

Salph End  
Bedford

# Arboricultural Impact Assessment

August 2019  
10326\_AIA.001

| Project Details        |                                  |
|------------------------|----------------------------------|
| <b>Client:</b>         | Manor Oak Homes Ltd              |
| <b>Project:</b>        | Salph End, Bedford               |
| <b>Report Title:</b>   | Arboricultural Impact Assessment |
| <b>Project Number:</b> | 10326                            |
| <b>File Reference:</b> | 10326_AIA.001                    |
| <b>Date:</b>           | 30/08/2019                       |

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## Executive Summary

- i) **Introduction.** Aspect Arboriculture are commissioned by Manor Oak Homes Ltd to establish and report on the arboricultural impact of the proposed development of land to the northwest of Salph End, Bedford.
- ii) **Proposals.** The application seeks permission for the introduction of *'up to 400 dwellings, land for a new primary school along with open space and access'*.
- iii) **Surveys.** The site was surveyed by Aspect during August 2019 following the guidance contained within BS5837:2012.
- iv) **Statutory Designations.** Background checks have revealed that whilst the site does not occur within a Conservation Area, there are a number of Tree Preservation Orders which influence the site.
- v) **Arboricultural Impact.** Based on the submitted parameters plan, the arboricultural impact of the proposed development is expected to be minor and limited to the clearance of low-quality hedgerow and ornamental plantings to accommodate the site's new accesses of Ravensden Road and Hookhams Lane. No high or moderate quality trees, or trees scheduled within a TPO, are expected to be harmed to accommodate the development. A preliminary tree protection drawing is provided to demonstrate the deliverability of safeguarding measures for retained trees.
- vi) Conclusions drawn against Bedford Borough Council's development control Policies and the NPPF, conclude that in the absence of harm to any high quality or veteran trees, the arboricultural impact of the development will be acceptable/manageable.

# 1 Introduction

## 1.1 Background & Proposals

1.1.1 Aspect Arboriculture are instructed by Manor Oak Homes Ltd to establish and report on the arboricultural impact of the proposed development of land to the northwest of Salph End, Bedford.

1.1.2 The application seeks permission for the introduction of *'up to 400 dwellings, land for a new primary school along with open space and access'*.

## 1.2 Site Overview

1.2.1 The application area comprises the curtilage of no. 25 Hookhams Lane and two agricultural fields to the northwest of Salph End, Bedford. The site's south-eastern boundary directly abuts existing residential development associated with Hookhams Lane, Home Close and Ravensdon Road, where a number of residential units back onto the site and define the boundary. Ravensdon Road defines the northernmost section of the eastern boundary, where access is available via an existing field gate. Mowsbury Golf Course is positioned directly to the west of the site, although it is separated from the site by field boundary hedgerows which contain English Oak and Ash standard. The northern boundary is defined by an area of deciduous woodland known as Marsh Wood and abuts a separate parcel of land which is populated with dense native scrub growth.

1.2.2 The site falls entirely within the administration of Bedford Borough Council as the local planning authority.

## 1.3 Existing Trees

1.3.1 Tree cover within influence of the site represents a typical assemblage for its locality and agricultural setting. The assemblage majors on native field boundary hedgerows which contain the occasional Ash and English Oak standard, alongside parcels of deciduous woodland and native scrub growth.

1.3.2 Marsh Wood, which defines a length of the site's northern boundary is considered to be of particular value (refer to W1 within appendices A and B). The woodland is predominantly comprised of Ash and English Oak and features a relatively dense Hawthorn and Elder understory. Whilst the woodland is not accessible from the site, the edge components over sail the boundary and are readily appreciable within internal views. Their crowns appear to be in good condition, with structures typical for their type and context, and accordingly they are collectively considered to represent a feature of high arboricultural quality.

1.3.3 Native hedgerows and parcels of established scrub growth define the majority of the site's other boundaries, including the interior field network. Arrested management of the hedgerows has resulted in the formation of gaps and Blackthorn encroachment, which has led to variations in quality and density.

- 1.3.4 English Oak and Ash standards occur intermittently within boundary hedgerows. The majority occur within the western extent of the site and appear to be in good health and of good form, and subsequently are considered to represent trees of moderate arboricultural quality. Particular value is recognised within a mature Oak positioned along the southern boundary, which has a particularly well-balanced scaffold structure and canopy (refer to T36 within appendix A and B).

## 2 Statutory Designations

### 2.1 Conservation Area

- 2.1.1 Background checks have confirmed that the application area does not occur within a Conservation Area (Bedford Borough Council, August 2019).

### 2.2 Tree Preservation Orders

- 2.2.1 Background checks have revealed that a number of trees within influence of the site are scheduled within Tree Preservation Orders TPO 01/1956, TPO 02/1967 and TPO 22/1993 (Bedford Borough Council, August 2019).

- 2.2.2 The TPOs are understood to relate to T1, T3, T39, W1 and two areas of land under third party control adjacent to the site's south eastern corner. Trees which over sail the site's boundary that are understood to be affected by the two area TPOs include T37 and T38.

## 3 Policy Review

### 3.1 The National Planning Policy Framework 2019

- 3.1.1 The NPPF (2019) provides planning policy guidance at a National level. With respect to arboriculture, it considers that *'decisions should contribute to and enhance the natural and local environment by: recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland'* (para 170b), and; *'development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists'* (para. 175c).

- 3.1.2 For clarity, there are no ancient or veteran trees, or areas of designated ancient woodland within influence of the application area against which the tests contained with para 175c can be applied.

### 3.2 Bedford Borough Local Plan 2002 (saved July 2013)

- 3.2.1 At a local level, Bedford Borough Council has a statutory obligation to ensure adequate provision is made for the preservation of trees through Section 197 of the Town and Country Planning Act (1990). Saved policies from the Bedford Borough Local Plan 2002 (saved July 2013) are understood to comprise the Council's current primary

development control policies; of which, Policies NE4 *Trees and Hedges* and NE6 *Woodland* are tests considered relevant to trees in the context of development (reproduced below).

### 3.2.2 POLICY NE4 - Trees and Hedges

3.2.3 *'In considering proposals for development, the Borough Council will seek to protect and retain trees and hedges which it considers to be of amenity, landscape or wildlife significance. Where development is permitted, conditions will be applied and, where appropriate, legal agreements sought to:*

- i) secure landscaping, tree and hedgerow planting on or adjacent to such sites appropriate to the character of the development and its setting, including using native species of local origin where suitable;*
- ii) protect existing and new planting;*
- iii) secure structural planting where required;*
- iv) secure the conditions to allow existing or newly planted trees to grow unhindered to full maturity;*
- v) provide for the reinstatement or replacement of such features consequently lost or adversely affected.'*

### 3.2.4 POLICY NE6 – Woodland

*'In considering proposals for development, the Borough Council will:*

- i) protect areas of woodland which it considers to be of landscape, amenity and/or, wildlife significance;*
- ii) protect ancient woodlands by a presumption against development or any potentially damaging use;*
- iii) seek appropriate management;*
- iv) encourage the creation of new woodland especially on ridges and hills;*
- v) discourage recreation uses likely to have an adverse impact on woodland habitat.'*

## 3.3 Emerging Bedford Borough Local Plan (September 2018)

3.3.1 It is known that Bedford Borough Council are in the process of preparing a new Local Plan (Bedford Borough Local Plan 2030), which once adopted will guide planning decisions within the borough up to 2030. A version of the Local Plan has been published (September 2018), within which Policy 36S *Green Infrastructure*, Policy 40 *Retention of trees* and Policy 41 *Hedgerows* relate to existing trees (relevant parts are reproduced overleaf).

### 3.3.2 Policy 36S – Green Infrastructure

*'The existing green infrastructure in the borough shall be protected, enhanced and managed for the future benefit of the environment, people and the economy.*

*Development shall provide a net gain in green infrastructure, while seeking to provide a high quality multi-functional green infrastructure network in accordance with the Bedford Green Infrastructure Plan.*

*The Council will work with developers and other partners to deliver the three strategic green infrastructure projects: the Forest of Marston Vale, the Bedford River Valley Park and the Bedford to Milton Keynes Waterway Park.'*

### 3.3.3 Policy 40 – Retention of trees

*'In considering proposals for development all of the following criteria will apply:*

- i) Existing trees will be protected where they make a significant contribution to the local landscape, or amenity of the site, or have wildlife significance.*
- ii) The Council will protect existing trees and trees planted in accordance with approved landscaping schemes through the making of Tree Preservation Orders where appropriate or necessary.*
- iii) Existing trees on and adjacent to a site must be recorded following guidance in the relevant British Standard including an assessment for ancient or veteran tree status, also including orchard status where appropriate. The Council will as a condition of any planning permission granted, require details as to how trees, hedges and hedge banks will be protected prior to and during and after construction.*
- iv) No building, hard surfacing drainage or underground works will be permitted that does not accord with the principles of the relevant British Standard unless, exceptionally, the Council is satisfied that such works can be accommodated without harm to the trees concerned or there are overriding reasons for development to proceed.*
- v) Planning permission will be refused for development resulting in the loss or deterioration of ancient woodland and the loss of aged or veteran trees found outside ancient woodland (including from indirect impacts such as increased visitor pressure), unless the need for, and benefits of, the development in that location clearly outweigh the loss.'*

### 3.3.4 Policy 41 – Hedgerows

*'Any hedgerows should be retained on development sites, unless there are overriding benefits that justify their removal. Where removal is deemed necessary, details addressing the criteria under the Hedgerow Regulations 1997 (as amended) shall be submitted to demonstrate the validity for removal and details of the replacement*



*hedgerows. Replacement hedgerows shall be of an equal scale, native and species rich and should be provided where possible, elsewhere on the development site.*

*Where there are gaps in the existing hedgerows on the site, the development should provide for additional hedgerow planting.'*

## 4 Arboricultural Impact

### 4.1 Tree Removals<sup>1</sup>

4.1.1 Trees are recommended for removal where: a) it is necessary and unavoidable to site development within proximity to existing trees, such that they cannot be confidently retained in the long-term as living features, and/or b), where the amenity value of the tree will be significantly reduced as a result of the proposals, particularly if already of a low retention priority.

4.1.2 Due to the indicative nature of the parameters plan, detailed assessment of the proposal's arboricultural impact has been restricted, and therefore only tree removals necessary to accommodate the proposed access and internal road layout have been identified at this stage.

4.1.3 There are two new accesses proposed, one adjacent to the eastern boundary off Ravensden Road and one adjacent to the southern boundary off Hookhams Lane, which will require the demolition of no.25 Hookhams Lane. Tree removals necessary to accommodate the propose accesses are detailed within Table 1 (below), and major on the clearance of two sections of low-quality field boundary hedgerow and the removal of low-quality ornamental fruit trees and shrubs from the private amenity space associated with no.25 Hookhams Lane. No high or moderate quality trees, or any trees scheduled within TPO 01/1956, TPO 02/1967 or TPO 22/1993, will be affected by the proposed accesses.

4.1.4 Table 1: Net Tree Removals by BS5837 Category.

| Category A | Category B | Category C   |
|------------|------------|--|
| None       | None       | T53, T54, T55, T56 and T59<br>Apple<br>T57 Horse Chestnut<br>T60 Lawson Cypress<br>G14 Lilac and Snowbell<br>G17+, G15+ and G18+<br>H1+Δ, H4+Δ, H8+Δ |

+ Denotes mixed assemblage of three or more species (details provided in appendix B)

Δ Denotes partial removal

<sup>1</sup> All tree works should be timed to avoid the main nesting season for birds between 1st March and 31st August. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

## 4.2 Vulnerable Trees

4.2.1 Based on the submitted parameters plan, the proposals arboricultural impact arising through encroachment within root protection areas is expected to be low. The constraints posed by the site's existing trees have been identified in accordance with BS5837:2012, and there is sufficient information available to inform detailed design and to provide a high level of confidence with regards to the scheme's capacity to retain trees of value.

4.2.2 When detailed design is undertaken, arboricultural advice in accordance with Clause 5 of BS5837:2012 should be provided to minimise any potential arboricultural impact of the final scheme of development. Regard will be given to this assessment and there will be a further opportunity for any adverse impact to be assessed, with any additional impacts addressed as part of a future reserved matters application. Ongoing arboricultural input could be secured by condition via a request for an Arboricultural Method Statement or an additional Arboricultural Impact Assessment.

## 4.3 Pruning Works<sup>2</sup>

4.3.1 The need for pruning work to accommodate the development proposal is expected to be low and limited to restoring managed edges to boundary hedgerows and parcels of scrub. Although not required to accommodate the development, it is recommended that throughout the entire site, dead branches are removed from the canopies of retained trees to help mitigate the risk of future tree related hazards emerging.

4.3.2 Should the need for pruning work be identified during detailed design, the work should be undertaken in accordance with BS3998:2010, by a competent tree contractor, to ensure that cuts are performed correctly and positioned so as to avoid future structural defects or physiological issues, facilitate growth and maintain aesthetic value. The removal of deadwood should be undertaken in accordance with section 7.3.

## 4.4 Protective Barriers

4.4.1 It will be important to protect the retained trees' above-ground structures and underlying RPAs from damage during development works. To achieve this, tree protection barriers should be erected prior to the commencement of construction works and consist of the default barrier specification provided in BS5837:2012.

4.4.2 Where the development proposals are not in close proximity to retained trees or hedges, a reduced specification tree protection barrier is considered appropriate, which omits the 45° bracing and is secured with a 100x100mm fence post every second panel.

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<sup>2</sup> All tree works should be timed to avoid the main nesting season for birds between 1st March and 31st August. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

4.4.3 The location for the default tree protection fencing is illustrated within the Tree Protection Plan (appendix C) with a bold blue line, and for the reduced specification, with a dashed blue line.

4.4.4 It would be prudent for the Project Arboriculturist to oversee the initial setting out of tree protection barriers and provide written confirmation to the Council's arboricultural officer on completion.

## 4.5 Mitigation Replanting

4.5.1 Based on the submitted parameters plan, the impact of the proposed development is expected to generate little requirement for replacement planting, however the introduction of new development presents an opportunity for securing new planting on the site.

4.5.2 It is recommended that detailed planting proposals are secured by condition and are agreed as part of a future reserved matters application. It is recommended that new planting includes a variety of ornamental standards throughout the interior, within areas of public open space and adjacent to internal access roads. It is also recommended that additional hedgerow planting is provided as part of the development (in accordance with emerging Policy 41), to reinforce gaps within boundary hedgerows and to break-up development parcels.

4.5.3 It is recommended that the species proposed include native species and cultivars which are appropriate for inclusion within a high-quality residential setting; hedgerow mixes should also be native and species rich.

## 5 Conclusions

5.1.1 The proposed parameters plan been informed by a survey of the existing tree stock, and a review of relevant policy tests.

5.1.2 Based on the submitted parameters plan, the arboricultural impact of the proposed development is expected to be minor and limited to the clearance of low-quality hedgerow and ornamental plantings to accommodate the site's new accesses of Ravensden Road and Hookhams Lane. No high or moderate quality trees, or trees scheduled within TPO 01/1956, TPO 02/1967 or TPO 22/1993, are expected to be harmed to accommodate the development. It will be possible to mitigate for the removals required to for the proposed accesses with the provision of appropriate replacement tree and hedgerow planting.

5.1.3 A preliminary scheme for safeguarding retained trees during construction has been prepared which relies on the use of standard barrier techniques, however this work should be reviewed/expanded on during detailed design.

5.1.4 The principle of introducing development to the site is considered to be acceptable/supportable from the arboricultural perspective, subject to ongoing arboricultural input during detailed design and the adoption of safeguards for

protecting retained trees during construction. It is our subsequent judgement that introducing development in accordance with the submitted parameters plan would not conflict with Bedford Borough Council's adopted Policies NE4 and NE6, emerging Policy 36S, 40 and 41 or NPPF paragraphs 170b and 175c.

## 6 Recommendations

- 6.1.1 Pursuant to the Council's preference to ensure confident tree retention during the development, an Arboricultural Impact Assessment should be produced following detailed design, alongside a detailed Arboricultural Method Statement which expands on Appendix C. It is also recommended that detailed planting proposals are produced to demonstrate the approach to incorporating new planting within the site. This work could be secured by Condition.
- 6.1.2 An additional Arboricultural Impact Assessment should assess a detailed layout in accordance with Clause 5 of BS5837:2012. The Arboricultural Method Statement could address matters including: specification for tree protection barriers, including revisions to barrier locations; a schedule of tree works; works within RPAs; a scheme for auditing tree protection and subsequent reporting to the Council should feature explicitly throughout. Detailed Tree Protection Drawings should be prepared to 1:500 scale to support the AMS, with detail given of proposed levels and service routes.

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### Checked By:

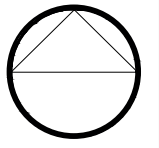
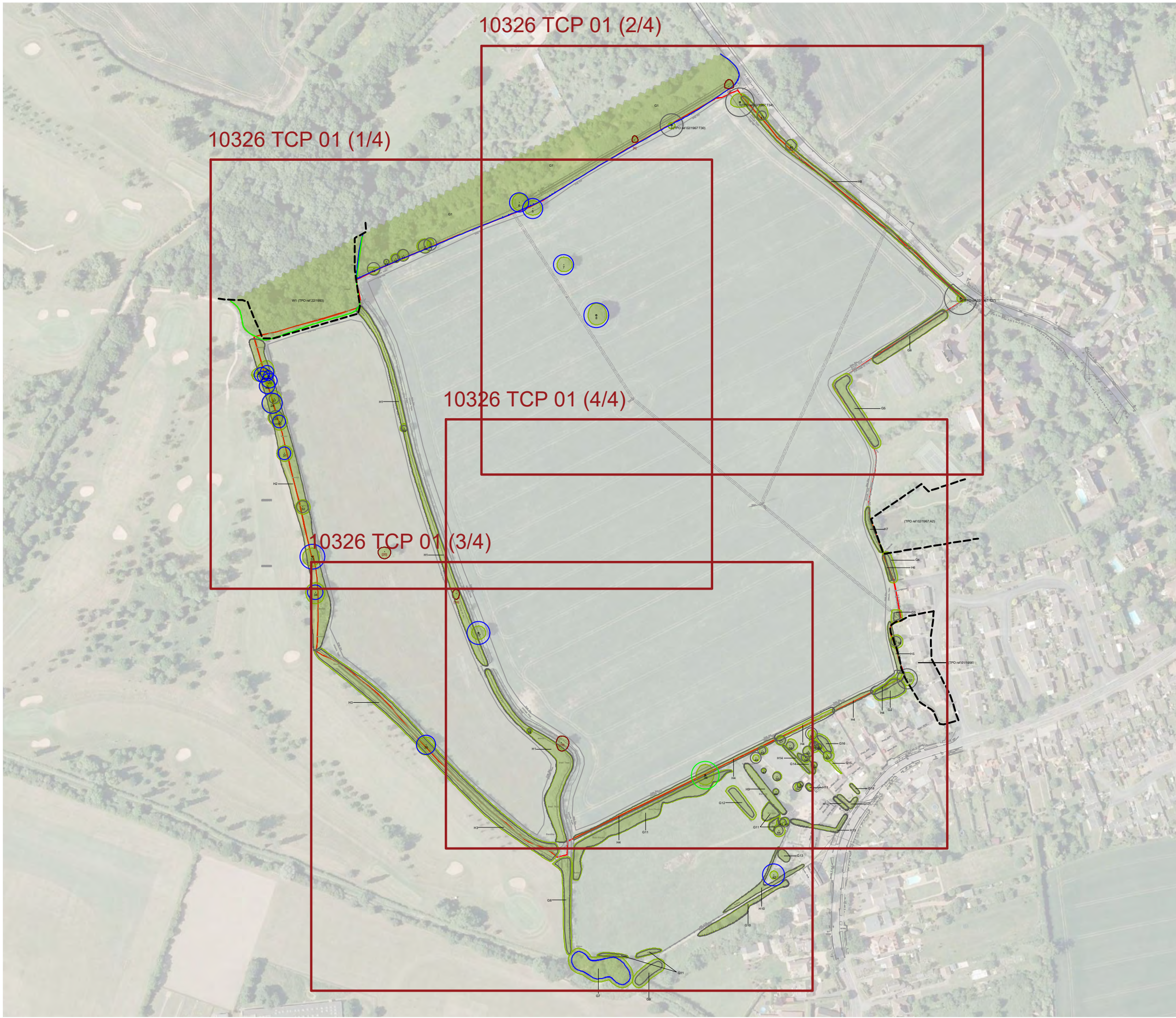
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## APPENDICES

**APPENDIX A**

**TREE CONSTRAINTS PLAN (10326 TCP 01)**

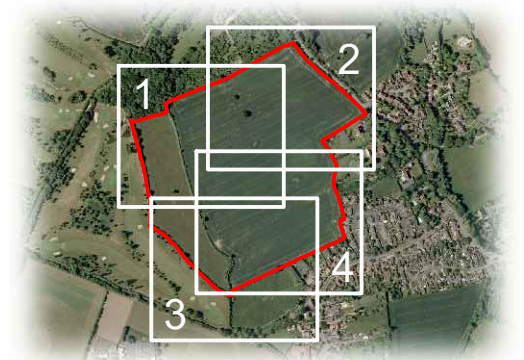


**KEY:**

- Site Boundary
- 15 Tree Numbers
- Tree Canopies
- Category 'U' Trees
- Category 'A' RPA
- Category 'B' RPA
- Category 'C' RPA
- Tree Preservation Order

Note: Trees 16, 18, 25, 32, 37, 38, 46-61, Groups G2-G10, G12-G18, Hedgerows H9, H11-H13 and Woodland W1 have been plotted using measurements onsite in conjunction with aerial imagery. Their locations were not recorded on the topographical survey of the site.

Note: The RPA footprint for trees 39 & 40 have been displaced to allow for the effect of the adopted highway. The surface area of the RPA has not been reduced.



Cited from Google Earth

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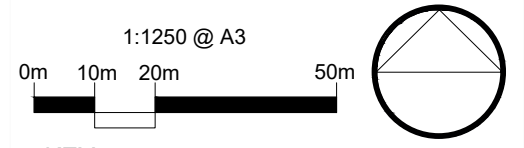
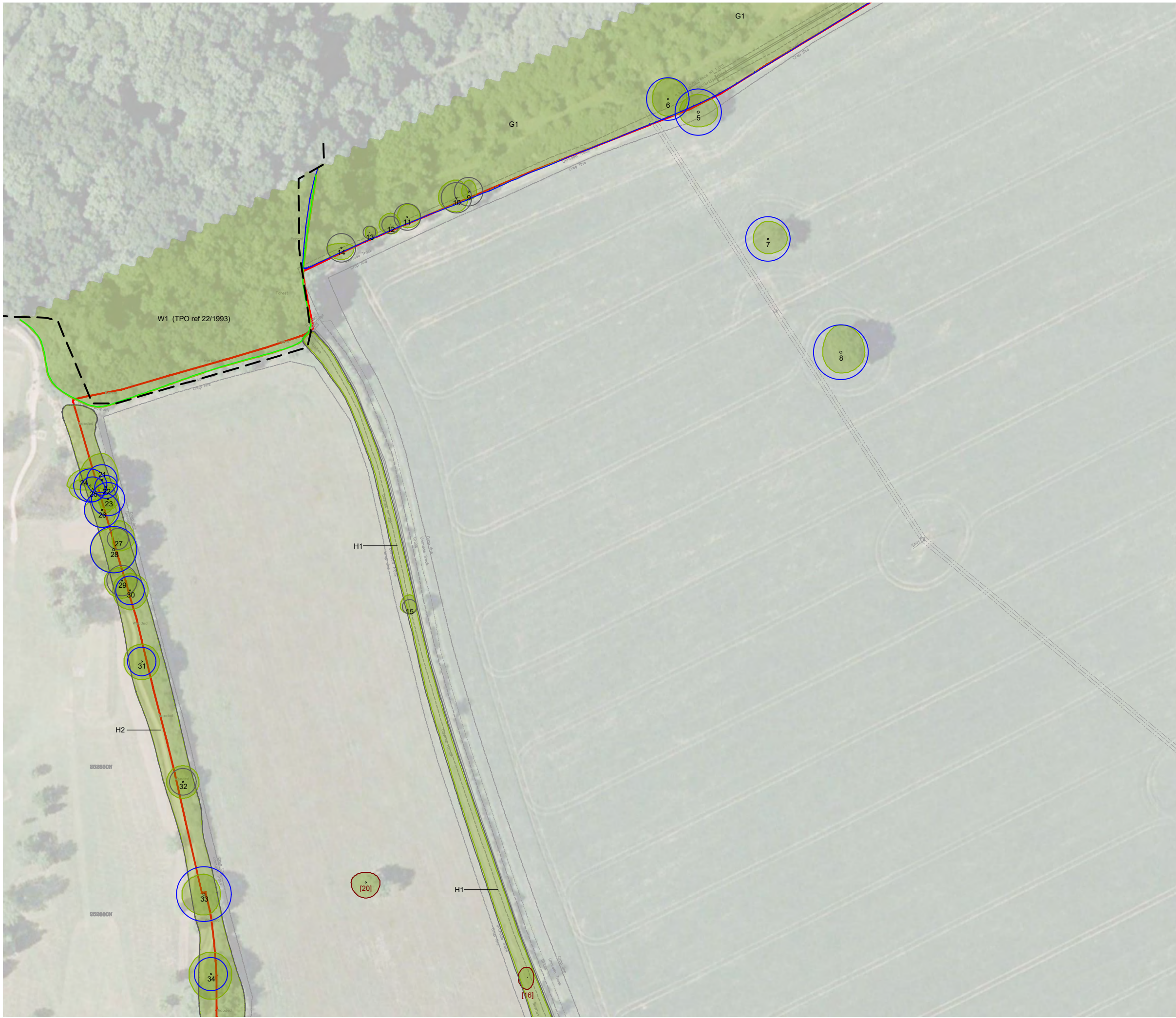


TITLE  
**Salph End, Bedford  
 Tree Constraints Plan**

CLIENT  
**Manor Oak Homes**

| SCALE                   | DATE     | DRAWN |
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| DRAWING NUMBER          | REVISION |       |
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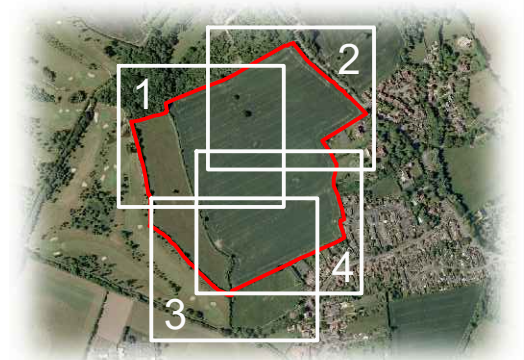
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- KEY:**
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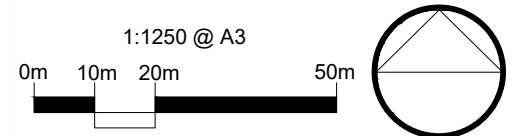
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**Salph End, Bedford  
 Tree Constraints Plan**

CLIENT  
**Manor Oak Homes**

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Based on: 1215-2272-1-3.dwg





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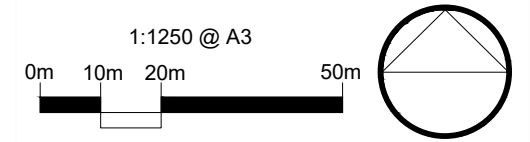


TITLE  
**Salph End, Bedford  
 Tree Constraints Plan**

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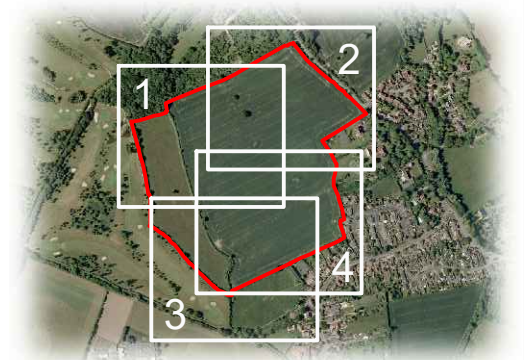
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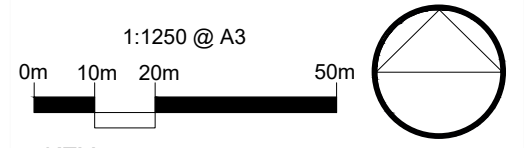


TITLE  
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|                                      |                  |             |
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**Manor Oak Homes**

|                                      |                  |             |
|--------------------------------------|------------------|-------------|
| SCALE<br>1:1250 @ A3                 | DATE<br>AUG 2019 | DRAWN<br>GW |
| DRAWING NUMBER<br>10326 TCP 01 (4/4) |                  | REVISION    |

Based on: 1215-2272-1-3.dwg

**APPENDIX B**

**TREE SURVEY SCHEDULE (10326 TS 01)**

**BS 5837:2012 Tree Schedule: Salph End,  
Bedford**

BS5837:2012 Tree Survey: Explanation of Survey Criteria

| Tree Number | Common Species Name | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |   |   |   |        | Crown Clearance (m) | Life Stage | Physiological Condition | Structural Condition | Comments | BS5837 Category | RPA Radius (m) |
|-------------|---------------------|---------------------|------------|------------------|---|---|---|--------|---------------------|------------|-------------------------|----------------------|----------|-----------------|----------------|
|             |                     |                     |            | N                | E | S | W | radial |                     |            |                         |                      |          |                 |                |
|             |                     |                     |            |                  |   |   |   |        |                     |            |                         |                      |          |                 |                |

*Sequential reference number cited on all aspect drawing.*

*Height and Crown spread measured to the nearest half meter; # denotes where this is estimated.*

*e.g.: young, semi-mature, early-mature, mature or over-mature*

*Area around tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of roots and soil structure is a priority. \*The RPA has been manipulated to allow for various site features, i.e. roads, structures or changes in levels. Please refer to the Tree Constraints Plan for these changes.*

*Category prefix A-C denotes arboricultural quality, decreasing from A (high) to C (low); Subcategories 1, 2 and 3 highlight associated arboricultural (1), landscape (2) and ecological (3) qualities.*

*Category U trees are those in such a condition that they cannot be realistically retained as living trees in the current context for the long term.*

*Measured to the nearest 10mm; # denotes estimated diameter where access is not possible.*

*e.g.: above-average, average, below average or dead*

*General observations, i.e. defects, preliminary management recommendation, presence of pests/disease, perceived significance.*

*Height of first significant branch and/or canopy*

*e.g.: good, indifferent, poor, or hazardous*

**Colour band key:**

- Category A
- Category B
- Category C
- Category U

The following survey should not be interpreted as a report on tree health and safety. Aspect's opinion of tree condition and structural potential is valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees existing setting.

| Tree Number | Common Species Name | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |      |      |      | Radial | First Significant Branch (m) | Crown Clearance (m) | Life Stage   | Physiological Condition | Structural Condition | Comments   | BS5837 Category | RPA Radius (m) |
|-------------|---------------------|---------------------|------------|------------------|------|------|------|--------|------------------------------|---------------------|--------------|-------------------------|----------------------|--|-----------------|----------------|
|             |                     |                     |            | N                | E    | S    | W    |        |                              |                     |              |                         |                      |  |                 |                |
| 1           | English Oak         | 900                 | 13m        | 7                | 6.5  | 3.5  | 7.25 |        | 5.5                          | 5                   | Mature       | Below Average           | Poor                 | Multiple impact wounds exposing heartwood around the base<br>Fungal fruiting body at base of stem to south<br>Unsympathetic limb removals from the lower canopy<br>Above average die back, secondary growth forms internal canopy<br>Reduced future potential  | C1              | 10.8           |
| 2           | Ash                 | 370<br>300          | 10.5m      | 5.5#             | 3.5  | 1.25 | 3.5  |        | 3                            | 3.5                 | Early Mature | Below Average           | Poor                 | Cavity within bole extending down from previously removed co-dominant to southeast<br>Co-dominant to southwest previously reduced to c. 2m<br>Above average die back<br>Multiple <i>Inonotus hispidus</i> brackets on stems and surrounding ground<br>Considered to be in a state of terminal decline  | U               | N/A            |
| 3           | English Oak         | 720                 | 7m         | 2.25             | 2.5  | 2.5  | 2.75 |        | 3.75                         | 2.75                | Mature       | Below Average           | Poor                 | Previously unsympathetically crown reduced<br>Squat canopy form<br>Above average deadwood<br>Large impact wound exposing heartwood at base to east<br>Exposed heartwood throughout the majority of remaining co-dominant to southeast, likely to be a tear out wound from past reduction/failure<br>Longitudinal pocket of decay on scaffold to the southwest from c. 4m to 6m<br>Low arboricultural quality | C1              | 8.7            |
| 4           | Ash                 | 410                 | 8m         | 3.5#             | 2.75 | 1.5  | 1.75 |        | 3.5                          | 3.5                 | Early Mature | Below Average           | Poor                 | Single stem previously failed at c. 3.5m<br>Epicormic growth forms minimal canopy coverage<br>Unlikely to offer a long term future contribution  | U               | N/A            |
| 5           | English Oak         | 640                 | 9.5m       | 6                | 6.5  | 5    | 6.5  |        | 3.25                         | 3.5                 | Early Mature | Average                 | Indifferent          | Single stout stem forks at c. 2m into 2 co-dominant stems, union appears sound<br>Previous limb removals from the lower canopy to crown lift<br>Minor partially occluded wound at base to southwest<br>Minor internal deadwood<br>Well balanced scaffold structure<br>Slightly squat canopy form<br>Moderate example of species whilst maturing  | B12             | 7.8            |

| Tree Number | Common Species Name | Trunk Diameter (mm)          | Height (m) | Crown Spread (m) |      |      |      |        | First Significant Branch (m) | Crown Clearance (m) | Life Stage   | Physiological Condition | Structural Condition | Comments  | BS5837 Category | RPA Radius (m) |
|-------------|---------------------|------------------------------|------------|------------------|------|------|------|--------|------------------------------|---------------------|--------------|-------------------------|----------------------|---|-----------------|----------------|
|             |                     |                              |            | N                | E    | S    | W    | Radial |                              |                     |              |                         |                      |   |                 |                |
| 6           | English Oak         | 595                          | 13m        | 7#               | 6.5  | 5.75 | 5.25 |        | 4.5                          | 3                   | Early Mature | Average                 | Indifferent          | Established on frontage of G1<br>Limited access to base<br>Small cavity with signs of decay at base to south, active bees nest within at time of survey<br>Previous limb removals from the lower canopy to crownlift<br>Maintains a single leader for majority of height<br>Minor internal deadwood<br>Well balanced scaffold structure and canopy<br>Moderate example of the species whilst maturing   | B12             | 7.2            |
| 7           | English Oak         | 620                          | 11m        | 6                | 6.5  | 5    | 5    |        | 3.25                         | 3.5                 | Early Mature | Average                 | Indifferent          | Standalone internal field specimen<br>Agricultural cultivation c. 2m from base<br>Multiple impact wounds throughout buttress flares<br>Minor bacterial standing on west side of the trunk<br>Previous unsympathetic limb removals from lower canopy to crownlift<br>Average internal deadwood<br>Possible historic tear out wound, now fully occluded, on southeast side of stem extending from base to c. 2m<br>Well balanced scaffold structure and canopy<br>Moderate example of species whilst maturing | B12             | 7.5            |
| 8           | English Oak         | 780                          | 14m        | 9.25             | 8    | 7    | 6.25 |        | 4.25                         | 4.75                | Mature       | Average                 | Indifferent          | Standalone internal field specimen<br>Agricultural cultivation c. 2m from base<br>Establishing epicormic growth on stem from c. 1.5m to 3m<br>Minor internal deadwood<br>Previous limb removals from lower canopy to crownlift<br>Well balanced scaffold structure and canopy<br>Moderate example of the species at maturity  | B12             | 9.3            |
| 9           | Ash                 | 230<br>150<br>290            | 11m        | 4#               | 2.5  | 2.5  | 2.5  |        | 4.25                         | 4                   | Early Mature | Average                 | Poor                 | Outlying component of G1<br>Lapsed coppice stool, cavity within the bole<br>Above average internal deadwood<br>Low arboricultural quality   | C12             | 4.8            |
| 10          | English Oak         | 420                          | 10m        | 6#               | 3.75 | 4.75 | 6.25 |        | 3                            | 3                   | Early Mature | Average                 | Indifferent          | Outlying component of G1<br>Previous sub dominant removal from base to south<br>Above average epicormic growth throughout stem and canopy<br>Unremarkable example of the species  | C1              | 5.1            |
| 11          | Field Maple         | 2*160<br>2*150<br>170<br>140 | 9m         | 4.5#             | 4.25 | 3.5  | 3.5  |        | 3                            | 3                   | Early Mature | Average                 | Poor                 | Outlying component of G1<br>Multi stemmed from ground level<br>Multiple stems tight and fused at c. 1.5m<br>Low arboricultural quality  | C12             | 4.5            |



| Tree Number | Common Species Name | Trunk Diameter (mm)               | Height (m) | Crown Spread (m) |      |      |      |        | First Significant Branch (m) | Crown Clearance (m) | Life Stage   | Physiological Condition | Structural Condition | Comments  | BS5837 Category | RPA Radius (m) |
|-------------|---------------------|-----------------------------------|------------|------------------|------|------|------|--------|------------------------------|---------------------|--------------|-------------------------|----------------------|---|-----------------|----------------|
|             |                     |                                   |            | N                | E    | S    | W    | Radial |                              |                     |              |                         |                      |   |                 |                |
| 12          | Field Maple         | 190<br>150                        | 9m         | 4#               | 3.25 | 3    | 4    |        | 1.5                          | 2                   | Semi Mature  | Average                 | Indifferent          | Outlying component of G1<br>Bifurcates from ground level<br>Average minor internal deadwood<br>Low arboricultural quality   | C12             | 3              |
| 13          | Ash                 | 180                               | 12m        | 2#               | 2.5  | 2.5  | 1.5  |        | 5                            | 4.5                 | Semi Mature  | Average                 | Indifferent          | Outlying component of G1<br>Establishing within a field boundary ditch<br>Low arboricultural quality  | C12             | 2.1            |
| 14          | Ash                 | 130<br>150<br>160<br>180<br>2*170 | 12.5m      | 1.5#             | 4.25 | 4    | 5    |        | 3.75                         | 4.25                | Early Mature | Below Average           | Poor                 | Outlying component of G1<br>Multi stemmed from ground level<br>Above average deadwood<br>Low arboricultural quality   | C12             | 4.8            |
| 15          | Ash                 | 2*140#                            | 7.5m       | 4                | 2.25 | 2.25 | 3.25 |        | 2.5#                         | 2.5                 | Semi Mature  | Below Average           | Poor                 | Establishing within hedgerow<br>Bifurcates from ground level<br>Above average minor internal deadwood<br>Low arboricultural quality   | C12             | 2.4            |
| 16          | Ash                 | 2*150<br>100<br>#                 | 8m         | 3.5              | 2.25 | 4    | 3    |        | 2.5#                         | 3                   | Semi Mature  | Below Average           | Poor                 | Establishing within hedgerow<br>Multi stemmed from ground level<br>Above average die back<br>Entering a state of terminal decline   | U               | N/A            |
| 17          | English Oak         | 730                               | 11m        | 5.5              | 5.25 | 4.75 | 5.5  |        | 2.75                         | 1.5                 | Mature       | Average                 | Indifferent          | Established on east bank of internal field boundary ditch<br>Unable to access base to the west<br>Previous limb removals from lower canopy to crownlift<br>Establishing epicormic growth on stem from c. 2m to 3m<br>Scaffold limb to north previously failed at c. 4m<br>Average internal deadwood<br>Moderate example of species at maturity  | B12             | 8.7            |
| 18          | Ash                 | 110                               | 5.5m       |                  |      |      |      | 2      | 1.5                          | 2                   | Semi Mature  | Average                 | Indifferent          | Establishing self set specimen<br>Low arboricultural quality  | C12             | 1.2            |
| 19          | Ash                 | 470                               | 11.5m      | 5                | 5.5  | 6.5  | 4#   |        | 4                            | 2                   | Early Mature | Average                 | Hazardous            | Established on east bank of internal field boundary ditch<br>longitudinal crack extending down from primary union<br>to c. 4m<br>Multiple woodpecker holes within close proximity to crack<br>Visible exudate from lower woodpecker holes<br>Above average minor internal deadwood<br>Hazardous structural condition, anticipate future failure | U               | N/A            |
| 20          | English Oak         | 560                               | 9m         | 3.5              | 4.75 | 5.25 | 5    |        | 2.5                          | 3                   | Early Mature | Dead                    | Hazardous            | Standalone internal field specimen<br>Standing deadwood at time of survey   | U               | N/A            |

| Tree Number | Common Species Name | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |      |      |      | Radial | First Significant Branch (m) | Crown Clearance (m) | Life Stage   | Physiological Condition | Structural Condition | Comments  | BS5837 Category | RPA Radius (m) |
|-------------|---------------------|---------------------|------------|------------------|------|------|------|--------|------------------------------|---------------------|--------------|-------------------------|----------------------|---|-----------------|----------------|
|             |                     |                     |            | N                | E    | S    | W    |        |                              |                     |              |                         |                      |   |                 |                |
| 21          | English Oak         | 430                 | 13.5m      | 9                | 5.5  | 3    | 7.75 |        | 2                            | 2                   | Early Mature | Average                 | Indifferent          |   | B2              | 5.1            |
| 22          | English Oak         | 330                 | 13m        | 3                | 3.5  | 3    | 3    |        | 2.25                         | 3                   | Early Mature | Average                 | Indifferent          | 6 no. English Oak established within field boundary hedgerow  | B2              | 3.9            |
| 23          | English Oak         | 360<br>300          | 10.5m      | 3.5              | 4.5  | 8.75 | 3.5  |        | 2.25                         | 3.25                | Early Mature | Average                 | Indifferent          | Forms a single mutually suppressed and cohesive canopy<br>Predominantly clad and obscured by Ivy, unable to thoroughly inspect  | B2              | 5.7            |
| 24          | English Oak         | 470                 | 14m        | 6#               | 3.5  | 3.5  | 8#   |        | 2.75                         | 1.5                 | Early Mature | Average                 | Indifferent          | Damage to the lower canopies from past flail management<br>All have average internal deadwood and epicormic growth  | B2              | 5.7            |
| 25          | English Oak         | 350                 | 11m        | 4                | 1.5  | 4    | 8#   |        | 2.5                          | 1.75                | Early Mature | Average                 | Indifferent          | Considered to be of low individual significance, conferred moderate collective value as cohesive unit   | B2              | 4.2            |
| 26          | English Oak         | 500                 | 14m        | 4                | 4.75 | 5.75 | 6#   |        | 3                            | 2                   | Early Mature | Average                 | Indifferent          |   | B2              | 6              |
| 27          | Ash                 | 310                 | 12m        | 6.25             | 5.5  | 4    | 2    |        | 4.75                         | 3.5                 | Early Mature | Average                 | Indifferent          | Established within field boundary hedgerow<br>Cohesive with overgrown hedgerow components<br>Canopy appears slightly sparse<br>Minor internal deadwood<br>Low arboricultural quality  | C12             | 3.6            |
| 28          | English Oak         | 650 at 0.5m         | 12m        | 7.25             | 7.5  | 7.5  | 8#   |        | 1.5                          | 2                   | Early Mature | Average                 | Indifferent          | Established within field boundary hedgerow<br>3 no. co-dominant stems from c. 1.5m<br>Average internal deadwood and epicormic growth<br>Damage to lower canopy from past flail management<br>Moderate example of species whilst maturing        | B12             | 7.8            |
| 29          | English Oak         | 420                 | 8.5m       | 4.5              | 5    | 6#   | 6#   |        | 2                            | 3                   | Early Mature | Below Average           | Indifferent          | Established within field boundary hedgerow<br>Cohesive with companion to south<br>Limited access to inspect base due to understorey<br>Above average internal deadwood and sparse canopy<br>Squat canopy form<br>Weaker component of collection | C12             | 5.1            |
| 30          | English Oak         | 400#                | 10.5m      | 5.75             | 6    | 6.5  | 6#   |        | 3                            | 2.5                 | Early Mature | Average                 | Indifferent          | Established within field boundary hedgerow<br>Inaccessible due to dense understorey<br>Cohesive with companion to north<br>Average minor internal deadwood<br>Structure appears typical for the species within current context                  | B2              | 4.8            |
| 31          | English Oak         | 500#                | 10m        |                  |      |      |      | 6      | 3#                           | 2.5                 | Early Mature | Average                 | Indifferent          | Established within field boundary hedgerow<br>Inaccessible due to the dense understorey<br>Average internal deadwood<br>Squat canopy form appears fairly radial<br>Structure appears typical for the species within current context             | B2              | 6              |
| 32          | Ash                 | 380#                | 7.5m       |                  |      |      |      | 5.5#   | 3#                           | 3                   | Early Mature | Average                 | Indifferent          | Established within field boundary hedgerow<br>Inaccessible due to dense understorey<br>Lower canopy cohesive with and obscured by hedgerow<br>Squat canopy form<br>Above average minor internal deadwood<br>Unremarkable example of species     | C1              | 4.5            |

| Tree Number | Common Species Name | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |      |     |      |    | Radial | First Significant Branch (m) | Crown Clearance (m) | Life Stage | Physiological Condition | Structural Condition  | Comments | BS5837 Category | RPA Radius (m) |
|-------------|---------------------|---------------------|------------|------------------|------|-----|------|----|--------|------------------------------|---------------------|------------|-------------------------|---|----------|-----------------|----------------|
|             |                     |                     |            | N                | E    | S   | W    |    |        |                              |                     |            |                         |   |          |                 |                |
| 33          | English Oak         | 770 at 0.5m         | 10.5m      | 6.75             | 5.5  | 7   | 7.5  |    | 1      | 1.5                          | Mature              | Average    | Indifferent             | Established within field boundary hedgerow<br>3 no. sub dominant stems orientated to the west at c. 1m<br>Tight, crossing and fused scaffold limbs to east and central canopy<br>Average internal deadwood and epicormic growth<br>Squat canopy form<br>Damage to lower canopy from past flail management | B2       | 9.3             |                |
| 34          | English Oak         | 470                 | 13.5m      | 7.5              | 7    | 8.5 | 7.5  |    | 3      | 3.5                          | Early Mature        | Average    | Indifferent             | Established within field boundary hedgerow<br>Maintains a single leader for majority of height<br>Partially clad in Ivy, unable to thoroughly inspect<br>Average internal deadwood and epicormic growth<br>Well balanced canopy form<br>Moderate example of species whilst maturing                       | B12      | 5.7             |                |
| 35          | English Oak         | 610                 | 13.5m      | 6                | 6.5  | 7.5 | 7.25 |    | 1.5    | 2.5                          | Early Mature        | Average    | Indifferent             | Established within field boundary hedgerow<br>3 no. sub dominant stems orientated to the south at c. 1.5m<br>Clad and obscured by Ivy, unable to thoroughly inspect<br>Lower canopy cohesive with understory<br>Average internal deadwood   | B2       | 7.2             |                |
| 36          | English Oak         | 880                 | 14.5m      | 8.5              | 6.25 | 7#  | 7    |    | 3.5    | 2.5                          | Mature              | Average    | Good                    | Established within field boundary hedgerow<br>Barbwire tight around lower stem<br>Some minor damage to lower canopy from past flail management<br>Average internal deadwood<br>Well distributed scaffold structure and balanced canopy<br>Good example of species at maturity                             | A12      | 10.5            |                |
| 37          | Ash                 | 620#                | 14m        |                  |      |     |      | 5# | 3#     | 2.5#                         | Early Mature        | Average    | Poor                    | Inaccessible, offsite within neighbouring residential land<br>Previously unsympathetically pollarded<br>Low arboricultural quality  | C1       | 7.5             |                |
| 38          | Field Maple         | 290<br>150<br>#     | 9.5m       |                  |      |     |      | 5  | 2.5#   | 3.25                         | Early Mature        | Average    | Indifferent             | Inaccessible, offsite within neighbouring residential land<br>Overhangs the site boundary<br>Multiple limb removals from the lower canopy to crownlift<br>Unremarkable example of the species   | C1       | 3.9             |                |
| 39          | Ash                 | 910                 | 7.5m       |                  |      |     |      | 3  | 5.5    | 5.5                          | Mature              | Average    | Poor                    | Standalone specimen on highway verge<br>Recently unsympathetically pollarded to c. 5.5m monolith<br>Low arboricultural quality  | C1       | 10.8            |                |
| 40          | Norway Maple        | 330                 | 8.5m       | 4.5              | 4.5  | 5.5 | 4.25 |    | 2.25   | 2.25                         | Early Mature        | Average    | Poor                    | Highways verge planting<br>Large impact wound exposing heartwood on east side of stem at base<br>Multiple limb removals from lower canopy to crownlift over highway<br>Unremarkable example of the species  | C1       | 3.9             |                |

| Tree Number | Common Species Name         | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |      |     |      |        | First Significant Branch (m) | Crown Clearance (m) | Life Stage   | Physiological Condition | Structural Condition | Comments   | BS5837 Category | RPA Radius (m) |
|-------------|-----------------------------|---------------------|------------|------------------|------|-----|------|--------|------------------------------|---------------------|--------------|-------------------------|----------------------|--|-----------------|----------------|
|             |                             |                     |            | N                | E    | S   | W    | Radial |                              |                     |              |                         |                      |  |                 |                |
| 41          | Ash                         | 270                 | 9.5m       | 3.75             | 4.5  | 3.5 | 4#   |        | 3                            | 2.5                 | Semi Mature  | Average                 | Indifferent          | Self set specimen established within field boundary hedgerow<br>Low arboricultural quality   | C12             | 3.3            |
| 42          | Lombardy Poplar             | 700#                | 20m        |                  |      |     |      | 3#     | 0.5#                         | 1#                  | Mature       | Average                 | Indifferent          | Standalone specimen<br>Inaccessible, offsite within neighbouring residential land<br>Structure appears typical for the species within current context<br>Prominent within views from surrounding dwellings | B2              | 8.4            |
| 43          | Norway Maple                | 230 oi              | 5.5m       | 3.5              | 1.5  | 3   | 5#   |        | 2                            | 2                   | Semi Mature  | Average                 | Indifferent          | Partially Ivy clad, unable to thoroughly inspect<br>Structure typical for the species within current context<br>Average minor internal deadwood  | C12             | 2.7            |
| 44          | Norway Maple                | 280                 | 8m         | 5                | 5    | 4.5 | 4    |        | 2                            | 2                   | Semi Mature  | Average                 | Indifferent          | Radial canopy<br>Structure typical for the species within current context  | C12             | 3.3            |
| 45          | Norway Maple 'Crimson King' | 320 oi              | 6.5m       | 3.5              | 2.5  | 2.5 | 3.5  |        | 2                            | 2                   | Semi Mature  | Average                 | Indifferent          | Clad and obscured by dense Ivy, unable to thoroughly inspect<br>Structure typical for the species within current context<br>Canopy biased to the north   | C12             | 3.9            |
| 46          | Apple                       | 210                 | 3.5m       |                  |      |     |      | 2      | 1                            | 1                   | Semi Mature  | Average                 | Indifferent          | Orchard planting within residential land<br>Structure typical for the species within the current context<br>Low arboricultural quality   | C12             | 2.4            |
| 47          | Pear                        | 2*80<br>2*70        | 5m         |                  |      |     |      | 1.5    | 0.5                          | 0.5                 | Semi Mature  | Average                 | Indifferent          | Orchard planting within residential land<br>Regrowth from previously felled stump<br>Low arboricultural quality  | C12             | 1.8            |
| 48          | Leyland Cypress             | 350#                | 4m         |                  |      |     |      | 2.5    | 0.5                          | 0.5                 | Early Mature | Average                 | Indifferent          | Previously reduced<br>Obscured by dense lower canopy, unable to thoroughly inspect<br>Low arboricultural quality   | C12             | 4.2            |
| 49          | Apple                       | 250#                | 5m         | 3.75             | 4.25 | 3   | 2#   |        | 1                            | 1                   | Early Mature | Average                 | Indifferent          | Orchard planting within residential land<br>Obscured by dense understory<br>Low arboricultural quality   | C12             | 3              |
| 50          | Apple                       | 250 at 1m           | 3m         | 4                | 3.5  | 3   | 3.25 |        | 1                            | 1.5                 | Early Mature | Average                 | Indifferent          | Orchard planting within residential land<br>Structure typical for the species within current context<br>Low arboricultural quality   | C12             | 3              |
| 51          | Bay                         | 2*150               | 6m         |                  |      |     |      | 2      | 0.5                          | 0.5                 | Semi Mature  | Average                 | Indifferent          | Planting within residential land<br>Low arboricultural quality   | C12             | 2.4            |
| 52          | Tamarisk                    | 280 at 1m           | 3.5m       | 2.75             | 2.5  | 3.5 | 2    |        | 1                            | 0.5                 | Mature       | Average                 | Indifferent          | Unsympathetic pruning throughout the canopy<br>Low arboricultural quality  | C12             | 3.3            |

| Tree Number | Common Species Name  | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |      |      |      |                 | First Significant Branch (m) | Crown Clearance (m) | Life Stage                     | Physiological Condition | Structural Condition | Comments   | BS5837 Category | RPA Radius (m) |
|-------------|--|---------------------|------------|------------------|------|------|------|-----------------|------------------------------|---------------------|--------------------------------|-------------------------|----------------------|--|-----------------|----------------|
|             |  |                     |            | N                | E    | S    | W    | Radial          |                              |                     |                                |                         |                      |  |                 |                |
| 53          | Apple  | 190 at 1m           | 3.5m       | 1.75             | 2    | 3.5  | 2.5  |                 | 1.5                          | 1.5                 | Semi Mature                    | Average                 | Indifferent          | Orchard planting within residential land<br>Structure typical for the species within the current context<br>Low arboricultural quality   | C12             | 2.4            |
| 54          | Apple  | 140<br>190<br>at 1m | 4m         | 2.5              | 3.5  | 3.75 | 2    |                 | 1.5                          | 1.5                 | Semi Mature                    | Average                 | Indifferent          | Orchard planting within residential land<br>Bifurcates at c. 0.5m<br>Structure typical for the species within current context<br>Low arboricultural quality  | C12             | 2.7            |
| 55          | Apple  | 230<br>260          | 4m         | 3.75             | 4    | 4.5  | 3.75 |                 | 1.75                         | 1.75                | Early Mature                   | Average                 | Indifferent          | Orchard planting within residential land<br>Structure typical for the species within current context<br>Radial canopy<br>Low arboricultural quality  | C12             | 4.2            |
| 56          | Apple  | 260                 | 5m         | 5.5              | 5.5  | 3.75 | 2.5  |                 | 2                            | 2                   | Early Mature                   | Average                 | Indifferent          | Orchard planting within residential land<br>Structure typical for the species within current context<br>Low arboricultural quality   | C12             | 3              |
| 57          | Horse chestnut   | 240<br>120          | 7m         | 2.75             | 3.5  | 4    | 4.5# |                 | 2.5                          | 2.5                 | Semi Mature                    | Average                 | Indifferent          | Bifurcates at c. 0.75m<br>Unsympathetic pruning throughout canopy  | C12             | 3.3            |
| 58          | Hawthorn   | 6*150#              | 6m         |                  |      |      |      | 3               | 1.5                          | 1.5                 | Early Mature                   | Average                 | Indifferent          | Inaccessible offsite specimen<br>Radial canopy<br>Structure appears typical for the species within current context<br>Unsympathetic pruning to the lower canopy  | C12             | 4.5            |
| 59          | Apple  | 150<br>160<br>170   | 5.5m       | 4.25             | 4.25 | 5    | 4.25 |                 | 1.5                          | 2                   | Early Mature                   | Average                 | Indifferent          | Orchard planting within residential land<br>Slightly sparse canopy<br>Structure typical for the species within current context<br>Low arboricultural quality   | C12             | 3.3            |
| 60          | Lawson Cypress   | 190                 | 6m         |                  |      |      |      | 1.75            | 0.5                          | 0.5                 | Semi Mature                    | Average                 | Indifferent          | Fastigate form<br>Beginning to suppress T59<br>Low arboricultural value  | C12             | 2.4            |
| 61          | Sweet Gum  | 260                 | 9m         | 3.25             | 5#   | 4.5  | 3.5  |                 | 1.75                         | 0.5                 | Semi Mature                    | Average                 | Indifferent          | Bifurcates at c. 1.75m, poor tight union formed<br>Fibre buckling at c. 1m<br>Average internal deadwood  | C12             | 3              |
| G1          | Norway Maple<br>Ash<br>Blackthorn<br>Hawthorn<br>English Oak<br>Field Maple<br>Elder | 300#                | 14m max    |                  |      |      |      | 8 max<br>3.5 av | 0.5 to 3#                    | 0.5 to 3            | Semi Mature to<br>Early Mature | Average                 | Indifferent          | Offsite group defines sites northern boundary<br>Frontage predominantly comprised of hedgerow/scrub<br>species with early mature standards occurring frequently<br>to the north<br>Frontage sides appear to be maintained with flail<br>Structures appear typical for the species within current<br>context<br>Individual components of low significance<br>Conferred moderate value as a group for screening only | B2              | 3.6            |

| Tree Number | Common Species Name   | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |   |   |   |          | First Significant Branch (m) | Crown Clearance (m) | Life Stage                  | Physiological Condition  | Structural Condition | Comments  | BS5837 Category | RPA Radius (m) |
|-------------|---|---------------------|------------|------------------|---|---|---|----------|------------------------------|---------------------|-----------------------------|--------------------------|----------------------|---|-----------------|----------------|
|             |   |                     |            | N                | E | S | W | Radial   |                              |                     |                             |                          |                      |   |                 |                |
| G2          | English Oak<br>Horse chestnut<br>Silver Birch<br>Hawthorn<br>Hazel<br>Common Walnut<br>Rowan<br>Apple | 350# max            | 10m max    |                  |   |   |   | 5.25 max | 2.5# av                      | 2.5 av              | Semi Mature to Early Mature | Average                  | Indifferent          | Small inaccessible collection spanning across multiple residential gardens<br>Overhangs site boundary<br>Intermittently clad and obscured by Ivy<br>Screens dwellings to the south<br>Unremarkable collection   | C12             | 4.2            |
| G3          | Goat Willow   | 3*150# av           | 6m av      |                  |   |   |   | 5 av     | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Inaccessible collection established on boundary of neighbouring residential land<br>Clad and obscured by ivy<br>Low arboricultural quality  | C12             | 3              |
| G4          | Field Maple<br>Hawthorn   | 320# max            | 6.5m av    |                  |   |   |   | 3.5 av   | 2.5# av                      | 2.5                 | Early Mature                | Average                  | Indifferent          | Small inaccessible offsite collection within neighbouring residential land<br>Intermittently cohesive<br>Unremarkable collection  | C12             | 3.9            |
| G5          | Field Maple<br>Ash<br>Rowan<br>Silver Birch<br>Norway Maple<br>Elder                                  | 250# max            | 9m max     |                  |   |   |   | 4.75 max | 0.5 av                       | 0.5 to 1.5          | Semi Mature                 | Below Average to Average | Indifferent          | Inaccessible, offsite within neighbouring residential land<br>intermittent linear planted collection<br>1 no. dead Rowan within group<br>Provides minimal screening benefits<br>Lower canopies cut back by flail  | C12             | 3              |
| G6          | Leyland Cypress   | 300# max            | 12.5m av   |                  |   |   |   | 4 av     | 0.5 av                       | 0.5 av              | Semi Mature to Early Mature | Average                  | Indifferent          | Inaccessible, offsite within neighbouring residential land<br>Cohesive linear planted collection<br>Provides screen of adjacent dwelling<br>Lower canopies cut back by flail  | C12             | 3.6            |
| G7          | Ash<br>Blackthorn<br>Hawthorn<br>Dogwood<br>Field Maple   | 550# max            | 15m max    |                  |   |   |   | 9 max    | 0.5 to 3#                    | 0.5 to 3#           | Semi Mature to Early Mature | Average                  | Indifferent          | Offsite boundary collection<br>Dominant Ash components form intermittently cohesive canopy<br>Predominantly inaccessible due to dense understory scrub and deep ditch travelling along north side of stems<br>Structures appear typical for the species within current context<br>Understory clad and obscured by Bramble<br>Average internal deadwood throughout dominant components | B2              | 6.6            |
| G8          | Hawthorn<br>Blackthorn<br>Damson<br>Elder<br>Elm<br>Ash   | 250# max            | 11.5m max  |                  |   |   |   | 4# max   | 0.5 to 4#                    | 0.5 to 4            | Semi Mature                 | Average                  | Indifferent          | Dense cohesive offsite group comprising of unmanaged hedgerow components and establishing self set scrub<br>Provides screen of neighbouring golf course<br>Intermittently clad and obscured by Bramble<br>Low arboricultural quality  | C12             | 3              |
| G9          | Field Maple<br>Blackthorn   | 180<br>140<br>max   | 7m max     |                  |   |   |   | 4.75 max | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Predominately colonising scrub with planted Maple specimens to southwest extent<br>Provides screen of neighbouring residential land<br>Low arboricultural quality   | C12             | 2.7            |

| Tree Number | Common Species Name  | Trunk Diameter (mm) | Height (m)        | Crown Spread (m) |   |   |   |               | First Significant Branch (m) | Crown Clearance (m) | Life Stage                  | Physiological Condition  | Structural Condition | Comments   | BS5837 Category | RPA Radius (m) |
|-------------|--|---------------------|-------------------|------------------|---|---|---|---------------|------------------------------|---------------------|-----------------------------|--------------------------|----------------------|--|-----------------|----------------|
|             |  |                     |                   | N                | E | S | W | Radial        |                              |                     |                             |                          |                      |  |                 |                |
| G10         | Ash<br>Blackthorn<br>Norway Spruce<br>Cherry<br>Leyland Cypress<br>Apple<br>Holly<br>Field Maple | 400# max            | 6m to 15m         |                  |   |   |   | 4.5 max       | 0.5 to 3                     | 0.5 to 2            | Semi Mature to Early Mature | Below Average to Average | Poor to Indifferent  | Inaccessible, offsite intermittent collection along boundary of neighbouring residential land<br>Structures appear typical for the species within current context<br>Stems and lower canopies clad and obscured by Bramble<br>Provides minimal screening benefits<br>Unremarkable collection | C12             | 4.8            |
| G11         | Blackthorn   | 75# max             | 6m max            |                  |   |   |   | 1.5 max       | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Parcels of colonising scrub<br>Low arboricultural quality  | C12             | 0.9            |
| G12         | Apple<br>Damson<br>Plum<br>Pear<br>Hazel   | 100 max             | 5m max            |                  |   |   |   | 3 max         | 0.5 av                       | 0.5 av              | Young to semi mature        | Average                  | Indifferent          | Small collection of establishing orchard plantings<br>Low arboricultural value, readily replaced at current age  | C12             | 1.2            |
| G13         | Apple<br>Plum<br>Hazel   | 250# av             | 5m max            |                  |   |   |   | 3# av         | 0.5 to 1#                    | 1.5#                | Semi Mature to Early Mature | Average                  | Indifferent          | Inaccessible offsite collection within neighbouring residential land<br>Structures appear typical for the species within current context<br>Unremarkable collection  | C12             | 3              |
| G14         | Lilac<br>Snowbell  | 4*90 max            | 4m max            |                  |   |   |   | 2.5 max       | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Ornamental planted collection<br>Low arboricultural value  | C12             | 2.1            |
| G15         | Portuguese Laurel<br>Buddleia<br>Cherry<br>Bamboo<br>Holly<br>Elder                              | 90 max              | 3.5m max          |                  |   |   |   | 2.5 max       | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Ornamental planted collection<br>Low arboricultural value  | C12             | 1.2            |
| G16         | Apple  | 300 max             | 6m max            |                  |   |   |   | 5 max         | 1.5 av                       | 1.5 av              | Early Mature                | Average                  | Indifferent          | Inaccessible, offsite group within neighbouring residential land<br>Unremarkable collection  | C12             | 3.6            |
| G17         | Buddleia<br>Holly<br>Dogwood<br>Snowbell<br>Laurel<br>Portuguese Laurel                          | 150 max             | 4.5m max          |                  |   |   |   | 2 max         | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Ornamental planted collection<br>Low arboricultural value  | C12             | 1.8            |
| G18         | Elaeagnus<br>Cotoneaster<br>Holly  | 90 max              | 3m max<br>1.5m av |                  |   |   |   | 1.5 max       | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Ornamental planted collection<br>Low arboricultural value  | C12             | 1.2            |
| H1          | Hawthorn<br>Blackthorn<br>Field Maple<br>Damson<br>Elm   | 150<br>120#<br>max  | 2m to 8.5m        |                  |   |   |   | 2 max<br>1 av | 0.5 av                       | 0.5 av              | Semi Mature to Early Mature | Below Average to Average | Indifferent          | Partially maintained internal boundary hedgerow<br>Established on west bank of ditch<br>Occasional unmanaged Maple specimens distributed throughout<br>Multiple dead Elm to southern extent  | C12             | 2.4            |

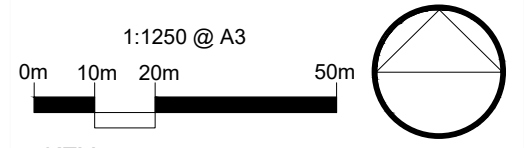
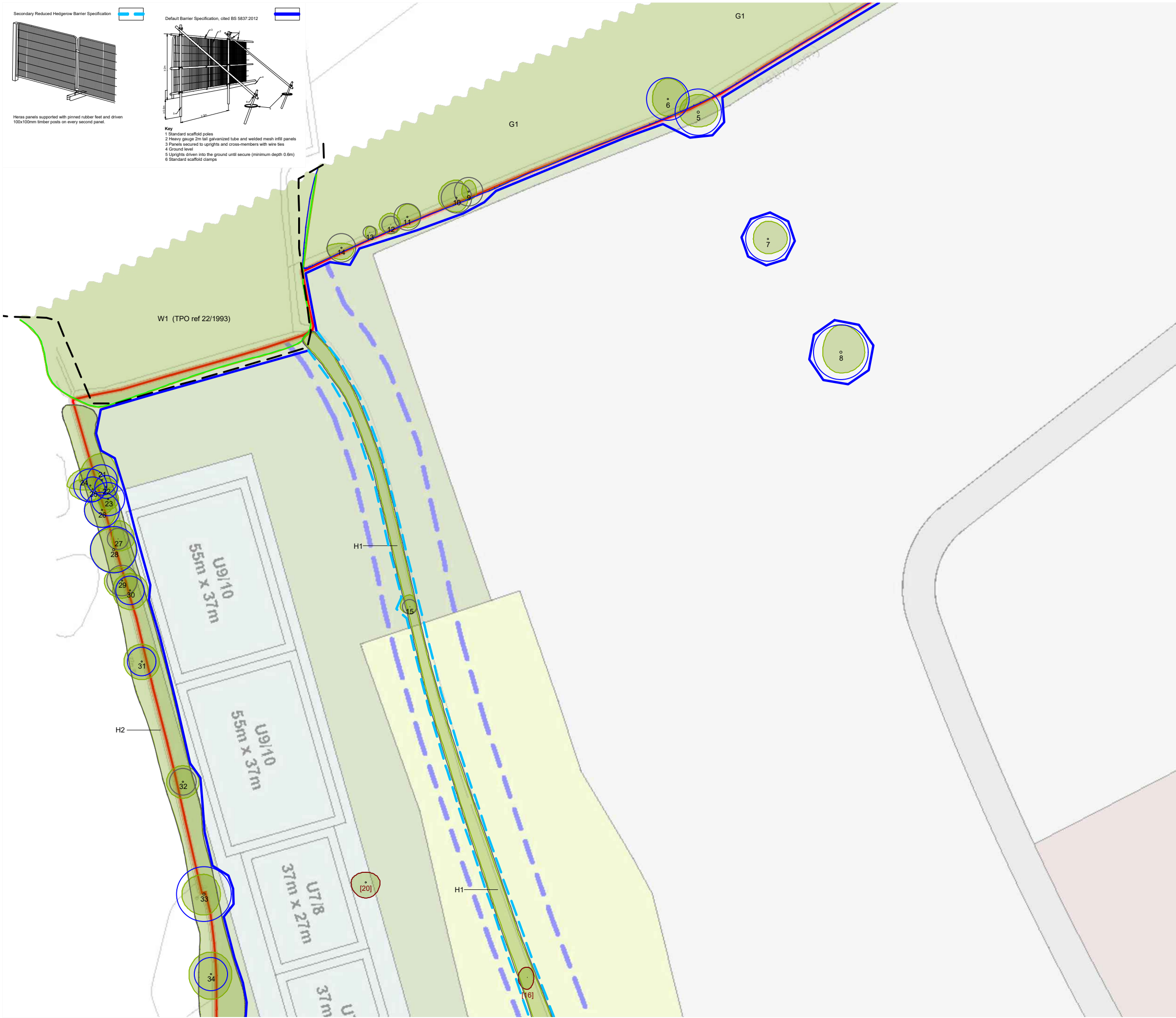
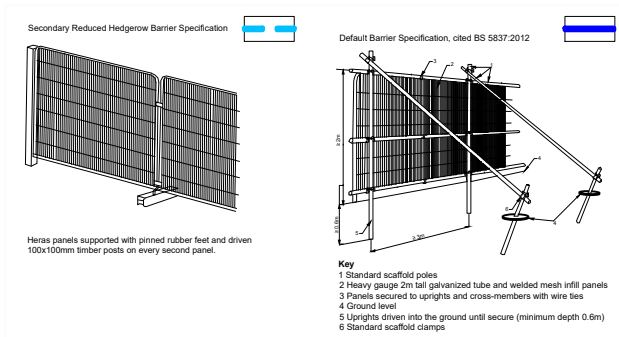
| Tree Number | Common Species Name   | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |   |   |   |        | First Significant Branch (m) | Crown Clearance (m) | Life Stage                  | Physiological Condition  | Structural Condition | Comments  | BS5837 Category | RPA Radius (m)    |
|-------------|---|---------------------|------------|------------------|---|---|---|--------|------------------------------|---------------------|-----------------------------|--------------------------|----------------------|---|-----------------|-------------------|
|             |   |                     |            | N                | E | S | W | Radial |                              |                     |                             |                          |                      |   |                 |                   |
| H2          | Hawthorn<br>Blackthorn<br>Field Maple<br>Elm                          | 180# max            | 7m max     |                  |   |   |   | 2 av   | 0.5 av                       | 0.5 av              | Semi Mature to Early Mature | Below Average to Average | Poor to Indifferent  | Field boundary hedgerow, maintained on sides only<br>Provides screen on neighbouring golf course<br>Intermittently clad and obscured by Bramble<br>Occasional dead and dying Elm occurring throughout | C12             | 2.1               |
| H3          | Hawthorn<br>Blackthorn<br>Field Maple<br>Elm<br>Elder                 | 250 max             | 8m max     |                  |   |   |   | 4 max  | 0.5 av                       | 0.5 av              | Semi Mature to Early Mature | Below Average to Average | Poor to Indifferent  | Field boundary hedgerow, maintained on sides only<br>Provides screen on neighbouring golf course<br>Intermittently clad and obscured by Bramble<br>Occasional dead and dying Elm occurring throughout | C12             | 3                 |
| H4          | Hawthorn<br>Blackthorn<br>Field Maple<br>Holly<br>Pyracantha<br>Elder | 4*120# max          | 2m to 7.5m |                  |   |   |   | 3 av   | 0.5 av                       | 0.5 av              | Semi Mature to Early Mature | Below Average to Average | Poor to Indifferent  | Field boundary hedgerow, predominantly maintained on sides only<br>Intermittently clad and obscured by Ivy and Bramble  | C12             | 3                 |
| H5          | Hawthorn<br>Blackthorn<br>Ash<br>Lilac<br>Elder                       | 80# av              | 2m to 5m   |                  |   |   |   | 1 av   | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Short length of maintained hedgerow<br>Defines boundary of neighbouring residential land<br>Multiple unmanaged self set Ash to southern extent  | C12             | 0.9               |
| H6          | Hawthorn<br>Blackthorn<br>Ash<br>Field Maple                          | 75# av              | 2m av      |                  |   |   |   | 1 av   | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Short length of maintained hedgerow<br>Defines boundary of neighbouring residential land  | C12             | 0.9               |
| H7          | Hawthorn<br>Blackthorn  | 100# max            | 5.5m max   |                  |   |   |   | 1.5 av | 0.5 av                       | 0.5 av              | Semi Mature to Early Mature | Average                  | Indifferent          | Field boundary hedgerow, maintained on sides only<br>Provides screen of area to the west  | C12             | 1.2               |
| H8          | Elm<br>Blackthorn<br>Hawthorn<br>Elder<br>Ash                         | 80# av              | 4m max     |                  |   |   |   | 1.5 av | 0.5 av                       | 0.5 av              | Semi Mature to Early Mature | Average                  | Indifferent          | Partially maintained field boundary hedgerow<br>Becomes intermittent towards southern extent  | C12             | 0.9               |
| H9          | Leyland Cypress   | 275# av at base     | 5m av      |                  |   |   |   | 3 av   | 0.5 av                       | 0.5 av              | Early Mature                | Average                  | Indifferent          | Previously maintained ornamental planted hedgerow<br>Defines boundary of neighbouring residential land  | C12             | 3.3               |
| H10         | Hawthorn<br>Blackthorn<br>Ash<br>Privet<br>Pyracantha<br>Laurel       | 75# max             | 1.5m to 4m |                  |   |   |   | 1 av   | 0.5 av                       | 0.5 av              | Young to Semi Mature        | Average                  | Indifferent          | Unmaintained hedgerow<br>Defines boundary of neighbouring residential land<br>Occasional self set Ash occurring throughout<br>Intermittently clad and obscured by Bramble                             | C12             | 0.9               |
| H11         | Leyland Cypress   | 200 max<br>120 av   | 3m to 3.5m |                  |   |   |   | 1.5 av | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Maintained ornamental planted hedgerow  | C12             | 2.4 max<br>1.5 av |
| H12         | Leyland Cypress   | 150 max<br>120 av   | 3.5m to 6m |                  |   |   |   | 1.5 av | 0.5 av                       | 0.5 av              | Semi Mature                 | Average                  | Indifferent          | Maintained ornamental planted hedgerow<br>Defines boundary of residential land  | C12             | 1.8 max<br>1.5 av |



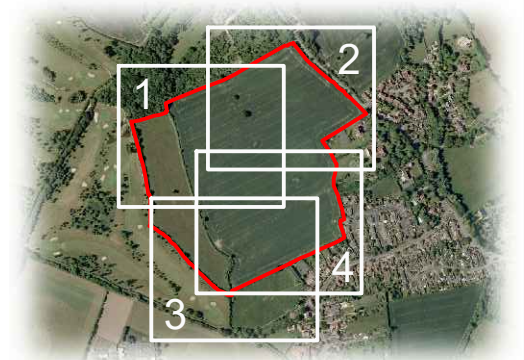
| Tree Number | Common Species Name                     | Trunk Diameter (mm) | Height (m) | Crown Spread (m) |   |   |   |          | First Significant Branch (m) | Crown Clearance (m) | Life Stage            | Physiological Condition  | Structural Condition | Comments  | BS5837 Category | RPA Radius (m)    |
|-------------|---|---------------------|------------|------------------|---|---|---|----------|------------------------------|---------------------|-----------------------|--------------------------|----------------------|---|-----------------|-------------------|
|             |   |                     |            | N                | E | S | W | Radial   |                              |                     |                       |                          |                      |   |                 |                   |
| H13         | Leyland Cypress<br>Ash<br>Hawthorn      | 150 max<br>120 av   | 3.5m max   |                  |   |   |   | 1.5 av   | 0.5 av                       | 0.5 av              | Semi Mature           | Average                  | Indifferent          | Maintained ornamental planted hedgerow<br>Defines boundary of residential land  | C12             | 1.8 max<br>1.5 av |
| H14         | Various Species                         | 80# av              | 2.5m av    |                  |   |   |   | 1.5# av  | 1.5 av                       | 1.5 av              | Semi Mature           | Average                  | Indifferent          | Inaccessible at time of survey<br>Mixed species hedgerow located in land of No. 27<br>Unmaintained  | C12             | 0.9 av            |
| W1          | English Oak<br>Ash<br>Hawthorn<br>Elder | 850#<br>max         | 17.5m max  |                  |   |   |   | 10.5 max | 0.5 to 3#                    | 2 av along frontage | Semi Mature to mature | Below Average to Average | Poor to Indifferent  | Inaccessible, offsite woodland overhangs sites northwest perimeter<br>Dominant edge components generally occur c. 5m from fence line<br>Understorey appears fairly dense from views to the south<br>Structures appear typical for the species within current context<br>Collection of high arboricultural value | A2              | 10.2              |

**APPENDIX C**

**TREE PROTECTION PLAN (10326 TPP 01)**



- KEY:**
- Site Boundary
  - Tree Numbers
  - Tree Canopies
  - Category 'U' Trees
  - Category 'A' RPA
  - Category 'B' RPA
  - Category 'C' RPA
  - Tree Preservation Order
  - Trees to be Removed
  - Tree Protection Barrier
  - Tree Protection Barrier (Secondary Specification)



Cited from Google Earth

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|-----------|------|------|-------|-------|
| REVISIONS |      |      |       |       |

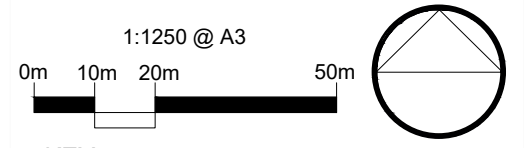
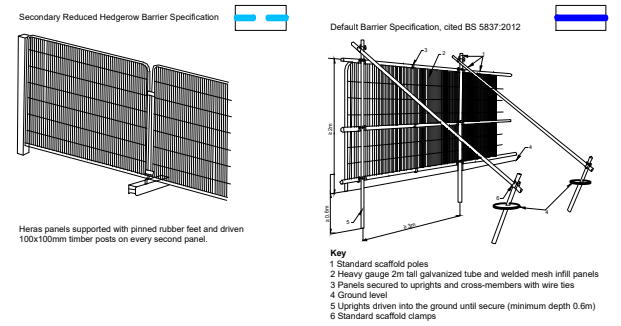
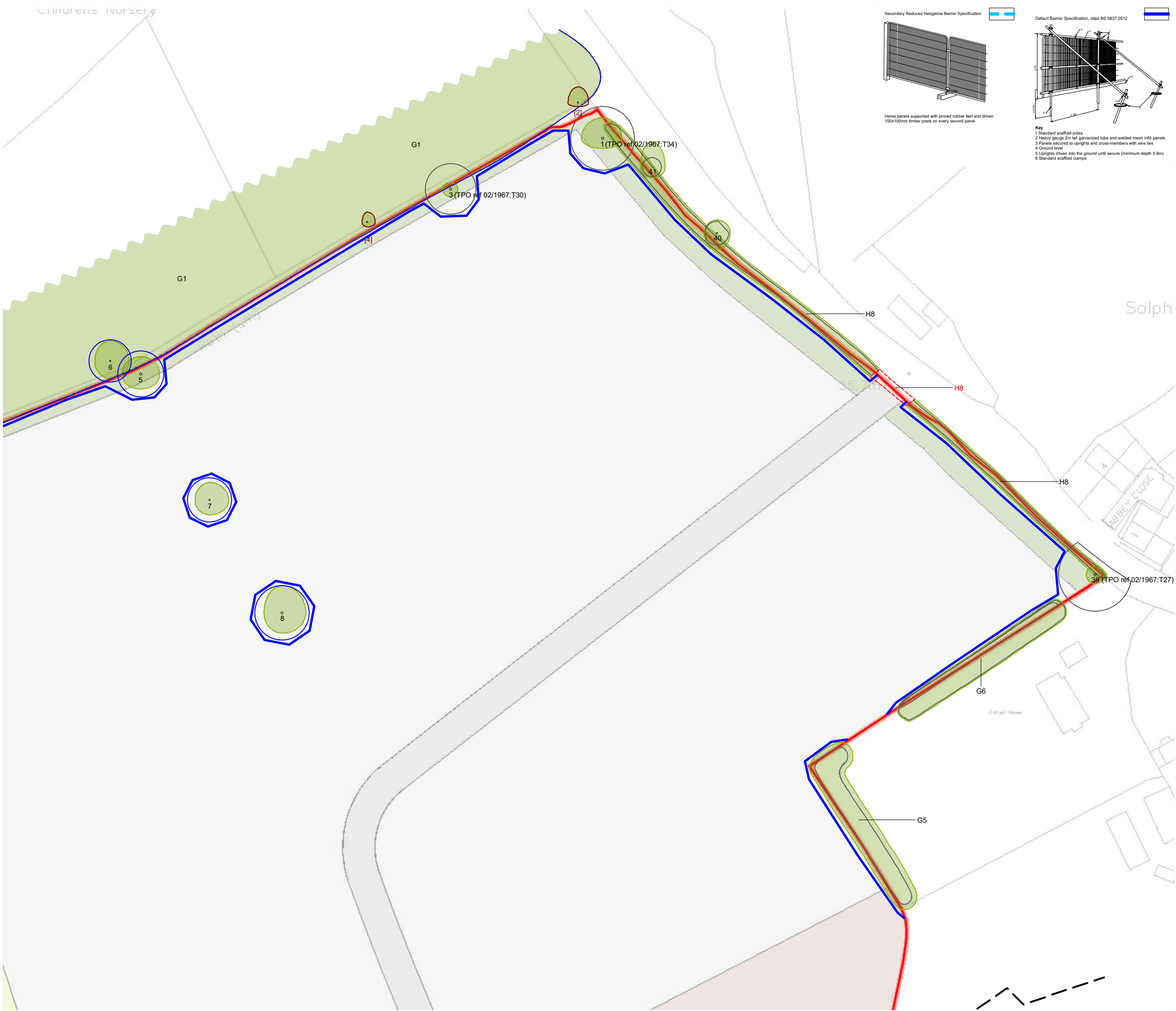


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 Tree Protection Plan**

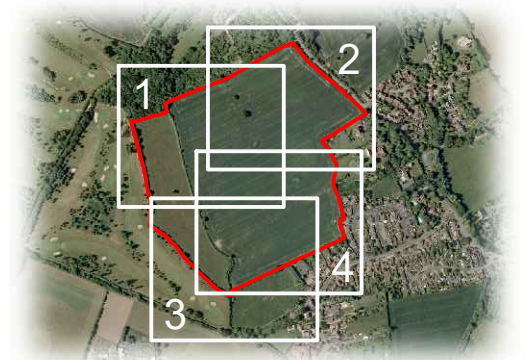
CLIENT  
**Manor Oak Homes**

| SCALE              | DATE     | DRAWN |
|--------------------|----------|-------|
| 1:1250 @ A3        | AUG 2019 | GW    |
| DRAWING NUMBER     | REVISION |       |
| 10326 TPP 01 (1/4) |          |       |

Based on: 40986 013A Parameters Plan.dwg



- KEY:**
- Site Boundary
  - Tree Numbers
  - Tree Canopies
  - Category 'U' Trees
  - Category 'A' RPA
  - Category 'B' RPA
  - Category 'C' RPA
  - Tree Preservation Order
  - Trees to be Removed
  - Tree Protection Barrier
  - Tree Protection Barrier (Secondary Specification)



Cited from Google Earth

| REV       | DATE | NOTE | Drawn | Chk'd |
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| REVISIONS |      |      |       |       |

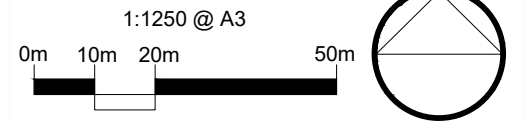


TITLE  
**Salph End, Bedford  
 Tree Protection Plan**

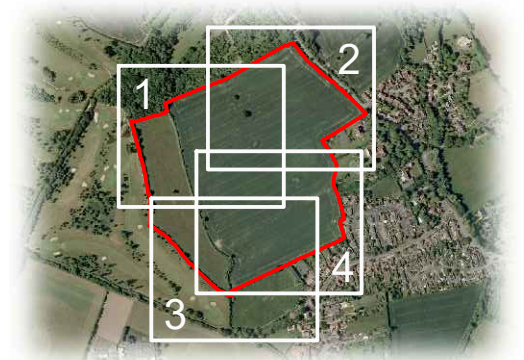
CLIENT  
**Manor Oak Homes**

|                                      |                  |             |
|--------------------------------------|------------------|-------------|
| SCALE<br>1:1250 @ A3                 | DATE<br>AUG 2019 | DRAWN<br>GW |
| DRAWING NUMBER<br>10326 TPP 01 (2/4) |                  | REVISION    |

Based on: 40986 013A Parameters Plan.dwg



- KEY:**
- Site Boundary
  - Tree Numbers
  - Tree Canopies
  - Category 'U' Trees
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  - Tree Preservation Order
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  - Tree Protection Barrier
  - Tree Protection Barrier (Secondary Specification)



Cited from Google Earth

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|-----|------|------|-------|-------|
|     |      |      |       |       |

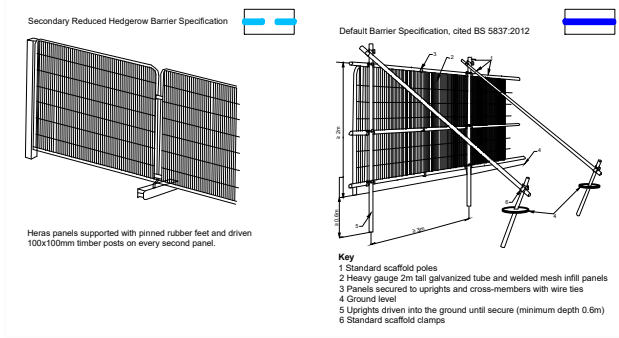


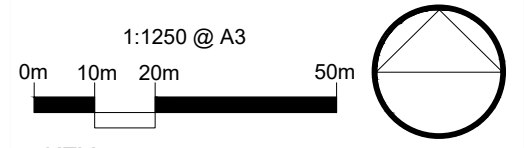
TITLE  
**Salph End, Bedford  
 Tree Protection Plan**

CLIENT  
**Manor Oak Homes**

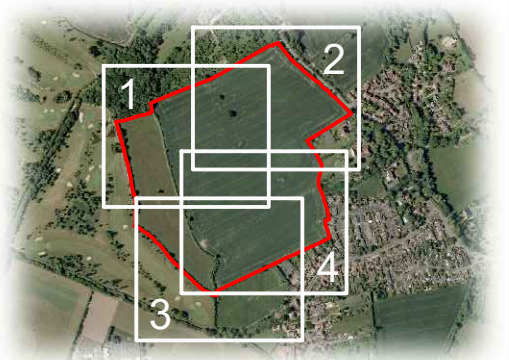
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| DRAWING NUMBER     | REVISION |       |
| 10326 TPP 01 (3/4) |          |       |

Based on: 40986 013A Parameters Plan.dwg





- KEY:**
- Site Boundary
  - Tree Numbers
  - Tree Canopies
  - Category 'U' Trees
  - Category 'A' RPA
  - Category 'B' RPA
  - Category 'C' RPA
  - Tree Preservation Order
  - Trees to be Removed
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  - Tree Protection Barrier (Secondary Specification)



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| REV       | DATE | NOTE | Drawn | Chk'd |
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| REVISIONS |      |      |       |       |

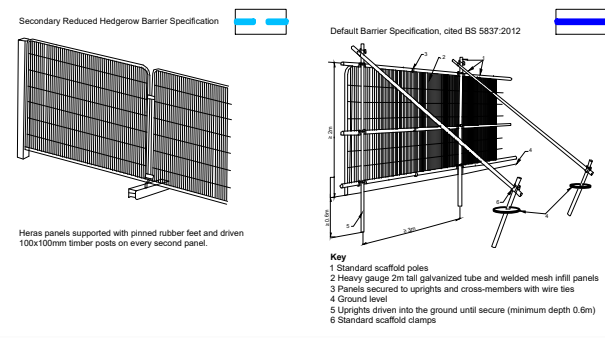


TITLE  
**Salph End, Bedford  
 Tree Protection Plan**

CLIENT  
**Manor Oak Homes**

| SCALE              | DATE     | DRAWN |
|--------------------|----------|-------|
| 1:1250 @ A3        | AUG 2019 | GW    |
| DRAWING NUMBER     | REVISION |       |
| 10326 TPP 01 (4/4) |          |       |

Based on: 40986 013A Parameters Plan.dwg



APPENDIX D

TREE SURVEY METHODOLOGY

## Tree Survey Methodology

The tree survey is a form of Visual Tree Assessment undertaken during July 2019. Tree locations are identified via a topographical survey; locations of any trees excluded from the topographical survey were plotted on site. The purpose of the survey is to record information about trees on or adjacent to the site to inform design options. In keeping with clause 4.4 of BS5837: 2012 'Trees in Relation to Design, Construction and Demolition', the survey provides a record of the following parameters:

**Tree Numbers:** all individual trees are sequentially numbered. Groups of trees, woodlands and hedgerow are also sequentially numbered with a corresponding prefix relevant to their type e.g. G, W or H respectively; the identification of trees as woodland, groups of trees or within hedgerows is undertaken where appropriate. The identification of trees as individuals within collections has been made where it is considered sensible to make such a differentiation.

**Species:** listed by common name

**Stem Diameter:** given in millimetres and obtained by measuring single/multiple stems at 1.5m using a diameter tape in accordance with Annex C within BS5837:2012. Diameters of inaccessible trunks are estimated and provided with the suffix '#'.

**Tree Heights:** determined using a clinometer and measured to the nearest 500mm. Heights are estimated where specific triangulation is not achievable and by reference to measured trees nearby (provided with the suffix '#').

**Crown Spreads:** measured at cardinal points using a Leica Disto™ laser distance measurer. Measurements were recorded to the nearest 250mm. Inaccessible crown spreads are estimated based on measured canopies nearby and provided with the suffix '#'

**Crown Clearance:** The height of the first significant living branch and/or canopy (as appropriate) is recorded using a Leica Disto™ laser distance measurer to inform vertical ground clearance. Crown clearance may be higher or lower than the first significant branch. Estimated clearances are provided with the suffix '#'. Height of first significant branch will be provided where considered advantageous to make the distinction.



**Life Stage** – The age of trees, groups of trees, hedges and woodlands are defined as follows:

- Young (within the first 1/4<sup>th</sup> of life expectancy)
- Semi-mature (within the second 1/4<sup>th</sup> of life expectancy)
- Early Mature (within the third 1/4<sup>th</sup> of life expectancy)
- Mature (within the fourth 1/4<sup>th</sup> of life expectancy)
- Over Mature and Veteran (exceeding normal life expectancy)
- Veteran (significantly exceeding normal life expectancy)

**Physiological and structural condition:** physiological condition defined as follows; good, above average, average, below average, poor or dead. Structural condition is defined as: good, moderate, indifferent, poor or hazardous

**Comments:** further observations were recorded where necessary i.e. details regarding defects, preliminary management recommendations, presence of pest/disease and perceived significance.

**BS5837 Category:** pursuant to BS5837:2012 section 4.5 and cascade chart for tree quality assessment (refer to reproduced Table 1 overleaf). Trees qualifying under a given category (A-C and U) and any appropriate subheading (1-3) are considered to fall within the scope of that category's definition.

**Estimated Remaining Contribution.** Described` as a guideline only and in terms of years: <10, 10+, 20+ and 40+ relevant to category U, C, B and A respectively. This information is not provided on the tree schedule to avoid conclusions based upon 'life expectancy'.

Table 1 Cascade chart for tree quality assessment

| Category and definition   | Criteria (including subcategories where appropriate)   |   |   |
|---|--|---|---|
| <b>Trees unsuitable for retention</b> (see Note)  |  |   |   |
| <b>Category U</b><br>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years | <ul style="list-style-type: none"> <li>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 U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul> <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p> |   |   |
|   | <b>1 Mainly arboricultural qualities</b>   | <b>2 Mainly landscape qualities</b>   | <b>3 Mainly cultural values, including conservation</b>   |
| <b>Trees to be considered for retention</b>   |  |   |   |
| <b>Category A</b><br><b>Trees of high quality</b> with an estimated remaining life expectancy of at least 40 years  | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)   | Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features  | Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture) |
| <b>Category B</b><br><b>Trees of moderate quality</b> with an estimated remaining life expectancy of at least 20 years  | Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation  | Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality | Trees with material conservation or other cultural value  |
| <b>Category C</b><br><b>Trees of low quality</b> with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm       | Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories  | Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits  | Trees with no material conservation or other cultural value   |

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