

**Gladman Developments Limited**  
**Land off Henthorn Road, Clitheroe**

**TREE ASSESSMENT REPORT**

July 2010

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## 1.0 REPORT INTRODUCTION

- 1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of Gladman Developments Limited to present the findings of a survey of mature trees on land off Henthorn Road, Clitheroe, Lancashire (hereafter referred to as 'the site'). The site is centered on the Ordnance Survey Grid Reference SD 732 410 and is shown as Figure 1. The survey was carried out on the 6th July 2010.
- 1.2 The purpose of the report is to present an assessment of the arboricultural value of the trees based on their current quality in accordance with *BS 5837 Trees in Relation to Construction (2005) – Recommendations*, to help inform any initial design and site layout considerations to support a planning application for future residential development of the site. The survey has focused on the major trees within the site, and those adjacent to the site, that may be directly affected by any proposed future development. The report also indicates those trees requiring removal on the grounds of sound arboricultural management and those that would not be considered a major constraint to any development that may occur on the site.
- 1.3 Trees, tree groups and woodlands have been considered following evaluation into one of four categories (R, A, B & C) based on tree quality as outlined in *British Standard 5837 (2005)*. Categorisation of trees following the British Standard gives an indication as to the trees importance in relation to the site and the local landscape and also, the value and quality of the existing tree stock on site. This allows for informed decisions to be made concerning which trees should be removed or retained, should development occur. For a tree to qualify under any given category it should fall within the scope of that category's definition. In the categories A, B & C which collectively deal with trees that should be a material consideration in the development process, there are three sub-categories which are intended to reflect arboricultural, landscape and cultural values respectively. Category R trees are those which would be lost in the short-term for reasons connected with their physiological or structural condition. They are, for this reason, not usually considered in the planning process.
- 1.4 In assigning trees to the above categories the presence of any serious disease or tree-related hazards have been taken into account. If the disease is considered fatal and/or irremediable, or likely to require sanitation for the protection of other trees, the trees concerned may be categorised as R, even if they are otherwise of considerable value.

- 1.5 The site comprises a series of agricultural fields currently used for grazing livestock, separated by mature boundary hedgerows. Residential properties border the north eastern side of the site and Henthorn Road forms the south eastern boundary, beyond which is further agricultural land. At the northern extent of the site is a caravan park situated along side the River Ribble, which passes close to the western extent of the site. To the south west of the site boundary is further agricultural land. The town of Clitheroe lies to the north and east of the site.
- 1.6 Trees were found predominantly along the boundaries to the site and as components of the internal field boundary hedgerows. Principal tree species represented, in order of dominance (first listed being most commonly found) included common ash *Fraxinus excelsior*, alder *Alnus glutinosa*, hawthorn *Crataegus monogyna*, English oak *Quercus robur*, sycamore *Acer pseudoplatanus*, downy birch *Betula pubescens* and English yew *Taxus baccata*.
- 1.7 It is being proposed that the site be developed for residential housing and an area designated as a local country park. The scheme will be supported by the areas of public open space complete with play areas, new footpath links and a series of internal access roads.
- 1.8 The Local Planning Authority is Ribble Valley Borough Council.
- 1.9 Following consultation with the Local Planning Authority, Ribble Valley Borough Council, it has been confirmed that there are no Tree Preservation Orders or Conservation Area Designations that would affect trees present on, or in close proximity to the assessment site and therefore the site would not be affected by any such statutory constraints in respect of trees.
- 1.10 A separate Extended Phase 1 Habitat and Protected Species Survey has also been under taken on the site, which should read in conjunction with the Tree Assessment, (Ecological Appraisal, FPCR Environment and Design Limited, July 2010).
- 1.11 Appendix A presents a summary table of the tree survey data as collected from a site visit. Chapter 2 describes the methodology to which the tree assessment has been undertaken. Chapter 3 presents a written description of the results of the data collected discussing any particular trees of note, thereby providing a guide to establishing any specimens that are worthy for incorporation within any development of the site. Chapter 4 evaluates the findings in respect of any proposed development and provides recommendations for any tree management considered appropriate for reasons of sound arboricultural treatment.

Chapter 5 presents an indication of tree protection measures to be required from a general viewpoint, however it must be understood that any specific tree protection requirements should be separately considered where needs arise. This would be in the form of an **Arboricultural Method Statement (AMS)**, produced in conjunction with a specific **Tree Constraints Plan (TCP) and Tree Protection Plan (TPP)**, produced in accordance with guidance in *British Standard 5837 (2005) – Trees in Relation to Construction- Recommendations*.

## 2.0 TREE SURVEY METHODOLOGY

2.1 Trees have been broadly assessed based on guidance set out within the *British Standard BS 5837: (2005) Trees in Relation to Construction – Recommendations*. This standard provides recommendations and guidance on the principles to be applied to achieve successful integration of development with trees, shrubs and hedgerows. Where development (including demolition) is to occur, the standard provides guidance on the approach needed to decide which trees are appropriate for retention, on the means for protecting these trees during the development (including demolition and construction work) and on the means of incorporating trees into the developed landscape.

2.2 Trees have been divided into one of four categories (based on the cascade chart for tree quality assessment). These are classed as A, B, C & R (Section 4.3 of BS 5837). This gives an indication as to the tree's importance in relation to the site and the local landscape and, also, the value and quality of the existing trees on site. This assists informal decisions concerning which trees should be removed or retained should development occur. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below). Categories A, B & C cover trees that should be a material consideration in the development process, each with three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural (nature conservation) values. Category R trees are those which would be lost in the short term for reasons connected with their physiology or structural condition. They are for this reason not considered in the planning process. In assigning trees to the A, B or C categories the presence of any serious disease or tree – related hazards are taken into account. If the disease is considered fatal and / or irremediable, or likely to require sanitation for the protection of other trees it may be categorised as R, even if they are otherwise of considerable value.

2.3 **Category (A) – (Light Green):** are trees whose retention is most desirable and are of high quality and value. These trees are considered to be in such a condition as to be able to make a lasting contribution (a minimum of 40 years) and may comprise:

- (i) Trees which are particularly good examples of their species especially rare or unusual, or essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue);
- (ii) Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups);

- (iii) Trees or groups or woodlands of significant conservation, historical, commemorative or other value (eg. Veteran or wood-pasture trees).

2.4 **Category (B) – (Blue):** are trees whose retention is considered desirable and are of moderate quality and value. These trees are considered to be in such a condition as to make a significant contribution (a minimum of 20 years) and may comprise:

- (i) Trees that might be included in the high category but because of their numbers or slightly impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage), are downgraded in favour of the best individuals;
- (ii) Trees present in numbers such that they form distinct landscape features and attract a higher collective rating than they would as individuals. Individually these trees are not essential components of formal or semi-formal arboricultural features, or trees situated mainly internally to the site and have little visual impact beyond the site;
- (iii) Trees with clearly identifiable conservation or other cultural benefits.

2.5 **Category (C) – (Grey):** are trees that could be retained and are considered to be of low quality and value. These trees are in an adequate condition to remain until new planting could be established (a minimum of ten years) or are young trees with a stem diameter below 50mm and may comprise:

- (i) Trees not qualifying in higher categories;
- (ii) Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value and or trees offering low or only temporary screening benefit;
- (iii) Trees with very limited conservation or other cultural benefits.

2.6 **Category (R) – (Dark Red):** Trees for removal are those trees in such a condition that any existing value would be lost within 10 years and which should in the current context be removed for reasons of sound arboricultural management. Trees within this category are:

- (i) Trees that have a serious irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category R trees;
- (ii) Trees that are dead or are showing signs of significant, immediate or irreversible overall decline;

- (iii) Trees infected with pathogens of significance to the health and or/safety of other trees nearby trees or very low quality trees suppressing adjacent trees of better quality.

2.7 In the tree schedule (Appendix A) species has been recorded in both common and Latin names. Tree height has been estimated in metres and stem diameter measured at 1.5 metres above ground level (recorded in millimetres). Crown spread has been measured in metres and given as a radial spread from the stem. Crown spreads have been measured to the point of greatest spread in most cases unless a crown is clearly asymmetrical, in which case measurements have been recorded as radial distance from the stem in one or more of the corresponding compass points, N, S, E or W.

2.8 In the assessment particular consideration has been given to the following when considering the appropriate British Standard Category and Sub-Category allocation:

- (a) The health, vigour and condition of each tree;
- (b) The presence of any structural defects in each tree and its remaining contribution in years (i.e. future life expectancy);
- (c) The size and form of each tree and its suitability within the context of a proposed development for residential land use;
- (d) The location of each tree relative to existing site features, e.g. its value as a screen or as a skyline feature.

2.9 Age class is assessed according to the age class categories referred to in BS 5837.

**YNG**; Young trees up to five years of age.

**SM**: Semi-mature, trees less than 1/3 life expectancy.

**EM**: Early mature, trees 1/3 – 2/3 life expectancy.

**M**: Mature trees over 2/3 life expectancy.

**OM**: Over mature – declining or moribund trees of low vigor.

**V**: – Veteran status - Veteran Characteristics have been noted where a tree possesses certain attributes relating to veteran trees.

2.10 The overall condition of the tree, or group of trees, has been referred to as one of the following. A summary has been noted in the Tree Schedule and discussed in the Report.

- G Good:** A sound tree/trees needing little if any attention.
- F Fair:** A tree/trees with minor but rectifiable defects or in the early stages of stress, from which it may recover.
- P Poor:** A tree/trees with major structural and physiological defects or stressed such that it would be very expensive and inappropriate to retain.
- D Dead:** A tree/trees no longer alive. However, this could also apply to those trees that are dying and will be unlikely to recover, or have become dangerous.

2.11 Major defects or diseases and relevant observations have also been recorded under Structural Condition. The assessment for structural condition has included inspection of the following defects:

- The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay.
- Soil cracks and any heaving of the soil around the base
- Any abrupt bends in branches and limbs resulting from past pruning,
- Tight or weak 'V' shaped forks and co-dominant stems
- Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994)
- Cavities as a result of limb losses or past pruning
- Broken branches
- Storm damage
- Canker formations
- Loose bark
- Damage to roots
- Basal, stem or branch / limb cavities
- Crown die-back
- Abnormal foliage size and colour
- Any changes to the timing of normal leaf flush and leaf fall patterns
- Other pathological diseases affecting any part of the tree

2.12 Major defects or diseases and relevant observations have also been recorded. Dead wood has been defined as the following:

|                                 |                            |
|---------------------------------|----------------------------|
| Twigs and small branch material | Up to 5cm in diameter      |
| Minor dead wood                 | 5cm to 10cm in diameter    |
| Major dead wood                 | 10cm in diameter and above |

### **Conditions of Tree Survey**

- 2.13 The survey was completed from ground level only and from within the boundary of the site. Aerial inspection of trees was not undertaken at this stage. Investigations as to the internal condition of a tree have not been undertaken, being also beyond the immediate scope of this assessment. Evaluation of tree condition given within this assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months, in accordance with sound arboricultural practice.

### **Site Plans & Tree schedules**

- 2.14 The individual positions of trees and groups of trees recorded in the Tree Assessment Report have been shown on the Tree Location, Quality and Constraints Plan, Figure 2 (Drawing number 4370 – A – 01, July 2010). The tree quality element shows the relevant *BS 5837 (2005)* categories for retention considered for each tree and groups of trees. The positions of trees are based on a topographical / land survey supplied by the client in a dwg. format for the purpose of plotting the trees and Root Protection Areas (RPAs) accurately. The RPAs to be required by the individual and groups of trees are indicated by the Tree Constraints element of the above plan. The RPAs are formulated as described below.

- 2.15 A summary table of all the trees included in the Tree Assessment Report, detailing further information on each tree and group of trees shown in Appendix A. Within the summary table individual RPAs (m<sup>2</sup>) have been included, as well as a calculated corresponding radii of a circle for the RPA.

### **Tree Constraints and Root Protection Area (RPA)**

- 2.16 Below ground constraints to future development is represented by the area surrounding the tree that contains sufficient rooting volume to ensure survival of the tree, which need protecting in order for the tree to be incorporated into any future scheme, without adverse harm to the tree or structural integrity of buildings. This is referred to as the RPA and is shown as a circle of a given radius, calculated using the formula below. The circle may be modified in shape to maintain a similar total area depending on the presence of surrounding obstacles.

Where groups of trees have been assessed, the RPA has been shown based on the maximum sized tree in any one group and so would automatically exceed the RPAs required for many of the individual specimens within the group. A RPA is equivalent to a circle with a radius 12x the stem diameter for single stem trees and 10x the basal diameter for trees with more than one stem arising less than 1.5 meters above ground level.

**Table 1: Formula for calculating Root Protection Area**

$$\text{RPA (m}^2\text{)} = (\text{stem diameter (mm)} \times 12 / 1000)^2 \times 3.142$$

This figure should be capped to 707m<sup>2</sup>, that is, equivalent to a circle with a radius of 15m, or a square with approximately 26m sides

Taken from Table 2: Calculating the RPA , BS5837 (2005).

### 3.0 RESULTS OF TREE SURVEY (Refer to Figure 2 and Appendix A)

- 3.1 A total of twenty five individual trees and three groups of trees were surveyed as part of the tree assessment, including several specimens located directly adjacent to the site boundary, yet outside the ownership of the site (refer to Figure 2 – Tree Location, Quality and Constraints Plan, Drawing number 4370 – A - 01). All major freestanding trees within open field compartments and hedgerow trees within the curtilage of the site were assessed.
- 3.2 Details of the individual trees and groups of trees including heights, diameters at breast height (measured at 1.5m), crown spread in metres, overall age class, overall condition at the time of inspection, British Standard category of quality and suitability for retention and the root protection distances have been tabulated in Appendix A – Tree Schedule.
- 3.3 For the purpose of the report, the results of the assessment have been presented as individual trees and groups of trees where they are clearly present as free standing specimens, or as natural groupings, and according to species type.
- 3.4 Across the assessment site there were a number of commonly occurring features and defects to tree specimens that would be those expected of specimens within this environment. Typically observed was dead wood in varying degrees, storm damaged branches and limbs, broken branches most likely as a result of strong winds, browsing damage and epicormic growth. Generally trees found across the site were typical of specimens in open landscape having a variety of conditions and general absence of any formal management. Those individual specimens from an arboricultural perspective that possess certain defects of concern have been described in greater detail below.

#### Individual Trees

- 3.5 T1 was an English yew *Taxus baccata* approximately 6m in height and positioned within the front garden of the farm property along Henthorn Road. The specimen had received past pruning of lower branches to raise crown level which had resulted in many branch stubs. At the time of inspection the foliage showed slight browning and there was a light covering of ivy growth on the lower stem. Typically characteristic for the species, the branch structure was dense. The specimen did not house any obvious defects and therefore overall would be considered as retention category B (i) (moderate quality and value) for its good condition and amenity value.

- 3.6 T2 was a downy birch of an approximate height of 9m and also located within the front garden of the farm property along Henthorn Road. At the time of inspection the crown displayed slightly sparseness and thinness of foliage. There was ivy growth on the stem to a height of approximately 5m and the crown was evenly balanced. The tree was twin-stemmed in form, forking at approximately 1.5m above ground level and there was some visible inclusion of bark at the union. Noted at the time of inspection, the boundary wall was leaning from pressure being applied by tree growth. Overall the specimen was considered as retention category C (i) (low quality and value) for its limited future contribution.
- 3.7 T3 was an English oak *Quercus robur* of an approximate height of 8m and positioned within a hedgerow along part of the western boundary of the site. The crown supported a small amount of dead wood and was evenly proportioned and well balanced in form. There was a small amount of damage to the bark of several root buttresses. Having no obvious defects, overall the specimen was considered as retention category B (i) (moderate quality and value) for its good condition and amenity value.
- 3.8 T4 was a further English oak situated on the sloping field within the western part of the site, and was approximately 4-5m in height. The crown was low and spreading in form with a prominent browse line. The specimen was originally twin-stemmed, the stem sub-dividing at 2m above ground level, however historically the stem had failed through separation at the main union and subsequently the eastern side of the tree was absent. The damage had resulted in a sizable area of wounding, which had created a high amount of exposed heartwood. The exposed wood had associated cuboidal brown rot for the most part. A number of other cavities, decayed patches and rot holes were also present within the structure of the remaining westerly stem. The westerly stem and remaining branches formed the entire crown. The crown supported a low amount of broken branch material, storm damage and other dead / dysfunctional wood. T4 possessed a number of features that may have potential to provide suitable habitat for roosting bats such as hollows, sheltered cracks / splits, cavities and raised bark and therefore should it be concluded that the specimen would require removal, further assessment would be required by a suitably qualified ecologist. Overall the specimen was considered as retention category A (iii) (high quality and value) for its good condition and support to local wildlife. The allocation of sub-category (iii) has been given as the specimen would also be considered a veteran tree for its large girth and possessing several characteristic features associated with veteran trees.

- 3.9 T5 was another English oak positioned close to T4 within the western part of the site. It was located to the side of the public right of way (The Ribble Way) that passes at the bottom of the slope. The specimen was approximately 8m in height. The crown was slightly 'stag-headed' in form and supported a small amount of minor dead wood. There was a small proportion of the crown that had suffered storm damage as several broken branches were visible. The crown was low and spreading in form and there were prominent root buttresses. Overall the specimen was considered as retention category B (i) (moderate quality and value) for its good condition and amenity value.
- 3.10 T6 was a common ash *Fraxinus excelsior* approximately 14m in height and positioned along the western boundary of the site close to the caravan park. This large prominent specimen housed ivy growth to a height of 8m. The specimen was growing atop a raised bank and hence the boot buttresses were prominent, several of which showed visible damage to surface. The crown supported minor dead wood and several broken branches. Generally there were no obvious defects and overall the specimen was considered as retention category B (i) (moderate quality and value) for its good condition, amenity value and support to local wildlife.
- 3.11 T7 was a further common ash positioned just to the north side of T6 and approximately 12m in height. The specimen was located outside the site boundary within the grounds of the caravan park and housed dense ivy growth to a height of 10m which extended along the main primary branches / limbs. The main stem was twin-stemmed in form, from approximately 3m above ground level, although the union area was heavily obscured from view by ivy at the time of inspection. Being typically characteristic for the species, overall the specimen was considered as retention category B (i) (moderate quality and value) for its good condition, amenity value and support to local wildlife.
- 3.12 T8 was another common ash approximately 12m in height and positioned to the north side of T7. East facing on the lower trunk a small hole was visible, however this was not closely inspected as tree is located outside the site boundary and therefore viewed from a short distance away. The hole was approximately 3m above ground level and possibly leads to an internal trunk cavity. The main stem was twin-stemmed in form, the forking point being open and at approximately 3m above ground level. The structure of the specimen was formed of one main stem and a substantial diameter side limb (south side). The crown showed clear dieback of growth, general sparseness throughout, major dead wood, storm damage and broken branch material.

As for T4, T8 also possessed a number of features that may have potential to provide suitable habitat for roosting bats such as branch socket cavities and sheltered cracks / splits in dead wood and therefore should it be concluded that the specimen would require removal, further assessment would be required by a suitably qualified ecologist. Overall the specimen was considered as retention category C (i) (low quality and value) for its reduced arboricultural quality and limited future contribution.

- 3.13 T9 was a sycamore *Acer pseudoplatanus* of an approximate height of 14m positioned close to the north west corner of the site. The specimen had suffered major loss of bark throughout the main stem and primary branch structures and there was signs of Sooty Bark of Sycamore *Cryptostroma corticale* being present in patches where bark is missing. The tree was located outside the site boundary yet close enough to have influence on the assessment site. The specimen showed no live growth and therefore would be graded as category R and should be felled on the grounds of safety, prior to any development on site.
- 3.14 T10 and T11 were common ash of approximate heights of 4 and 5m respectively and positioned within the central hedgerow bisecting the site, towards its southern end. Twin stemmed in form from base. Both hedgerow trees were typically characteristic for the species and showed no obvious defects. T11 was located by a small field pond, and noted was a sizable shrubby goat willow *Salix caprea* adjacent to the pond. Overall both trees were considered as retention category C (i) (low quality and value) for their young age and current low amenity value.
- 3.15 T12 was another common ash positioned within the central hedgerow and was approximately 6m in height. T12 was located on the eastern side of a small field pond. The specimen has collapsed in the past and the lower stem section of the easterly stem was horizontal to the ground. One main lead shoot had taken dominance and now formed the upright part of the tree (westerly stem). The crown supported major dead wood and at the eastern end of the main stem there was a shallow branch socket cavity forming close to ground level. Overall the specimen was considered as retention category C (i) (low quality and value) for its limited future contribution.
- 3.16 T13 was an English oak also positioned within the central hedgerow and was approximately 11m in height. On the north east side of the lower stem at ground level there was an entrance to a basal cavity. The entrance hole lead to an area of progressive hollowing across the basal area. The crown was evenly balanced and shapely, although supported evidence of storm damage, broken branches, branch stubs and dead wood.

There was also a pronounced pattern in the bark on the north east facing side of the lower stem, in the form of a strip of previously damaged bark from ground level to approximately 2.5m above ground level. The pattern related to an area of repair to the damaged area. In addition there was livestock damage to the base of the stem especially on the west side. In the mid-crown area there were several branch failures and resultant branch stubs remained. Overall the specimen was considered as retention category B (i) and (moderate quality and value) having been downgraded from category A (high) for the defects it housed, although T13 was in still in good condition and had high amenity value by virtue of its size.

3.17 T14 was a common ash of an approximate height of 12m, positioned to the north side of T13 and within the central hedgerow, and centrally positioned within the site area. The crown supported dense ivy to a height of approximately 10m, which obstructed views of the stem and main branches at the time of inspection. The specimen possessed a one sided form mostly to the east, due to the presence of a substantial side lime extending to the east sub-dividing from the main stem at approximately 5m above ground level. Specimen was possible triple stemmed in form from approximately 3-4m above ground level, however the union was obscured by ivy growth. The crown supported the usual major dead wood and there were a number of visible branch socket cavities. The specimen possessed a number of features that may have potential to provide suitable habitat for roosting bats such as branch socket cavities and sheltered cracks / splits in dead wood and therefore should it be concluded that the specimen would require removal, further assessment would be required by a suitably qualified ecologist. Overall the specimen was considered as retention category C (i) (low quality and value) for its limited future contribution.

3.18 T15 was another common ash approximately 10m in height and positioned just to the north of T14. The crown contained major dead wood, some of which was heavily 'pitted' with rot holes and areas of decayed wood. A large previously failed limb was still present within the hedge beneath the tree. The specimen possessed prominent root buttresses and the base of the stem presented a distinctive 'flare'. Crown dieback was visible in places and the specimen possessed a number of features that may have potential to provide suitable habitat for roosting bats such as branch socket cavities and sheltered cracks / splits in dead wood. Overall the specimen was considered as retention category C (i) (low quality and value) for its limited future contribution.

3.19 T16, another common ash was located slightly to the north of T15 and was estimated to be 10m in height. The crown housed dense ivy growth to almost the full height of the tree, which obstructed views of the stem and main branches at the time of inspection. The main stem bifurcated at 3m into several lead stems, although the unions were covered with ivy.

The crown showed thinness and supported minor dead wood. Overall the specimen was considered as retention category C (i) (low quality and value) for its limited future contribution.

3.20 Trees numbered T17 to T23 were all common ash and positioned within the internal hedgerows that divide the field compartments. The only exception being T23, which was located off-site yet directly adjacent to the north eastern boundary. It has been included within the assessment due to its close proximity to the proposed development area. Being early mature and up to heights of 6-8m, most of the examples displayed clear stems for approximately 2-3m above ground level and had evenly balanced crown forms with no obvious defects. T20 had suffered damage to a surface root on its southern side. Overall the specimens were considered as a mix of retention category C (i) (low quality and value) and retention category B (i) (moderate quality and value) for their good condition and amenity value.

3.21 T24 was an English oak positioned within the low lying area associated with the ditch in the southern part of the site. The specimen was approximately 9m in height. T24 showed a series of prominent root buttress formations due to the position in which it is growing on the raised bank. Being typically characteristic for the species, the crown was domed in shape and evenly balanced. The west side of the stem housed a wound through which heartwood had become exposed and the beginnings of a cavity were forming. Due to the presence of livestock, there was browsing damage to the lower crown. Overall the specimen was considered as retention category A (i) (high quality and value) for its good condition and support to local wildlife.

3.22 T25 was a sycamore close to T25 and approximately 6m in height. T25 was a small specimen with no obvious defects and typically characteristic for the species. Overall the specimen was considered as retention category C (i) (low quality and value) for its young age and current low amenity value.

### **Groups of Trees**

3.23 TG1 comprised several individual hawthorn *Crataegus monogyna* specimens ranging in height from 4 to 6m and positioned across the sloping field in the western part of the site. The specimens were mostly large mature hawthorn bushes scattered randomly across the area. Most were multiple stemmed from ground level and typically characteristic for the species. Most contained varying quantities of dead branch material and occasional broken branches were visible. Collectively the trees would be considered as retention category B (ii) (moderate quality and value) for their good conditions and contribution to the local tree population.

- 3.24 TG2 represented those trees present as individual specimens along the hedgerow forming the northern boundary of the site. The trees present comprised a sycamore, five common ash and two common alder *Alnus glutinosa*. The greatest height was approximately 11m. There were several further smaller specimens, mostly ash, present also. The hedgerow ran along the line of a field ditch and trees were found to be positioned on either side of the banks to the ditch. Most individual specimens contained ivy growth on the main stems and into the crowns however generally there were no obvious defects. Examples were found to be typically characteristic for their respective species and therefore collectively the trees would be considered as retention category A (ii) (high quality and value) for their good conditions and contribution to the local tree population.
- 3.25 TG3 comprised seven Italian alder *Alnus cordata* and a single common alder of heights up to 9m. The group had been planted in a line along the boundary of the field (north east) and spaced at regular intervals of approximately 6-8m apart. The individual trees were uniformly spaced apart and all similar in size and overall condition. There were no obvious defects were visible other than a small number of broken branches in the lower crowns in some the examples. Noted at the time of inspection were that all the upper crowns were leaning to the north east, in response to the prevailing wind direction. Collectively the trees would be considered as retention category B (ii) (moderate quality and value) for their good conditions and contribution to the local tree population.

## 4.0 DISCUSSION OF RESULTS AND RECOMMENDATIONS

4.1 The following section presents a summary of the tree survey in terms of the collective results and offers discussion of particular trees and groups recorded in the context of any proposed development in the form of an Arboricultural Implications Assessment.

### Results Summary

4.2 Trees present across the site were predominantly common ash. A small number of other species were represented and included sycamore, common alder and English oak. Species diversity generally was therefore limited. Physical conditions of trees were found to be such typically associated with specimens growing in open countryside where specific management had been fairly limited, if absent in most cases. Defects commonly observed were occasional storm damaged limbs, crowns supporting varying proportions of dead wood and rudimentary branch removals for crown clearance.

4.3 Positions of trees were almost entirely found within boundary hedgerows of the livestock fields and overall trees formed an intrinsic part of the local landscape character. Being mostly mature there was an absence of younger material throughout the tree stock and despite the abovementioned defects were generally in good condition. Providing appropriate remedial tree surgery is implemented, existing trees should integrate with the development proposals thereby continuing to provide landscape character and amenity value. Several specimens demonstrated potential to provide suitable features and habitat for roosting bats and therefore should it be necessary to remove such specimens for the development, further assessment by a suitably qualified ecologist would be required to establish presence / absence of bats.

### Category R - Remove

4.4 One specimen was assessed as category R (remove), namely T9. The specimen was completely dead and would therefore not be considered a material consideration to the development. From an arboricultural perspective, the specimen presents a hazard and should therefore be felled in the interests of public safety as a matter of priority. The tree is positioned just outside the site boundary and within the grounds of the adjacent caravan park. It was noted that the tree is in close proximity to the main vehicular entrance to the caravan park and therefore would be considered as presenting a major hazard.

### **Retention Category C – Low Quality and Value**

4.5 Following the assessment eleven of the individual trees and one tree group within the assessment site were considered as retention category C (low quality and value), namely T2, T8, T10, T11, T12, T14, T15, T16, T20, T22, T15 and TG1. In accordance with the *British Standard*, category C specimens are those that would be considered as having a limited contribution in terms of their future visual amenity, up to 10 years, within any development proposals, due to either their current age or the number and types of defects present. Most of the category C trees present within the assessment site were considered as having lower future amenity value in arboricultural terms compared to those assessed as higher quality, and would only be contributing in the short term.

4.6 It would however generally be encouraged that the category C specimens be retained, where possible and suitable within the context of the proposals, to provide an instant level of maturity and continuity in cover, especially whilst any new replacement landscaping becomes established. Once the landscaping has become fairly established there would be justification to remove those category C specimens if required. Of the eleven category C trees, T8, T14, T15 and T16 would require appropriate levels of remedial tree surgery to reduce the risk of further branch / limb failures, and remove dead wood on the grounds of public safety. The proposed development would be seeking to retain these trees and the current layout shows them adjacent to the residential parcels and the area of public open space. Safety of the public is of prime importance and therefore remedial tree surgery would be a priority consideration.

### **Retention Category B – Moderate Quality and Value**

4.7 Following the assessment eleven of the individual trees and one tree group were considered as retention category B (moderate quality and value), namely T1, T2, T5, T6, T7, T13, T17, T18, T19, T21, T23 and TG3. In accordance with the *British Standard*, category B specimens are those considered to have overall higher quality than those of category C due to their good condition and greater remaining life expectancy, yet not as high quality as for retention category A. Within the *British Standard* it states that those trees considered as category B should clearly be able to demonstrate ability to contribute a minimum of 20 years of that quality to the proposed development in terms of health and amenity value.

4.8 Following the assessment it would be concluded that those trees assigned category B status demonstrate potential to contribute for a minimum of 20 years further to the development and therefore retention of such specimens would be highly desirable.

Of the category B specimens, T13 would require appropriate remedial tree surgery to remove dead wood on the grounds of public safety. The proposed development would be seeking to retain the specimen adjacent to an area of public open space and therefore public safety is of prime importance.

#### **Retention Category A – High Quality and Value**

4.9 Following the assessment two of the individual trees and the final tree group was considered as retention category A (high quality and value), namely T4, T24 and TG2. Any specimen considered as retention category A has been carefully assessed for their designation as Category A status. Loss of Category A specimens from the site would have a detrimental impact on visual amenity. Category A specimens are those trees that have the highest quality in both visual amenity and overall longer-term contribution in terms of arboriculture, having a minimum of 40 years in remaining contribution. Their retention is highly desirable.

4.10 T4 was awarded category A (iii) for contribution to wildlife, due to possessing a number of characteristic features attributed to veteran tree status.

#### **COMMENTS IN RESPECT OF THE DEVELOPMENT PROPOSALS**

4.11 The Illustrative Masterplan (Drawing no. 4370 – P – O2 E July 2010, FPCR Environment and Design Limited) shows the concept for development within the assessment site. Proposals seek to provide a residential development alongside an area of open space (parkland area with a meadow and trees), play areas and water features. The development will also include a 'Green Corridor' which would provide ecological enhancement, new footpath and cycle way links and provision of structured buffer landscaping incorporating new tree planting which will supplement the existing trees present on site.

4.12 To facilitate the above masterplan, there would be no direct loss of trees. The layout for the residential parcels has been designed around the natural features of the site thereby maintaining the key hedgerows and the trees contained within them. The positioning of the development parcels and road networks would therefore principally avoid the main tree components within the site. From an arboricultural perspective, the principal built infrastructure components and access points have also attempted to be respectful of the higher quality specimens and sympathetically designed to avoid conflicted with too many of those specimens as possible.

4.13 It is recommended therefore, in principal and following guidance within *British Standard 5837 (2005) – Trees in Relation to Construction – Recommendations*, that all category A and B specimens and groups of trees are retained and integrated into the future development. Should it be concluded that these retentions may potentially conflict with proposed layouts, further consideration should be given to any required losses in favour of development and the wider implications this may have in terms of visual landscape and amenity value before any final decisions for layouts are taken.

4.14 The layout shows an internal access road passing between trees T15 and T16, both of which had been assessed as retention C and would, if retained, require remedial tree surgery on the grounds of safety. Consideration would need to be given to the relationship of the proposed access road to the two trees in respect of their root protection areas and overhanging crown spread. Suitable tree protection measures would need to be considered for protecting the ground beneath the crown spread to minimise the amount of disturbance and damage potential during construction works. Treatment for construction works, such as ‘no-dig construction techniques’ in close proximity to trees by means of their calculated root protection areas, in accordance with *British Standard 5837 (2005)*, are available on request. Special engineering solutions are available for installing light surfaces within RPAs using ‘no – dig construction’ methods, however roads often require formal construction techniques to withstand various additional loading and therefore in such situations engineering solutions are available which involve the use of ‘load bearing geo-webs’ – specialist cell constructions to be applied directly onto the soil surface. Further details of both systems described within the report can be made available on request.

#### **General Design Principals**

4.15 At the detailed design stages closer assessment of the distance of proposed development in relation to the calculated root protection areas of trees proposed for retention should be made and modifications to the layouts made where conflicts are excessive especially where there may be changes in ground levels across an area required as part of the re-development.

4.16 At the detailed design stages, layouts will need to provide suitable protection measures for those trees to be retained and consideration for ground treatment works such as ‘no dig construction’ techniques’ in close proximity to those trees to be retained by means of their calculated root protection areas, in accordance with *British Standard 5837 (2005)* and as given in the Tree Schedule – Appendix A, especially where light structures such as car parking or footways are concerned.

Special engineering solutions are available for installing light surfaces within RPAs using 'no – dig construction' methods. Roads often require formal construction techniques to withstand various additional loading. In such situations, engineering solutions are available involving 'load bearing geo-webs' – specialist cell constructions to be applied directly onto the soil surface. Further details of both systems described within the report can be made available on request.

- 4.17 In addition, when considering the proposed layout in relation to calculated root protection areas for retained trees, an important element of detailed design would be the eventual positioning of any utility services that may be required to supply the new development, prior to any installation. Consideration may also need to be given to the potential for tree roots of newly planted material to affect / compromise any future services. Services, where possible, should not encroach upon root protection areas of retained trees. If below-ground services are proposed within or close to the calculated root protection areas, modifications to the alignment of service routes may need to be made to retain, where possible, the full extent of the RPA to minimise adverse effects of the development on tree-health. Where this is unavoidable, further specialist engineering techniques such as 'trenchless technology' i.e. moling, can be employed to avoid root damage. If services are required within the RPA, the extent of this encroachment should be re-assessed at the time and appropriate mitigation taken to ensure the safe incorporation of the trees without potential damage to services from tree roots. Additionally in design, account should be taken of the foundation construction of existing and proposed nearby structures where existing and new trees are concerned. Any new planting should not compromise the structural performance of the foundations and root barriers or tree planting pits should be considered in the designs.

### **Tree Surgery**

- 4.18 All retained trees should be subjected to sound arboricultural management by means of the following where appropriate: Tree surgery including operations such as removal of dead wood for reasons of safety; crown lifting works for access and improvement of overall visual appearance; possible crown reduction works, pollarding, crown thinning and crown balancing works; tree felling; and climbing inspections. It may be required for reasons of safety that certain defects are further investigated to establish the true conditions.
- 4.19 All retained trees should be inspected annually and following major storms by an experienced arborist or tree surgeon to identify any potential public health and safety risks and to agree remedial works as required.

4.20 The trees subject to this report were inspected from the ground only and therefore where any tree surgery is undertaken a thorough climbing inspection should be undertaken at the same time to determine the precise condition of the crown. Any cavities or areas of decay should be described with reference to its dimensions on the surface, its depth and an estimate of the proportion of the cross-sectional area of the limb / branch or trunk affected and an assessment of the success of compartmentalisation. It is further recommended that no action be taken on the strength of such a report until it has been seen and endorsed by a suitably qualified person. A decision could then be made on the most appropriate course of treatment.

4.21 Depending upon the results of such an inspection it may require the allocation given to the tree trees in respect of suitability for retention within new development, in accordance with *BS 5837 (2005) 'Trees in Relation to Construction' - Recommendations* to be revised.

4.22 **All tree surgery should comply with *British Standard 3998 'Recommendations for Tree Work' (1989)***

#### **Tree Surgeons**

4.23 All tree works undertaken should be carried out by skilled tree surgeons, and it is therefore recommended that quotations for such work be obtained from Arboricultural Association Approved Contractors only, as this is the recognised authority for certification of tree work contractors. To become an Approved Contractor the company must satisfy the Associations Professional Committee of its consistently high standard of tree work.

#### **Mitigation for Tree Losses**

4.24 As part of the development proposals it is recommended that replacement tree planting forms part of any landscaping scheme that would support the proposals. New tree planting is an integral part of any new development, supporting the development proposals to improve and enhance the local tree population for the future.

4.25 Native species (for their low maintenance requirements and nature conservation value) and ornamental species (for their contribution to urban design and amenity value), should be considered and include species selected on the basis of their suitability for the final site use. This should include consideration of ultimate size, canopy spread, height, blossom, autumn leaf colour, etc.

Species should be selected to be suitable to the new environment, therefore focusing on species that are considered suitable for large scale developments i.e. small to medium sized trees for the areas in close proximity to built structures and large sized trees in key focal areas, proposed areas of open space and any structural landscape buffer planting.

### **Trees with Potential to Support Bat Roosts**

4.26 Following the tree assessment, four of the trees within the site showed various structural features that could have potential to provide habitat for bat roosts and therefore should it be concluded that any of these trees could potentially be removed to facilitate the proposals, the removals would need to be carried out under a Method Statement, produced by an appropriately qualified ecologist, or such similar person, following an assessment. The specimens identified as having potential are T4, T8 T14 and T15. An assessment for trees present within the site to provide potential roosting opportunities for bats was also undertaken by ecologists based at FPCR Environment and Design Ltd during May 2010 and therefore cross-reference should be made with the Ecological Appraisal for further details of the trees concerned.

4.27 Bats are a protected species under European Law and therefore if it is decided that any of these specimens should be removed for development on the site they should be manually inspected by climbing, to determine the presence / absence of bats.

4.28 This is to ensure statutory compliance as all species of bats are listed on Schedule 2 of the Conservation (Natural Habitats & C.) Regulations 1994 and are afforded protection under Regulation 39. Under this regulation it is illegal to intentionally or recklessly disturb any such animal or damage or destroy a breeding site or roosting place of any such animal. Bats are also afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act (1981) and subsequent revisions. Under this legislation it is illegal to: -

- a) Recklessly or intentionally kill, injure or take a species of bat;
- b) Recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection or disturb any animal whilst they are occupying such a place of shelter or protection.

4.29 In the event that a bat roost is observed in the tree during the aerial surveys, a Natural England European Protected Species License may be required to legitimise their disturbance or loss. To support an EPS license further nocturnal survey work would be required to inform on a population class assessment and appropriate mitigation. In the event of such a circumstance, further advice can be provided.

4.30 If no bat potential is observed for roost sites or evidence of a roost is observed, no statutory constraints to the scheme from the presence of a bat roost will be concluded and no further restrictions to working practices or timing will be necessary.

**Arboricultural Method Statements (AMS) and Tree Protection Plan (TPP)**

4.31 Once the layout for the site has been finalised, a TPP should be prepared to contain the following:

- I. trees selected for retention, numbered and clearly identified on a plan;
- II. trees to be removed also clearly identified and numbered;
- III. the precise location for erection of protective barriers and any other relevant physical protection, including ground protection to protect the RPA and marked as a construction exclusion zone on the plan;
- IV. design details (specifications) for the means of protection, including any necessary facilitation pruning i.e. crown lifting work.

4.32 In order to avoid disturbance to the physical protection forming the construction exclusion zone, once fencing is installed consideration should be made for all construction operations which might need to be completed in the vicinity of trees, including the following. All of the listed activities have potential to cause long term damage to trees if not carefully managed. It is paramount that the calculated area around trees remains undisturbed, unless 'special circumstances' prevail, whereby specific techniques and methodologies may be required to resolve such conflicts. Section 5 – Tree Protection measures provides further details in respect of tree protection.

- site construction access;
- contractor's car parking;
- phasing of construction works;
- space needed for all foundation excavations and construction works;
- the location and space required for services, including foul and surface water drains, land drains, soakaways, gas, oil, water, electricity, telephone, television or other communication cables;
- all changes in ground level, including the location of retaining walls, steps and making adequate allowance for foundations of such walls and back fillings;
- space for site huts, temporary latrines (including drainage) and other structures;
- the type and extent of landscape works which will be needed within the protected areas and the effects these will have on the root system;

- space for storing (whether temporary or long-term) materials, spoil and fuel and the mixing of cement and concrete;
- the effects of slope on the movement of potentially harmful liquid spillages towards or into protected areas.

#### **Protection of Trees Close to the Site**

4.33 All trees retained as part of the scheme and those located outside the boundaries of the assessment site, yet within close proximity to works should be adequately protected during the course of the development by barriers or ground protection around the calculated Root Protection Area (RPA) and as indicated on any Tree Constraints Plan (TCP) that may be produced in association with the assessment following confirmation of detailed site layouts and construction proposals. The following section describes tree protection measures in further detail. Any trees which are to be retained and whose RPAs may be affected by the development should be monitored to identify any alterations in quality with time and to assess and undertake any remedial works required as a result. Trees retained should be subject to sympathetic management in the future to maintain their future health and vigour.

4.34 All vegetation and, particularly, woody vegetation proposed for clearance should be removed outside of the bird-breeding season (April – August inclusive) as all birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. Where this is not possible, vegetation should be checked for the presence of nesting birds prior to removal by an experienced ecologist.

## 5.0 TREE PROTECTION MEASURES

- 5.1 Retained trees will be adequately protected during works. Measures to protect these should follow the best practice principles set out in *BS5837: Trees in Relation to Construction - Recommendations (2005)*. These have been broadly summarised below.

### **General Information and Recommendations**

- 5.2 All trees retained on site will be protected by barriers or ground protection around the calculated Root Protection Area (RPA) and as indicated on any Tree Constraints Plan (TCP) that may be produced in association with the assessment (Clauses 5 and 7 of BS 5837).
- 5.3 Fencing will be erected prior to commencement of construction and before demolition including erection of any temporary structures. Once set up, fences should not be removed or altered without prior consultation with the arboricultural advisor.
- 5.4 Arrangements should be made for an arboriculturalist to supervise works and tree protection where trees are particularly vulnerable or sited close to access points.
- 5.5 Pre-development works may be undertaken prior to the installation of fencing with the agreement of the local planning authority.
- 5.6 Any trees that are not retained should be felled prior to the erection of protective fencing. Particular attention needs to be given by approved contractors to minimise damage or disturbance to retained specimens (good industry practice procedures should be followed at all times).
- 5.7 All tree works should follow best practice procedures as set out in *British Standard 3998 (1989) – Recommendations for Tree Work*. All trees should be maintained in good condition on site and be regularly inspected annually (where overall condition requires) or every 2 years and after any major storm events, with safety a priority.

### **Barriers**

- 5.8 Fencing should be strong and suitable for the location, type and proximity of construction activity. Barriers must remain rigid and complete.

5.9 In most situations fencing should comprise a scaffold framework comprising a vertical and horizontal framework. For particular areas where construction activity is anticipated to be intense higher fencing may be necessary. Typical fencing specifications are illustrated in Figure 3.

5.10 It may be appropriate on some sites to use temporary site offices as components of the protection barriers.

### **Ground protection**

5.11 Where it has been agreed, construction access may take place within the RPA if suitable ground protection measures are in place. This may comprise single scaffold boards over a compressible layer laid onto geo-textile materials for pedestrian movements. Vehicular movements over the RPA will require the calculation of expected loading and may require the use of proprietary protection systems.

### **Protection outside the exclusion zone**

5.12 Once the areas around trees have been protected by the fencing, any works on the remaining site area may be commenced providing activities do not impinge on protected areas. Notices should be placed on fencing to indicate that operations are not permitted within the fenced area.

5.13 Wide or tall loads etc should not come into contact with retained trees. Banksman should supervise transit of vehicles, jibs, booms etc where this is in close proximity to retained trees.

5.14 Oil, bitumen, cement or other material that is potentially injurious to trees should not be stacked or discharged within 10m of a tree bole. No concrete mixing should be done within 10m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree.

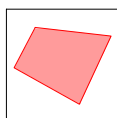
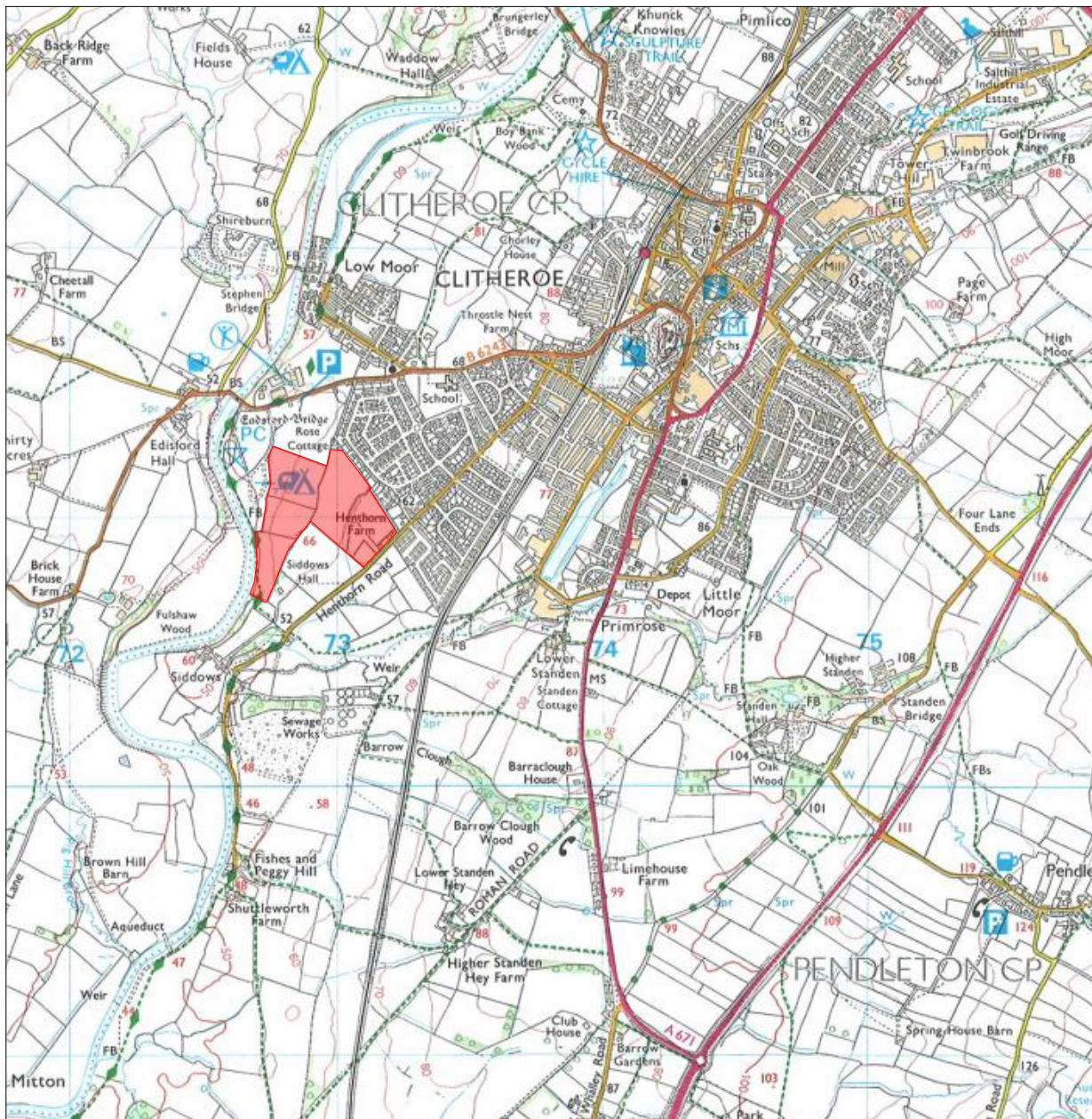
5.15 No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire.

5.16 Notice boards, telephone cables or other services should not be attached to any part of a retained tree.

5.17 Any trees which need to be felled adjacent to or are present within a continuous canopy of retained trees must be removed with due care (it may be necessary to remove such trees in sections).

### **Protection for Aerial Parts of Retained Trees**

- 5.18 Where it is deemed necessary to operate a wide or tall load, plant bearing booms, jibs and counterweights or other such equipment, as part of construction works, and such equipment would have potential to cause injurious contact with crown material i.e. low branches and limbs, of retained trees within the RPA fencing, it is best advised that appropriate, but limited tree surgery, be carried out beforehand to remove any obvious problem branches. This is classed as 'Facilitation Pruning', *British Standard 5837 (2005) 9.4.2 and 11.2.1*. Any such pruning should be undertaken in accordance with a specification prepared by an arboriculturalist.
- 5.19 It is strongly advised that a Pre-Commencement Site Meeting is held with contractors who are responsible for operating machinery, as described above, to firstly highlight the potential for damage occurring to tree crowns and to ensure that extra care is applied when manoeuvring machinery during such operations within close proximity to retained trees to avoid any contact.
- 5.20 In the event of having caused any such branch or limb damage to retained trees it is strongly recommended that suitable tree surgery be carried out, in accordance with *British Standard 3998 (1989) Recommendations for Tree Work*, to correct the damage, upon completion of development.
- 5.21 All of the above precautionary measures should be applied to minimise the effect of any damage to long-term tree health and safety.



Site Location

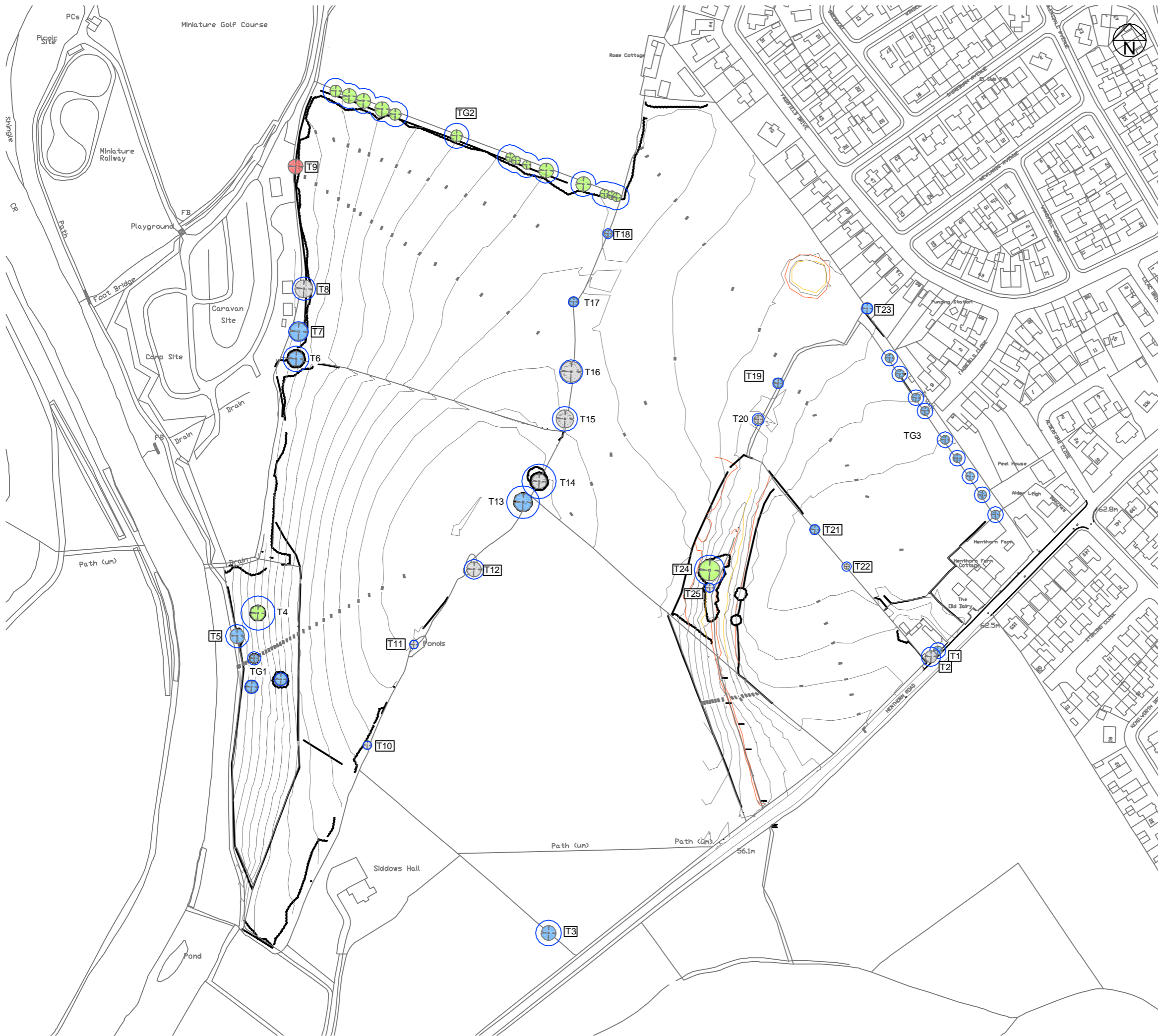
Gladman Developments Limited  
Land Surrounding Henthorn Farm  
Henthorn Road, Clitheroe

## STUDY AREA

Figure 1

Scale 1:25000 @ A4









July 2010



**NOTES**

All dimensions to be verified on site. Do not scale this drawing.  
 All discrepancies to be clarified with project Arboriculturalist.  
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**KEY**

-  Retention Category A - High (BS 5837:2005)
-  Retention Category B - Moderate (BS 5837:2005)
-  Retention Category C - Low (BS 5837:2005)
-  Retention Category R - Remove (BS 5837:2005)
-  Root Protection Area
-  Tree Number
-  Tree Group Number
-  Tree Plotted to Best Estimations Not Present on Topographical

**CAVEAT**

1. Drawing for PLANNING.
2. Drawing to be read in conjunction with Tree Report and Tree Schedule.
3. Drawing based on digital information supplied by the client in dwg format.
4. The exact position of trees are to be checked and verified on site prior to construction.
5. Crown spreads are illustrative only please refer to tree schedule for measurements.
6. Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked and verified by a qualified arboriculturalist or tree surgeon should works commence 12 months after the time of this survey.
7. Please note that no works should be undertaken to any trees illustrated herein without first obtaining the proper authorisation to do so.

| rev | date | description  | by   |
|-----|------|--------------|------|
| -   | -    | First issue. | FPCR |



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client  
**Gladman Developments Limited**

project  
**Land Surrounding Henthorn Farm  
 Henthorn Road, Clitheroe**

drawing title  
**TREE LOCATION, QUALITY AND  
 CONSTRAINTS PLAN - FIGURE 2**

scale  
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drawn  
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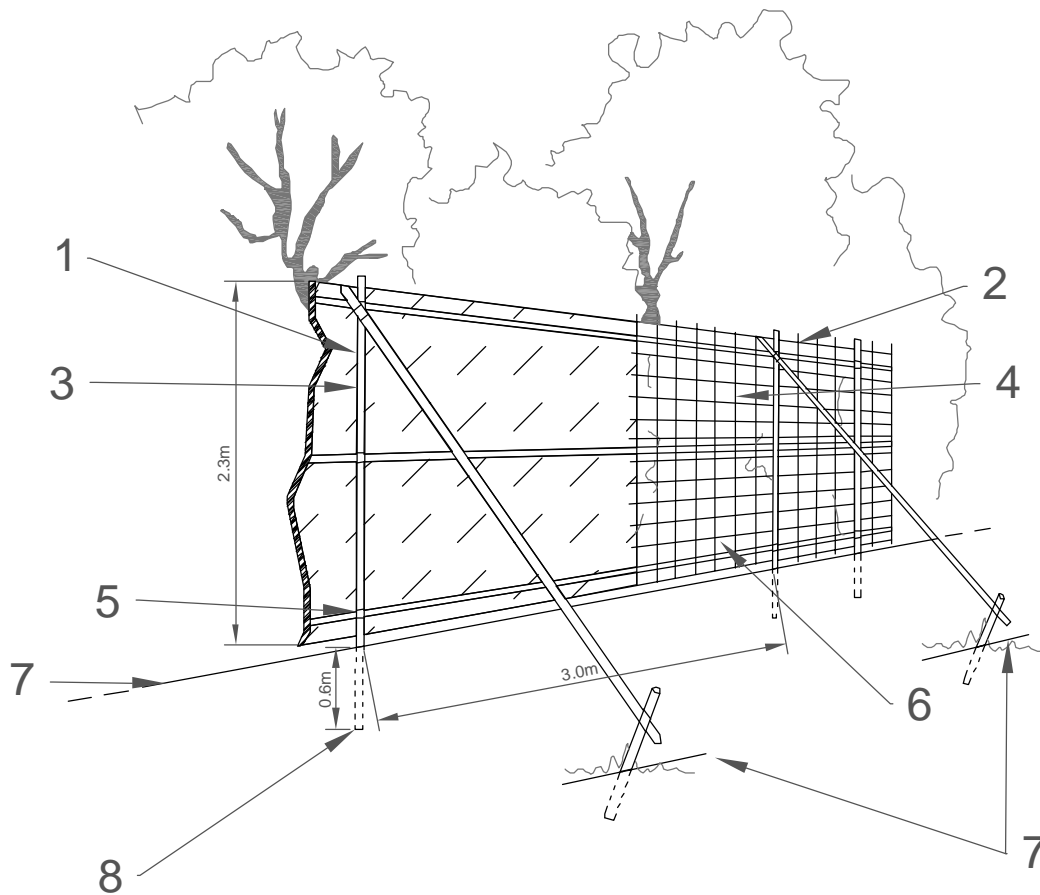
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**4370-A-01**

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# PROTECTIVE FENCING SPECIFICATIONS

Based on BS5837 *Trees in Relation to Construction (2005) - Recommendations*



1. Standard scaffold poles.
2. Uprights to be driven into the ground.
3. Panels secured to uprights with wire ties and where necessary with standard scaffold clamps.
4. Weldmesh wired to the uprights and horizontals.
5. Standard clamps
6. Wire twisted and secured on the inside face of fencing to avoid easy dismantling.
7. Ground level
8. Approximately 0.6m driven into the ground.

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Land Surrounding Henthorn Farm  
Henthorn road, Clitheroe

PROTECTIVE FENCING SPECIFICATIONS  
FIGURE 3

## APPENDIX A - TREE SCHEDULE

| <u>Key:</u>   | <u>Measurements</u>   | <u>Age Class</u>                       | <u>Overall Condition</u> | <u>BS 5837 2005: Cascade Chart for Quality Assessment/Retention Category</u>   | <u>Symbols:</u>   |
|---|---|--|--------------------------|--|-------------------|
|   | MS - Multi-Stemmed  | YNG - Young                            | G - Good                 | A - High   | < - Less than     |
|   | Ht - Height in Metres                                       | SM - Semi-Mature                       | F - Fair                 | B - Moderate   | ~ - Approximately |
|   | DBH - Stem Dia. at 1.5m above ground level                  | EM - Early Mature<br>M - Mature        | P - Poor                 | C - Low  | > - Greater than  |
|   | Crown - Crown spread in meters given radially from the stem | OM - Over Mature                       | D - Dead                 | R - Trees for removal  |                   |
|   |   | V - Possessing Veteran Characteristics |                          | <b>Sub-Categories:</b><br>1 - Mainly Arboricultural value<br>2 - Mainly Landscape value<br>3 - Mainly Cultural Value |                   |
| RPA - Root protection area (equivalent to a circle with a radius 12x the stem diameter for single trees and 10x the basal diameter for trees with more than one stem arising below 1.5m above ground level) |   |  |                          |  |                   |

| Tree No                 | Species                                | Height | DBH              | Crown Spread                        | Age Class            | Overall condition | Structural Defects   | RPA m <sup>2</sup> | RPA radius (m) | BS:5837 Category |
|-------------------------|--|--------|------------------|-------------------------------------|----------------------|-------------------|--|--------------------|----------------|------------------|
| <b>INDIVIDUAL TREES</b> |  |        |                  |                                     |                      |                   |  |                    |                |                  |
| 1                       | Common Yew<br><i>Taxus baccata</i>     | 6      | Estimated<br>450 | Up to 3                             | M                    | F                 | Past pruning of lower branches to raise crown level - many branch stubs<br>Tree located within the boundary of the property<br>Slight browning of foliage at the time of inspection<br>Light ivy growth on the lower stem<br>Dense branch structure<br>Typically characteristic for the species<br>No obvious defects  | 91.6               | 5.4            | B (i)            |
| 2                       | Downy Birch<br><i>Betula pubescens</i> | 9      | Estimated<br>650 | Up to 4                             | M                    | F                 | Sparseness and thinning to the crown at the time of inspection<br>Ivy growth on the stem to a height of approximately 5m<br>Evenly balanced form<br>Tree located within the boundary of the property<br>Boundary wall leaning from pressure being applied by tree growth<br>Twin-stemmed main stem, forking at approximately 1.5m above ground level - some visible inclusion of bark at the union   | 132.7              | 6.5            | C (i)            |
| 3                       | English Oak<br><i>Quercus robur</i>    | 8      | 710              | Up to 5                             | M                    | G                 | Hedgerow tree<br>Minor dead wood<br>Evenly proportioned and well balanced crown form<br>Some damage to the bark of root buttresses<br>Low crown form<br>No obvious defects   | 228.1              | 8.5            | B (i)            |
| 4                       | English Oak<br><i>Quercus robur</i>    | 4      | 940              | Up to 5,<br>mainly<br>to W<br>and N | M<br>(possible<br>V) | F                 | Low and spreading form with a prominent browse line to the crown<br>Originally a twin-stemmed specimen at 2m above ground level - stem had failed - separated close to the union - eastern side of tree missing<br>Damaged area created through failure exhibited high proportion of exposed heartwood with associated cuboidal brown rot for the most part<br>Further cavities present within the structure of the remaining westerly stem<br>Westerly stem forms the entire crown<br>Crown supports broken branch material - storm damage and other dead wood<br><b>The specimen possessed a number of features that may have potential to provide suitable habitat for roosting bats such as hollows, sheltered cracks / splits, cavities and raised bark</b> | 399.8              | 11.3           | A (iii)          |

|    |   |    |                  |         |    |   |  |       |     |       |
|----|---|----|------------------|---------|----|---|--|-------|-----|-------|
| 5  | English Oak<br><i>Quercus robur</i>     | 8  | 640              | Up to 5 | M  | G | Slightly 'stag-headed' form<br>Minor dead wood<br>Epicormic shoots<br>Storm damaged branch material visible<br>Small number of stubs of past branch failures present<br>Low and spreading form<br>Prominent root buttresses<br>Tree located to the side of the right of way  | 185.3 | 7.7 | B (i) |
| 6  | Common Ash<br><i>Fraxinus excelsior</i> | 14 | 720              | Up to 5 | M  | G | Large prominent specimen<br>Ivy growth to a height of 8m<br>Tree located on a raised bank<br>Prominent root buttresses show visible damage to surface<br>Large side sucker shoot - north<br>Minor dead wood and broken branches within the crown<br>No obvious defects   | 234.5 | 8.6 | B (i) |
| 7  | Common Ash<br><i>Fraxinus excelsior</i> | 12 | Estimated<br>550 | 6       | M  | G | Tree located outside the site boundary<br>Dense ivy growth to a height of 10m extending along the main<br>primary branches / limbs<br>Twin-stemmed form, from approximately 3m above ground level -<br>union heavily obscured from view by ivy<br>Typically characteristic for the species   | 136.9 | 6.6 | B (i) |
| 8  | Common Ash<br><i>Fraxinus excelsior</i> | 12 | Estimated<br>650 | 6       | M  | P | East facing on the lower trunk is a hole, although not closely<br>inspected as tree is located outside the site boundary - hole at 3m<br>above ground level and possibly leads to a trunk cavity<br>Twin-stemmed in form - open fork formation at approximately 3m<br>above ground level - structure formed of one main stem and a<br>substantial diameter side limb (south side)<br>Crown dieback visible and general sparseness throughout<br>Major dead wood, storm damage and broken branch material present<br><b>The specimen possessed a number of features that may have<br/>potential to provide suitable habitat for roosting bats such as<br/>branch socket cavities and sheltered cracks / splits in dead<br/>wood</b> | 191.2 | 7.8 | C (i) |
| 9  | Sycamore<br><i>Acer pseudoplatanus</i>  | -  | Estimated<br>800 | -       | -  | D | Specimen has suffered a major loss of bark throughout the main stem<br>and primary branch structures<br>Evidence of Sooty Bark of Sycamore <i>Cryptostroma corticale</i> in<br>patches where bark is missing<br>Tree located outside the site boundary   | 289.6 | 9.6 | R     |
| 10 | Common Ash<br><i>Fraxinus excelsior</i> | 4  | Estimated<br>280 | 3.0     | EM | F | Twin stemmed in form from base<br>Typically characteristic for the species<br>Hedgerow tree<br>No obvious defects  | 24.6  | 2.8 | C (i) |

|    |   |    |                  |                                  |    |   |  |       |      |       |
|----|---|----|------------------|----------------------------------|----|---|--|-------|------|-------|
| 11 | Common Ash<br><i>Fraxinus excelsior</i> | 5  | 230              | 3                                | EM | G | Typically characteristic for the species<br>No obvious defects<br>Located by a small field pond, and noted was a sizable shrubby goat willow <i>Salix caprea</i> adjacent  | 23.9  | 2.8  | C (i) |
| 12 | Common Ash<br><i>Fraxinus excelsior</i> | 6  | 350 and<br>550   | N - 3<br>S - 5<br>E - 5<br>W - 3 | M  | F | Specimen has collapsed in the past and now lies horizontally in the lower stem section (eastern stem)<br>One main lead shoot has taken dominance and now forms the upright part of the tree (west stem)<br>Specimen is located on the eastern side of a small field pond<br>Major dead wood<br>At the eastern end of the main stem there is a shallow branch socket cavity forming close to ground level<br>Numerous basal sucker shoots   | 136.9 | 6.6  | C (i) |
| 13 | English Oak<br><i>Quercus robur</i>     | 11 | 910              | Up to 6                          | M  | G | North east side of lower stem at ground level there is an entrance to a stem cavity - hole leads to a progressively hollowing stem across the basal area<br>Crown is evenly balanced and shapely<br>Evidence of storm damage, broken branches, branch stubs and dead wood within the crown<br>Pronounced pattern in the bark - north east facing - strip of previously damaged bark from ground level to approximately 2.5m above ground level - suspected missing bark that has now occluded<br>Livestock damage to the base of the stem especially on the west side<br>Mid-stem area there are several branch failures and resultant stubs | 374.7 | 10.9 | B (i) |
| 14 | Common Ash<br><i>Fraxinus excelsior</i> | 12 | Estimated<br>950 | E - 8<br>Rest 5                  | M  | F | Crown supported dense ivy to a height of approximately 10m, which obstructed views of the stem and main branches<br>Hedgerow tree<br>One sided crown form to the east, due to presence of substantial side lime extending to the east at approximately 5m above ground level<br>Bifurcated main stem - possibly triple stemmed in form from approximately 3-4m above ground level<br>Major dead wood<br>Visible branch socket cavities<br><b>The specimen possessed a number of features that may have potential to provide suitable habitat for roosting bats such as branch socket cavities and sheltered cracks / splits in dead wood</b> | 408.3 | 11.4 | C (i) |

|    |   |    |                  |         |    |   |   |       |     |       |
|----|---|----|------------------|---------|----|---|---|-------|-----|-------|
| 15 | Common Ash<br><i>Fraxinus excelsior</i> | 10 | 690              | Up to 6 | M  | P | Crown contained major dead wood - some of which was heavily 'pitted' with rot holes and areas of decayed wood<br>A large fallen limb was still present within the hedge beneath the tree<br>Hedgerow tree<br>Prominent root buttresses - the base of the stem presented a distinctive 'flare'<br>Crown dieback visible<br>Major dead wood<br><b>The specimen possessed a number of features that may have potential to provide suitable habitat for roosting bats such as branch socket cavities and sheltered cracks / splits in dead wood</b> | 215.4 | 8.3 | C (i) |
| 16 | Common Ash<br><i>Fraxinus excelsior</i> | 10 | Estimated<br>650 | Up to 7 | M  | F | Crown supported dense ivy to almost the full height of the tree, which obstructed views of the stem and main branches<br>Hedgerow tree<br>Main stem bifurcates at 3m into several lead stems, although all was hidden by ivy<br>Thin crown housing minor dead wood  | 191.2 | 7.8 | C (i) |
| 17 | Common Ash<br><i>Fraxinus excelsior</i> | 6  | 290              | Up to 3 | EM | G | Clear stem form for approximately 2.5m<br>Evenly balanced crown with good shape<br>Hedgerow tree<br>No obvious defects  | 38.1  | 3.5 | B (i) |
| 18 | Common Ash<br><i>Fraxinus excelsior</i> | 6  | 280              | 2.5     | EM | G | Clear stem form for approximately 2.5m<br>Evenly balanced crown with good shape<br>Hedgerow tree<br>No obvious defects<br>NB Climbing rose within the crown   | 35.5  | 3.4 | B (i) |
| 19 | Common Ash<br><i>Fraxinus excelsior</i> | 7  | 300              | 3       | EM | G | Clear stem form for approximately 2.5m<br>Evenly balanced crown with good shape<br>Hedgerow tree<br>No obvious defects  | 40.7  | 3.6 | B (i) |
| 20 | Common Ash<br><i>Fraxinus excelsior</i> | 8  | 330              | 3       | EM | G | Main stem forks at approximately 3m into two lead stems - open fork formation<br>Evenly balanced crown which appeared to be slightly thinning<br>On the south side there was a visible damaged surface root - root had been severed approximately 0.5m from the stem  | 49.3  | 4.0 | C (i) |
| 21 | Common Ash<br><i>Fraxinus excelsior</i> | 7  | 280              | 3       | EM | G | Clear stem form for approximately 2.5m<br>Evenly balanced crown with good shape<br>Hedgerow tree<br>No obvious defects  | 35.5  | 3.4 | B (i) |

|                        |  |          |                                 |         |          |   |  |       |      |        |
|------------------------|--|----------|---------------------------------|---------|----------|---|--|-------|------|--------|
| 22                     | Common Ash<br><i>Fraxinus excelsior</i>  | 7        | 260                             | 2       | EM       | F | Clear stem form for approximately 2.5m<br>Evenly balanced crown with good shape<br>Hedgerow tree<br>Crown appeared to be slightly thinning and was noted as having a heavy crop of seeds   | 30.6  | 3.1  | C (i)  |
| 23                     | Common Ash<br><i>Fraxinus excelsior</i>  | 7        | Estimated<br>300                | 4       | M        | G | Tree located outside the site boundary<br>Evenly balanced crown with good shape<br>No obvious defects<br>Crown overhang onto site was minimal  | 40.7  | 3.6  | B (i)  |
| 24                     | English Oak<br><i>Quercus robur</i>  | 9        | 840                             | Up to 7 | M        | G | Prominent root buttress formation due to growing position on a raised bank<br>Specimen was typically characteristic for the species - domed in shape and even form<br>West side of the stem housed a wound where heartwood had become exposed (position of a previous failed branch in which the socket had begun to develop into a cavity)<br>Browsing damage to the lower crown - cattle grazing in the field  | 319.2 | 10.1 | A (i)  |
| 25                     | Sycamore<br><i>Acer pseudoplatanus</i>   | 6        | 270                             | Up to 3 | EM       | G | Small specimen<br>No obvious defects<br>Typically characteristic for the species   | 33.0  | 3.2  | C (i)  |
| <b>GROUPS OF TREES</b> |  |          |                                 |         |          |   |  |       |      |        |
| TG1                    | Hawthorn<br><i>Crataegus monogyna</i>  | 4 to 6   | Estimated<br>450 at the<br>base | Max 4   | M        | F | Group consists of several large mature hawthorn bushes across the slope of the western extent of the site, where the fields fall away to the public footpath along the river<br>Specimens were scattered randomly across the area<br>Most were multiple stemmed from ground level<br>All typically characteristic for the species<br>Most contained varying quantities of dead branch material and occasional broken branches were visible   | 63.6  | 4.5  | B (ii) |
| TG2                    | Approximate numbers -<br>main trees<br>1 Sycamore<br><i>Acer pseudoplatanus</i> , 5<br>Common Ash<br><i>Fraxinus excelsior</i> and<br>2 Common Alder<br><i>Alnus glutinosa</i> | Up to 11 | Estimated<br>maximum<br>s700    | Up to 5 | EM and M | G | Group consists of several hedgerow tree specimens distributed along the mature hedgerow forming the northern boundary<br>Hedgerow ran along the line of a field ditch and trees were positioned on either side of the banks to the ditch<br>As well as several mature specimens there were a number of smaller examples<br>Most individual specimens contained ivy growth on the main stems and into the crowns<br>Generally there were no obvious defects and examples were found to be typically characteristic for their respective species | 221.7 | 8.4  | A (ii) |

|     |  |         |                         |         |    |   |  |      |     |        |
|-----|--|---------|-------------------------|---------|----|---|--|------|-----|--------|
| TG3 | 7 Italian Alder <i>Alnus cordata</i> and 1 Common Alder <i>Alnus glutinosa</i> (including 1 large shrub Hawthorn <i>Crataegus monogyna</i> ) | Up to 9 | Ranging from 240 to 440 | Up to 3 | EM | G | Line of trees along the north eastern boundary extending from Henthorn Farm to approximately half way up the field<br>Uniformly spaced apart and all similar in size and overall condition<br>No obvious defects were visible other than a small number of broken branches in the lower crowns of some examples<br>Noted - all the upper crowns were leaning to the north east, in response to the prevailing wind direction | 87.6 | 5.3 | B (ii) |
|-----|--|---------|-------------------------|---------|----|---|--|------|-----|--------|