C.B.E. Consulting

Arboricultural Surveys to BS5837

BS5837:2012 Tree Survey
Land at Northons Lane
Holbeach
Lincolnshire
NGR TF354 251

Survey by
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On behalf of:
Castlegate 348 Ltd

smas worksafe consultant www.smasltd.com as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT	Report prepared by: C Barker	Date Issued: 02 October 2014
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BS5837 Tree Survey, Land at Northons Lane, Holbeach

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1. Introduction

1.1 Site Description and Location

The 'site' surveyed comprises a roughly rectangular of land occupying a position at the junction of Northons Lane and Chestnut Avenue within the western margin of Holbeach, centred at NGR TF354 251. The location of the site is shown on the plan within **Figure 1** and an aerial photograph has been provided within **Figure 2** to place the site in context.

In order to facilitate an application to obtain permission to redevelop the site area being surveyed to construct new residential houses the land owner has requested a BS5837 (2012) Tree Survey should be completed to assess the quality of the trees within the site area and adjacent boundary areas and the impact any redevelopment may have on these. An inspection of the site and the immediate surrounding areas was carried out in November 2013. The site has also been the subject of an Extended Phase 1 Habitat Survey and the habitats and species present within the site area are described within the report prepared by CBE Consulting ref P568/ 0114 /01 dated 16 January 2014 and this report is to read in conjunction with the Extended Phase 1 Habitat Survey report.

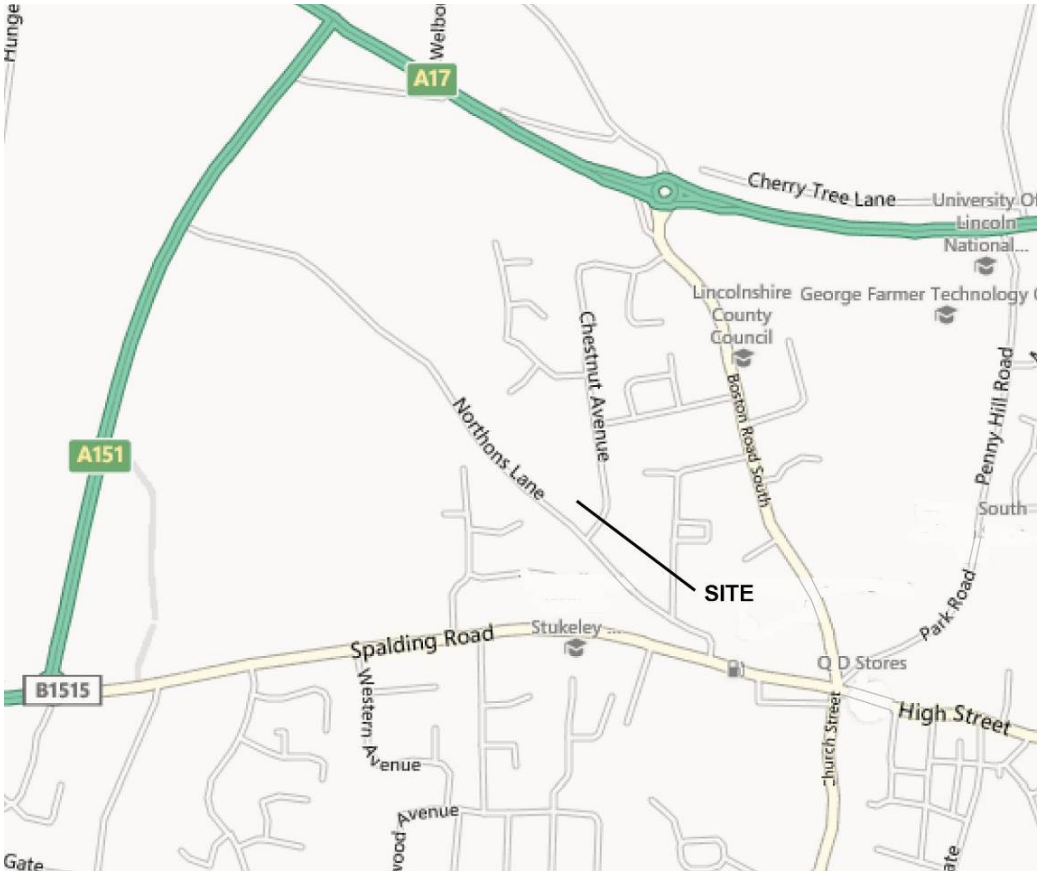


Figure 1: Location Plan

Image copyright Microsoft Corporation 2014

1.2 Neighbouring Land Uses and Recent Site History

As can be seen in the aerial photograph below, the site lies within a residential suburb of Holbeach surrounded by existing residential houses. Open farmland lies to the north and west. Surrounding roads and gardens contain a number of mature and semi-mature trees giving the area a fairly good canopy cover.



Figure 2: Site Contextual Aerial Photograph Image copyright Microsoft Corporation 2014

Consultation with South Holland District Council was undertaken and there are no records of tree preservation orders at the site. Number tags were found on three of the trees on the site, a result of a previous survey carried out in 2009 by Dr F Hope. The site is not within the Holbeach Conservation Area.

In undertaking the tree survey the assessment has been carried out in accordance with the specifications contained within BS 5837 Trees in Relation to Design, Development and Construction (2012).

An inspection of the site and the immediate surrounding areas was completed in November 2013 by Christopher Barker, dipHort, CEnv, an experienced arboricultural consultant and licensed bat worker.

2. Tree Survey Appraisal Methodology

2.1 Survey Objectives

This tree survey has been carried out with the objective of:

- Identifying the individual tree species present at the site by means of visual inspection;
- To define the approximate age, condition and canopy spread of all individual mature trees identified and the value of these within the development context;
- To identify any trees that present a risk to existing or proposed foundations or other structures that may be constructed on the site and recommend action to remove this risk; and
- Recommend tree management / mitigation measures where appropriate.

The survey broadly assessed the condition and arboricultural value of the trees lying in or adjacent to the defined site survey area, paying particular attention to any mature individual trees present within the area where access for construction will be required, in order to prepare an assessment in accordance with BS 5837 Trees in Relation to Design, Development and Construction (2012).

2.2 Survey Methodology

The methodology set out below is a detailed summary of the suggested approach to tree assessment as described in British Standard 5837:2012. This report has applied the methodology to all significant individual trees or groups of trees present at or near to the site. A topographical plan of the site has been provided by the Client so the position of the individual trees has been identified from this survey plan to prepare the Tree Location Plan within Section 3 of the report. This plan is approximately to scale but should not be used to measure off precise distances. Trees below 15 cm trunk diameter were generally excluded from the survey.

2.3 Trees

Trees have been broadly assessed based on guidance set out within the British Standard BS 5837:(2012) Trees in Relation to Design, Development and Construction. This standard provides recommendations and guidance on the principles to be applied to achieve successful integration of development with trees, shrubs and hedgerows. Where development is to occur, the standard provides guidance on the approach needed to decide which trees are appropriate for retention, and the means for protecting these trees during the development (including demolition and construction work) and the means of incorporating trees into the developed landscape.

Trees on the site have been divided into one of four categories (based on the cascade chart for tree quality assessment). These are classed as A, B, C or U (Section 4 of BS 5837) within the table in Appendix 1. This gives an indication as to the tree's importance in relation to the site, the local landscape and, also, the value and quality of the existing trees on site. This assists informal decisions concerning which trees should be removed or retained should development occur. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below). Categories A, B and C cover trees that should be a material consideration in the development process, each with three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural (nature conservation) values. Category U trees may have no significant landscape value but it is not presumed that there is any overriding need to remove these unless stated otherwise in the description and recommendations. They are for this reason not considered as being significant within the planning process. In assigning trees to the A, B or C categories, and the presence of any serious disease or tree–related hazard is taken into account. If the disease is considered fatal and/or irremediable, or likely to require sanitation for the protection of other trees it may be categorised as U with a recommendation for work or even removal, even if they are otherwise of considerable value.

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

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

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

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

Category (C): Trees that could be retained and are considered to be of low quality and value. These trees are in an adequate condition to remain until new planting could be established (a minimum of ten years) or are young trees with a stem diameter below 150 mm and may comprise:

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

Category (U): Trees that are considered to have no significant landscape value but it is not presumed that there is any overriding need to remove these unless stated otherwise in the description and recommendations. They are for this reason not considered as being significant within the planning process. These trees will be in such a condition that any existing value would be lost within 10 years and which should in the current context be ignored or removed for reasons of sound arboricultural management. Trees within this category are:

(i) Trees that have a serious irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees;
(ii) Trees that are dead or are showing signs of significant, immediate or irreversible overall decline;
(iii) Trees infected with pathogens of significance to the health and or/safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality.

Species have been recorded by common and scientific name. Height has been estimated in metres and stem diameter measured in centimetres unless impractical, taken at a height of 1.5 m from the base of the tree.

In the assessment particular consideration has been given to:

(a) The health, vigour and condition of each tree;

(b) The presence of any structural defects in each tree and its life expectancy;
(c) The size and form of each tree and its suitability within the context of the proposed scheme;
(d) The location of each tree relative to existing site features, e.g. its value as a screen or as a skyline feature.

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

YNG: Young trees age less than 1/3 life expectancy.
SM: Middle age trees 1/3 – 2/3 life expectancy.
M: Mature trees over 2/3 life expectancy.
OM: Over mature – declining or moribund trees of low vigour.

The overall condition of any individual tree, or group of trees, has been referred to using one of the definitions listed below. A more detailed description of condition has been noted in the Tree Schedule.

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

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

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

The survey was completed from ground level only. Aerial inspections were not undertaken. Evaluations of tree conditions given within this assessment apply to the date of survey and cannot be assumed to remain unchanged, and it may be necessary to review these within 24 months, in accordance with good arboricultural practice.

2.4 Site Plans & Tree schedules

The position of significant individual trees or groups of trees is shown on the Tree Location Plan within Section 3. A summary table providing detailed information on the trees and tree groups is included in Appendix 1. Within the summary table maximum RPA's (m^2) for estimated tree diameters have been included where appropriate, as well as a calculated corresponding radius of the circle for that RPA. The Root Protection Areas are formulated as described below and assist when designing layouts in relation to trees. A Constraints Plan will need to be prepared once a proposed development plan has been prepared.

2.5 Root Protection Area (RPA)

Below ground constraints to development are represented by the root plate around a tree which needs protecting in order for the tree to be incorporated into a proposed scheme, without adverse harm to the tree or structural integrity of any proposed foundation structures.

This area is illustrated by the Root Protection Area (RPA) shown as a purple dotted line on the tree plan in figure 3 and is calculated according to the formula set out in BS 5837 (2012) clause 4.6.1.

Single Stem Trees:

RPA (m^2) = (stem diameter (mm) x 12 / 1000) ^{2} x 3.142

Multiple Stem Trees:

RPA (m^2) = (combined stem diameters (mm) x 12 / 1000) ^{2} x 3.142

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

Taken from BS5837 (2012) clause 4.6.1.

2.6 Potential For Protected Species

Potential bat roost locations are described within this report using the methodology as that recommended by the Bat Conservation Trust (BCT). Each tree of significant size assessed within this survey has also been assessed for the potential to provide roosts for bats and the table in Appendix 1 includes reference to this.

Potential	Field Signs
Roost confirmed	Confirmed bat roost in tree. Field evidence past or current presence of bats confirmed by droppings, staining or flight.
High roost potential	Splits or cracks in major limbs which develop upwards, smooth surfaces around potential entry points, dense ivy covering, woodpecker / rot holes, significant lifting bark, Artificial bat boxes. Ancient of over mature trees where the canopy cannot be fully inspected from the ground.
Medium roost potential	Some splits in branches, dense ivy covering, and small cavities visible, dense epicormic growth. Flies may be present around a potential entry point.
Low roost potential	Splits may be present in minor branches, sparse ivy cover, and some loose bark evident. Young healthy trees with good visibility to the canopy top.
No roost potential	Tree with a negligible potential to support bat roosts (not supporting any of the above features).

3. Tree Survey Findings

3.1 Survey Details

The tree inspection took the form of a walkover inspection completed by Christopher Barker dipHort, CEnv. Each individual semi-mature or mature tree of significance that could be impacted by any new development within the site area was identified, visually inspected and classified. The character of the trees at the site is shown in photographs contained within this section.

3.2 Mature and Semi-mature Trees

A total of fifteen individual trees (T1 – T15) and four Tree Groups (TG1 –TG4) have been identified and assessed as part of the tree survey. The trees are a mixture of broadleaved trees of various ages, with some large mature specimens. There are no veteran trees of significant size or stature on the site but three trees have been noted as having numbered tags.

Trees T1 – T12 Northons Lane and site centre

Trees T1 – T3 are located in the south corner of the site. Birch T1 is a good specimen located close to the corner boundary of the site providing visual amenity and screening to the site. It is placed within Category B2 and if possible should be retained. Birch T2 nearby is a lower quality specimen in Category C2 which, as it matures, will crowd T1. This tree can be removed if necessary without affecting the visual amenity of Northons Lane. Lime T3 faces Northons Lane and is within the site ownership on the very boundary of the site. The canopy is highly visible along Northons Lane and poses no constraint to the site but is heavily colonised by Ivy. This tree is placed within Category B2. The RPA and canopy extend into the adjacent property. (*Nb – since the inspection of November 2013 the eastern canopy of this tree over the adjacent property has been entirely removed*)



Birch T1 and T2



Lime T3

Tree T4 is a small Oak which, whilst well-shaped and attractive, is of small stature and not of high landscape significance. This is placed within Category C2. If practical this tree could be retained but it is in a central position and may be a constraint to any development.



Oak T4



Maple T5 – T7

Trees T5 – T7 are a group of semi-mature Norway Maple in a central position within the site of reasonable quality but quite crowded. These trees are so closely positioned that they effectively form a single merging canopy feature. T7 is the best specimen of the three but all are placed within Category C2. They may be retained if this is practical.

Trees T8 (Oak) and T9 (Larch) are good individual specimen trees of quite small stature within the site area and both are placed within Category B2. If it is possible to do so these two trees should be retained within any development scheme although they are not presently of high landscape signficance.



Oak T8 of good quality



Larch T9 of good visual amenity

Trees T10 – T12 are three closely planted Hybrid Rowan trees that are just beginning to merge together. These have fairly conical canopy shapes. These trees are not large of visually significant in landscape terms and are placed within Category C2.



T10 – T12 Hybrid Rowan

Trees T13 – T15

These trees lie in a strip of land along the north eastern boundary providing partial screening to the properties along Chestnut Avenue from the commercial buildings within the site. These are all Birch trees of small / medium stature. The largest specimen is T15 in the north east corner of the site and this tree has a number tag 0883 on the trunk. If practical these Birch trees should be retained to maintain the screening of the site.



Birch T13 / T14



Birch T15

Tree Groups TG1 – TG4

Of the four tree groups surveyed, the most prominent in terms of stature and visibility are the three Eucalyptus trees within TG3. These trees are positioned within a front garden facing Northons Lane and are adjacent to the existing site entrance. These are placed within Category B2 because of the visual amenity they provide to the road and properties opposite.

However, of the three trees, two are in relatively poor condition with significant dead wood visible. In a different position of less prominence a lower category would be considered. One tree, the specimen furthest north is the best in terms of structural quality and visual amenity.



Eucalyptus TG3



Eucalyptus TG3

The remaining trees within groups are either of small stature (TG1 – Rowan and TG4 Hawthorn) and of little visual significance, or are dense regeneration associated with Cherry trees in decline (TG2). These groups of trees are placed within Category U because they are of little visual amenity or landscape value. Two of the three large Cherry trees have numbered tags on the trunk indicating that they may be protected.



TG1 – Three Rowan

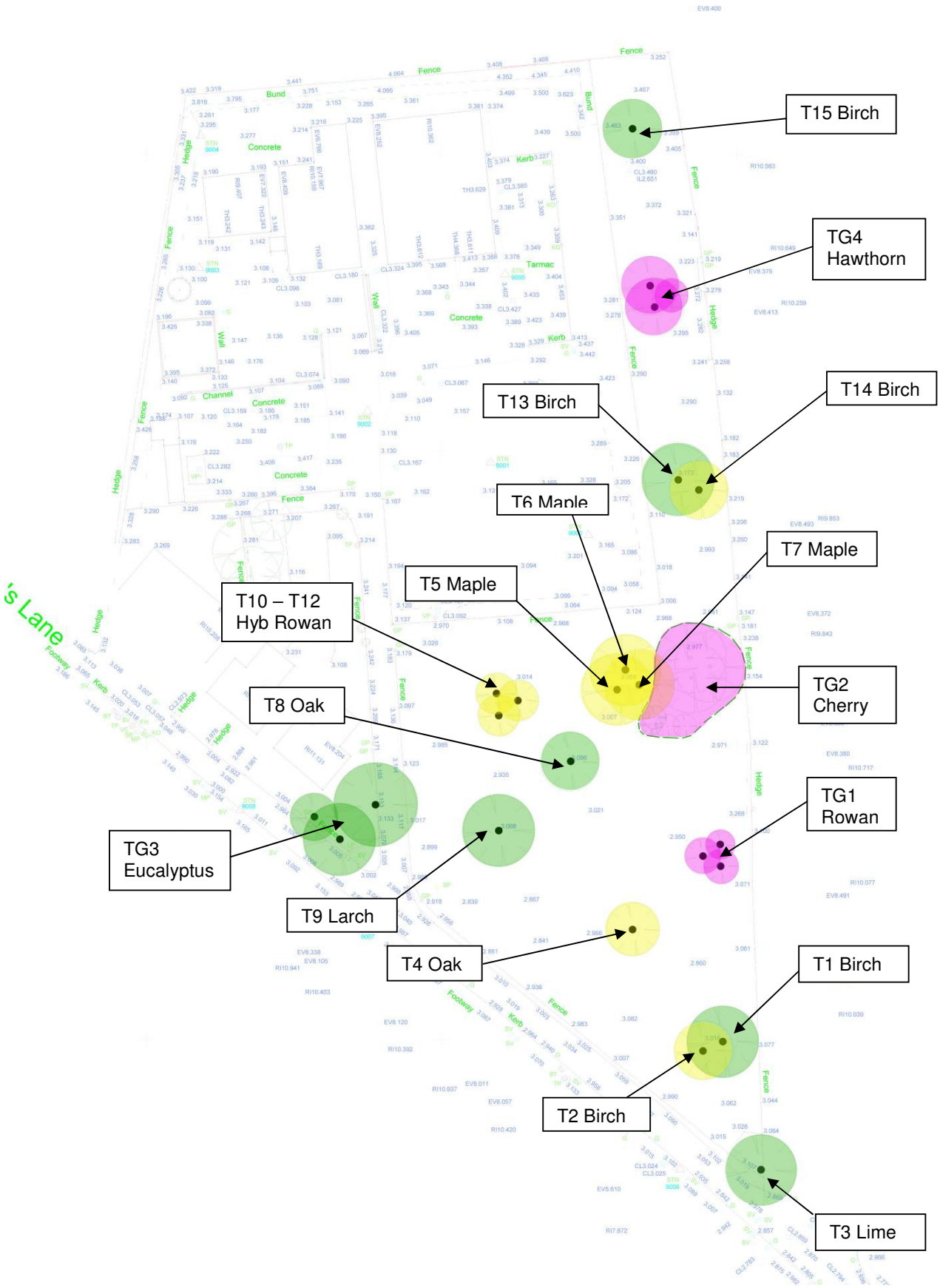


TG2 – Dense Cherry regeneration



TG4 Hawthorn

Figure 3: Tree Location Plan



Key: Category B – Green; Category C – Yellow; Category U – Purple.

4. Tree Management

4.1 Arboricultural Assessment

Until a proposed master plan of the development has been prepared a detailed arboricultural assessment cannot be completed.

However, the partial screening of the site along the Northons Lane boundary will be maintained if the recommendations to retain T1, T3 and TG3 are incorporated within any scheme. By retaining these trees the existing canopy cover along the road edge will not be impacted.

The proposed development of this site will not result in loss of any mature or veteran trees of high ecological or landscape significance regardless of the proposed layout. All of the trees internally within the central area of the site are either fairly small and therefore of limited landscape significance (T4 Oak, T8 Oak, T9 Larch and T10 – 12 Rowan) or are crowded and of poor quality (T5 =7 Maple and TG2 Cherry). If any of these trees could be incorporated into a development layout, either within gardens, open land or as roadside landscaping this would be beneficial to any development providing immediate canopy cover and visual amenity.

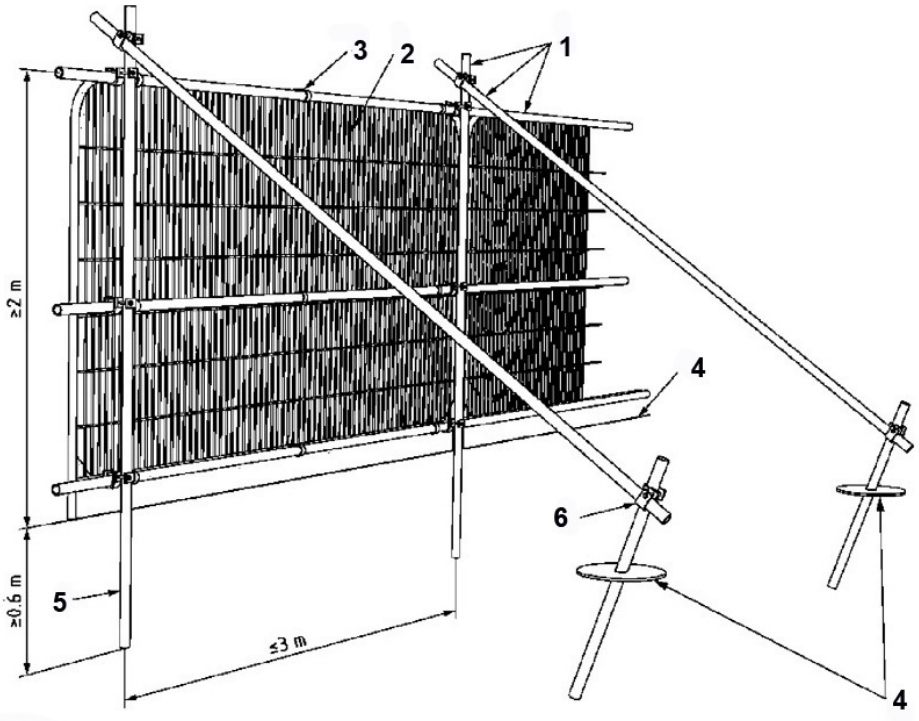
Tree	Category	Recommendation
T1 Birch	B2	Retain if practical and protect RPA. No works required
T2 Birch	C2	None. No works required.
T3 Lime	B2	Retain and protect RPA if possible.*
T4 Oak	C2	Retain if practical and protect RPA. No works required
T5 N Maple	C2	Retain if practical and protect RPA. No works required
T6 N Maple	C2	Retain if practical and protect RPA. No works required
T7 N Maple	C2	Retain if practical and protect RPA. No works required
T8 Oak	B2	Retain if practical and protect RPA. No works required
T9 Larch	B2	Retain if practical and protect RPA. No works required
T10 Hyb Rowan	C2	None
T11 Hyb Rowan	C2	None
T12 Hyb Rowan	C2	None.
T13 Birch	B2	Retain if practical to do so. Protect RPA
T14 Birch	C2	None.
T15 Birch	B2	Retain if practical to do so. Protect RPA
TG1 Rowan	U	None
TG2 Cherry	U	Recommend for removal
TG3 Eucalyptus	B2	Retain and protect RPA as these trees are of landscape significance
TG4 Hawthorn	U	None

* *since completion of this indicative assessment it is understood Lime T3 has been severely pruned by the adjacent landowner and the shape / balance of this tree and its visual amenity have been significantly reduced.*

4.2 General Recommendations

The trees recommended for retention will need to be adequately protected during any approved development works. As a general rule at this site, measures to protect trees should follow the best practice principles set out in BS5837: Trees in Relation to Design, Development and Construction (2012). Prior to any construction or development work proceeding, the RPA's of individual trees to be retained should be marked out using the distances provided in the table within Appendix 1. Marking out should be completed by a person with arboricultural or horticultural expertise as individual trees will have root zones that may be affected by local conditions and allowances will need to be made to accommodate this. The best practice principles have been broadly summarised below

- All trees retained adjacent to the site should be protected by barriers or ground protection around the calculated Root Protection Area (RPA) and as indicated on any Constraints Plan that may be produced in association with the assessment.



1. Standard scaffold poles
2. Heavy Guage 2m tall galvanised tube and weld mesh infill panels
3. Panels secured to uprights and cross members with wire ties
4. Ground Level
5. Uprights driven into ground until secure (up to 0.6m)
6. Standard scaffold clamps

- Any fencing required should be erected prior to commencement of construction and before demolition including erection of any temporary structures. Once set up fences should not be removed or altered without prior consultation with the arboricultural advisor.

- Arrangements should be made for an arboriculturist to supervise works and tree protection where trees are particularly vulnerable or sited close to access points.

- Pre-development works may be undertaken prior to the installation of fencing with the agreement of the local planning authority.

- All tree works should follow best practice procedures as set out in BS 3998 (2010). All trees should be maintained in good condition on site and be inspected annually (where overall condition requires) or every 2 years and after any major storm events, with safety a priority.

- Fencing should be clearly visible and suitable for the location, type and proximity of construction activity.

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

- Where it has been agreed and shown on a Tree Protection Plan, construction access may take place within the RPA if suitable ground protection measures are in place (e.g. existing surfaced car park areas). In other areas this may comprise single scaffold boards over a compressible layer laid onto geo-textile materials for pedestrian movements. Vehicular movements over the RPA will require the calculation of expected loading and may require the use of proprietary protection systems.

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

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

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

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

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

- Where it is deemed necessary to operate a wide or tall load, plant bearing booms, jibs and counterweights or other such equipment, as part of construction works, and such equipment would have potential to cause injurious contact with crown material i.e. low branches and limbs, of retained trees within the RPA fencing, it is best advised that appropriate, but limited tree surgery, be carried out beforehand to remove any obvious problem branches. This is classed as ‘Facilitation Pruning’ within BS 5837 (2012). Any such pruning should be undertaken in accordance with a specification prepared by an arboriculturalist.

- It is advised that a Pre-Commencement Site Meeting is held with contractors who are responsible for operating machinery, as described above. To firstly highlight the potential for damage occurring to tree crowns and to ensure that extra care is applied when manoeuvring machinery during such operations within close proximity to retained trees to avoid any contact.

- In the event of having caused any such branch or limb damage to retained trees it is strongly recommended that suitable tree surgery be carried out, in accordance with BS 3998 (2010) Recommendations for Tree Work, to correct the damage, upon completion of development.

- All of the above precautionary measures should be applied to minimise the effect of any damage to long-term tree health and safety.

Christopher Barker CEnv dipHort

Appendix 1: BS5837 Tree Schedule

Key:	Measurements	Age – Class	Overall Condition	BS 5837 2005 : Cascade Chart for Quality Assessment/Retention Category	Symbols:
	MS – Multi-stemmed	YNG-MAT-Young Mature	G – Good	A – High	< = less than
	Ht - Height in metres	SM – Semi-mature	F – Fair	B – Moderate	~ = approximately
	Stem – Stem Diameter at 1.5m in mm	Mat – Mature	P – Poor	C – Low	> = greater than
	Crown – Crown spread in metres	OM – Over mature	D – Dead	R – Trees for Removal	
	TD - Trunk division (height in metres)	**Est Yrs –** estimate of years remaining (>40 years; 20 –40 years; <20 years)		**Sub-categories:** **1** = mainly arboricultural values **2** = mainly landscape values **3** = mainly cultural values.	

RPA = Root protection area (equivalent to a circle with a radius 12 x the stem diameter for single stem trees and 10 x the basal diameter for trees with more than one stem arising below 1.5m above ground level).

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations	BS 5837 Category	RPA Radius (m)
T1	Birch (*Betula pendula*)	15	470	N-5 S-5 E-5 W-3	Clearance 1m agl.	SM	20 - 40	G	Single trunk with a strong central leader supporting a lightly branching canopy that over hangs the adjacent garden slightly. Visible from properties along Chestnut Ave but not a significant canopy tree of high visual amenity. Low bat roost potential due to maturity and stature. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	This tree is close to the boundary and could potentially be retained within a garden area to provide canopy cover and screening to any new development. RPA protection measures will be required.	B2	5.6
T2	Birch (*Betula pendula*)	16	410	N-5 S-4 E-3 W-4	Clearance 0m agl	SM	20 - 40	F	Single trunk with a strong leader that appears to loose vigour at 9m and becomes twisted. Leans slightly to the west. Low bat roost potential due to maturity. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	This tree is of lower quality than nearby T1 and could be removed to provide space. No protection measures or arboricultural work required if it is removed.	C2	4.9

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations	BS 5837 Category	RPA Radius (m)
T3	Lime *(Tilia cordata)*	18	390	N-5 S-5 E-5 W-5	Clearance 2m agl.	SM	20 - 40	G	Single trunk covered with ivy which reaches into the canopy. Good balance and shape to the crown*. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level. (**significant pruning in summer 2014 not taken into account)*	Clear Ivy from trunk and crown and retain if practical within the new development. RPA protection measures will be required.	B2	4.6
T4	Oak (*Quercus petraea*)	7	330	N-5 S-4 E-6 W-5	Clearance 1m agl	SM	20 - 40	G	Single trunk supporting an open, balanced and quite wide canopy. Fairly small stature. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Retain if practical within the development scheme. RPA protection measures will be required.	C2	3.9
T5	Norway Maple *(Acer platinoides)*	13	320	N-6 S-5 E-2 W-6	Clearance 2m agl	SM	20	F	Single trunk with a strong leader. The canopy merges with adjacent Maple trees close by. Low bat roost potential. **NEST PRESENT** at the time of the survey. No obvious structural defects visible from ground level.	Reasonable specimen with visual amenity value. Consider retaining if this is practical. Protect RPA if retained.	C2	3.8
T6	Norway Maple *(Acer platinoides)*	14	210 /240	N-5 S-2 E-3 W-4	Clearance 2m agl	SM	20	F	Two trunks from ground level supporting an upright canopy that merges with adjacent Maple trees close by. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Reasonable specimen with visual amenity value. Consider retaining if this is practical. Protect RPA if retained.	C2	2.8

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations	BS 5837 Category	RPA Radius (m)
T7	Norway Maple *(Acer platinoides)*	14	310	N-4 S-6 E-4 W-5	Clearance 3m agl	SM	20	G	Single trunk with a division into three leaders at 1.5m. Open broad headed and balanced canopy merging with adjacent Maple trees close by. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Reasonable specimen with visual amenity value. Consider retaining if this is practical. Protect RPA if retained.	C2	3.7
T8	Oak (*Quercus petraea*)	11	240 / 250	N-6 S-6 E-6 W-6	Clearance 1m agl.	SM	20 - 40	G	Two trunks from 0.3m agl. Broad, open and balanced canopy that has good shape and visual amenity value. Minor trunk wound healing. Minor dead wood in lower canopy. Low bat roost potential due to maturity. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Reasonable specimen with visual amenity value. Consider retaining if this is practical. Protect RPA if retained.	B2	3.0
T9	Larch (*Larix decidua)*	15	310	N-6 S-6 E-6 W-6	Clearance 1m agl	SM	10 - 20	G	Single trunk with a strong central leader supporting a well-balanced pyramidal canopy of good visual amenity value. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Reasonable specimen with visual amenity value. Consider retaining if this is practical. Protect RPA if retained.	B2	3.7

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations	BS 5837 Category	RPA Radius (m)
T10	Hybrid Rowan (*Sorbus intermedia)*	9	310	N-4 S-4 E-4 W-4	Clearance 1m agl	SM	10 - 20	F	A single trunk supporting very poorly developed canopy with little visual amenity value. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Recommend removal.	C2	3.7
T11	Hybrid Rowan (*Sorbus intermedia)*	9	360	N-3 S-3 E-3 W-3	Clearance 1m agl	SM	10 - 20	F	A single trunk supporting very poorly developed canopy with little visual amenity value. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Recommend removal.	C2	4.3
T12	Hybrid Rowan (*Sorbus intermedia)*	9	290	N-3 S-3 E-3 W-3	Clearance 1m agl	SM	10 - 20	F	A single trunk supporting very poorly developed canopy with little visual amenity value. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Recommend removal.	C2	3.4
T13	Birch (*Betula pendula)*	14	480	N-5 S-3 E-5 W-5	Clearance 1m agl	M	20	G	A single trunk supporting a well-balanced, lightly branching canopy. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Retain if practical within a garden or landscape area. Protect RPA if retained.	C2	5.7

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations	BS 5837 Category	RPA Radius (m)
T14	Birch (*Betula pendula)*	12	290	N-2 S-3 E-3 W-3	Clearance 1m agl	SM	20	G	A single trunk supporting a well-balanced, lightly branching canopy. Slight kink in trunk but not of structural concern. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Retain if practical within a garden or landscape area. Protect RPA if retained.	C2	3.4
T15	Birch (*Betula pendula)* ***Tree Tag 0883 present***	15	450	N-5 S-4 E-4 W-4	Clearance 1m agl	M	10 - 20	G	A single trunk supporting a well-balanced, lightly branching canopy of significant size, highly visible from properties along Chestnut Ave. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Retain if practical within a garden or landscape area. Protect RPA if retained.	B2	5.4
TG1	3 x Rowan (*Sorbus acuparia)*	7	150 - 180	N-3 S-3 E-3 W-3	Clearance 1m agl.	Y	20+	F	A group of three young rowan closely grouped. One has significant basal regeneration indicating stress. Not visually prominent or of importance in the local landscape. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	None	U	n/a

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Est yrs	Overall Condition	Structural condition	Recommendations	BS 5837 Category	RPA Radius (m)
TG2	3 Cherry (*Prunus avium) + multiple saplings)* ***Tree Number tags 0875 and 0876 present.***	10 /14	410 - 550	N-6 S-6 E-6 W-6	Clearance 0m agl.	OM	10	F/P	A group of three cherry trees surrounded by significant sapling / root sucker regeneration forming a very dense stand. Not visually prominent or of importance in the local landscape. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	Dense basal regeneration indicates these trees are losing vigour and are nearing senility. Consider removing and replacing.	U	n/a
TG3	3 x Gum (*Eucalyptus gunii)*	15 /18	390 – 480	Varies up to 6m	Clearance >5m agl.	SM	20+	F	A group of three mature single trunk specimens within adjacent garden area. Canopy of two hangs over the access road at height but poses no constraint. Visually prominent along Northons Lane and of visual significance in the local landscape. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	None.	B2	5.7
TG4	2 x Hawthorn (*Crataegus monogyna)* 1 x Horse Chestnut (*Aesculus hippocastenum)*	6 / 7	150 - 190	N-3 S-3 E-3 W-3	Clearance 1m agl.	Y	10 - 20	F	A group of three young trees closely grouped. Not visually prominent or of importance in the local landscape. Low bat roost potential. No nesting bird activity visible at the time of the survey. No obvious structural defects visible from ground level.	None	U	n/a