C.B.E. Consulting

Arboricultural Surveys to BS5837

Initial BS5837:2012 Tree Survey
Land at Keston Nursery
Mill Green Road
Pinchbeck
Lincolnshire
NGR TF23588 25095

Survey by
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On behalf of AMJ Construction Ltd

smas worksafe consultant www.smasltd.com as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT	Report prepared by: C Barker	Date Issued: 09 September 2016
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BS5837 Tree Survey, Land at Mill Green Road, Pinchbeck

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Introduction

1.1 Site Description and Location

The site surveyed comprises a roughly triangular plot of land to the east of Mill Green Road on the south western edge of Pinchbeck comprising two residential houses and gardens, a large are under glasshouses, polytunnels and nursery stock, and a cultivated field laid fallow at the time of the survey. The site is centered at NGR TF23588 25095. 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 the Applicant has requested a BS5837 (2012) Tree Survey should be completed to assess the quality of any trees within and close to the boundary of the survey area. An inspection of the site and the immediate surrounding areas was carried out on 12 August 2016. A photographic record of the trees at the site is included within the report.

Figure 1: Site location.



1.2 Neighbouring Land Uses and Recent Site History

The defined site area comprises three parcels of land:

a) An area at the northern end where there are two houses with gardens
b) An extensive area under glasshouses, polytunnels and ground laid out with matting to support nursery stock, and
c) A small field cultivated and used to produce flowering plants for commercial purposes which is presently laid fallow having produced a crop earlier in the season.

The site lies to the east of Mill Green Road and there is an extensive area of arable land to the west. To the north and north east are residential houses within the village of Pinchbeck. An operational railway runs along the eastern boundary of the site area. To the south is additional and laid to polytunnels used for nursery stock production.

The site lies within South Holland District. A review of the on-line SHDC mapping system in August 2016 confirms the site is not within a Conservation Area and there are no Tree Preservation Order within or adjacent to the area being surveyed.

Figure 2: Site Contextual Aerial Photograph Image copyright Microsoft Corporation 2016



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 August 2016 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 and semi-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 site area, paying particular attention to any mature individual trees present within or adjacent to the site area 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 provided by the land owner has been used to prepare the Tree Location Plan within Section 3 of the report. The location of the trees has been measured on the site but the plan is only approximately to scale but should not be used to measure off 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 measured out on the site is shown on the Tree Location Plan **Figure 3**. Due to the size of the site the tree location plan has been divided into three parts.

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. ***Once a development plan has been prepared using the information provided within this report, a detailed constraints plan will need to be prepared showing the impact of the development on the trees within the site and the protection measures required.***

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 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 proposed new development within the field 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 twenty four individual trees and seven tree groups have been identified and assessed as part of the tree survey. A number of the trees within the hedgerows crossing the fields are large mature specimens. The character of the trees can be seen in the photographs below.

Trees G1 – G5 within Gardens
These trees, predominantly Birch, are placed primarily in groups with the garden areas of the two houses purely for visual amenity purposes. The tall Leylandii hedge obscures all views of these trees from Mill Green Road so in terms of visual amenity there would be no loss if they were removed. However, the line of Birch G2 create a nice linear canopy feature that is worth retaining if possible. There are no significant mature trees or trees of large stature within this area. These trees are placed within Category B2 or C2 depending on quality and potential useful life expectancy.









Trees G6 and T7 on road frontage
This group of Whitebeam are in full view of Mill Green Road and provide useful canopy cover and screening to the existing house. These are small trees or quite good quality. They will become crowded over time so consideration should be given to removing any specimens within the centre where space is limited. These trees are placed in Category B2. Nearby Maple G7 is partially hidden by the trimmed hedgerow but the canopy is sufficiently high to be visible and provide some visual amenity along the road frontage. This tree is placed in Category B2 and should be retained if possible.



Trees T8 – T15 within rear garden area
This group of individual specimen trees planted within the rear garden of the dormer bungalow house contains a number of large mature specimens. Oak T9 in particular is a tree of good stature and shape with high landscape value placed within Category A2. Many of the larger trees of good quality are placed in Category B2 and recommended for retention, however the trees are becoming quite crowded and it may be prudent to consider removing some of the smaller central trees struggling to develop due to lack of space which are placed in Category C2.





Trees G16 – T21 along eastern boundary
The small trees within G16 are of little significance as they are young, of small stature and are completely hidden from view by the tall Grey Alder hedge and the glasshouses. These trees are placed in Category U.

The boundary is dominated by the tall trimmed Grey Alder hedge but there are a small number of specimen Ash trees of significant stature and maturity scattered along this hedge. These are broad headed trees, many crowded with dense ivy. These trees are placed within Category B2. It is assumed that are within the ownership of the site being positioned within the Alder hedgerow.

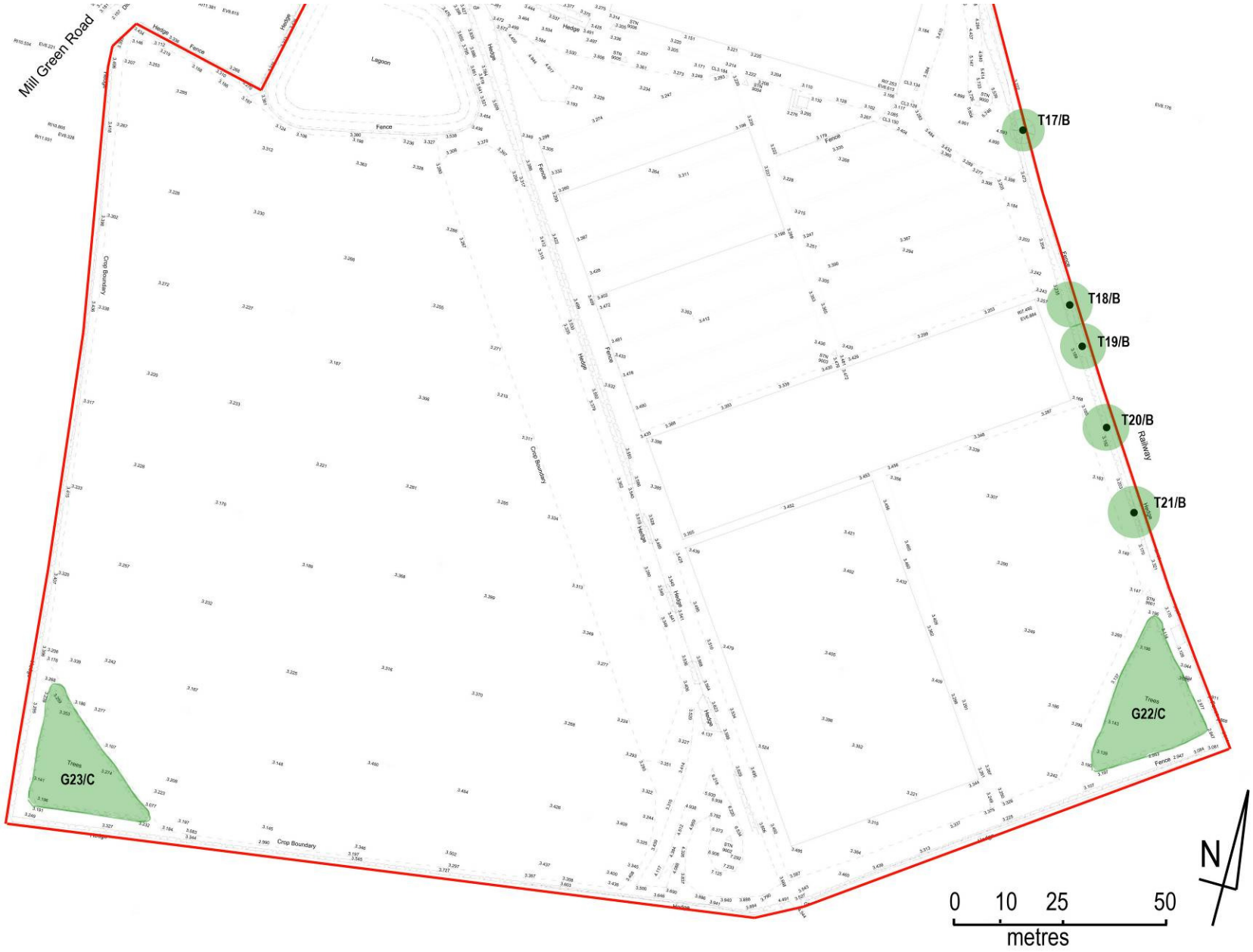



Trees G22 and G23 on south boundary
These two groups of young trees are positioned along the southern boundary of the site area in dense triangular planted areas. Presently these trees are completely screened from view from outside of the site area by the tall boundary hedgerows. If these trees are retained within any proposed development consideration should be given to thinning these to provide space for development and the removal of non-native plant stock should be prioritised. These two small plantations of young trees are placed within Category C2.






Figure 3: Tree Location Plan


Mill Green Road
Lagoon
Fence
Hedge
Crop Boundary
Railway
T17/B
T18/B
T19/B
T20/B
T21/B
Trees
G22/C
Trees
G23/C
N
0 10 25 50
metres

4. Tree Management

4.1 Arboricultural Assessment

Conceptual development proposals for this site will be prepared at a later date. Recommendation for retention or removal based on the arboricultural condition and assessed landscape value of the trees within the site area are provided below to assist with the preparation of a development plan.

Tree	Category	Recommendation
G1 5 x Birch *Betula pendula*	C2	Retain if possible. No arboricultural work required.
G2 6 x Birch *Betula pendula*	B2	Retain if possible No arboricultural work required
T3 Cherry *Prunus non-native Cul*	C2	None. No arboricultural work required
G4 3 x Birch *Betula pendula*	B2	None. No arboricultural work required.
G5 2 x Birch *Betula Cul*	U	Not a priority for retention due to poor condition.
G6 5 x Whitebeam *Sorbus aria*	B2	None. No arboricultural work required.
T7 Variegated Maple *Acer palmatum Cul.*	B2	None. No arboricultural work required.
T8 Horse chestnut *Aesculus hippocastenum*	B2	If retained consider reducing the crown to improve shape and balance.
T9 Oak *Quercus petraea*	A2	No arboricultural work required. Priority for retention.
T10 Oak *Quercus petraea*	B2	Retain if possible. Consider reducing canopy to improve shape and balance.
T11 Horse chestnut *Aesculus hippocastenum*	B2	Remove dead wood if retained and consider reducing canopy to improve balance.
T12 Birch *Betula pendula*	B2	Retain if practical to do so. No arboricultural work needed.
T13 Ginko *Ginko biloba*	C2	None. No arboricultural work needed.
G14 Field Maple x 4 *Acer campestre*	C2	Removal recommended due to proximity of glasshouses.
T15 Birch *Betula pendula*	B2	Retain if practical to do so. No arboricultural work required.
G16 Spruce, Ash and Apple	U	None
T17 Ash *Fraxinus excelsior*	B2	Consider removing ivy and reassess structural integrity if positioned near to new structures.
T18 Ash *Fraxinus excelsior*	B2	Consider removing ivy and reassess structural integrity if positioned near to new structures.
T19 Ash *Fraxinus excelsior*	B2	Consider removing ivy and reassess structural integrity if positioned near to new structures.
T20 Ash *Fraxinus excelsior*	B2	Consider removing ivy and reassess structural integrity if positioned near to new structures.

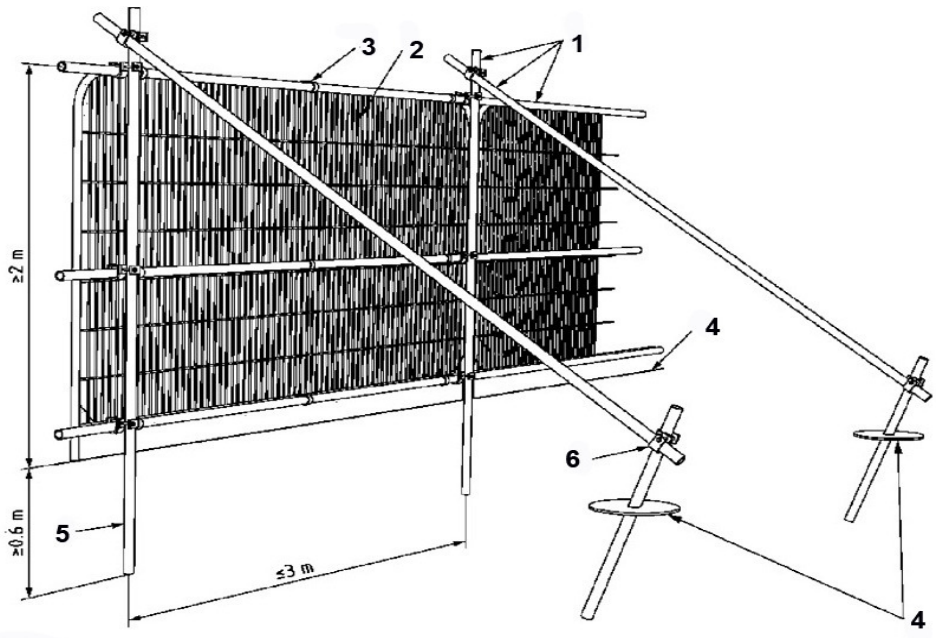
T21 Ash *Fraxinus excelsior*	B2	Consider removing ivy and reassess structural integrity if positioned near to new structures.
G22 Juvenile mixed woodland	C2	Will require thinning in the future if retained.
G23 Juvenile mixed woodland	C2	Will require thinning in the future if retained.

The majority of significant trees within the survey area are either on or very close to boundary positions and therefore it is likely that these can be retained within any proposed development to maintain canopy cover around the boundary areas. Once a proposed development plan has been prepared the potential impact of the development on the trees within the survey area can be fully assessed and the appropriate tree protection measures detailed and specified within a Constraints Plan and Arboricultural Impact Assessment.

4.2 General Recommendations

Any trees retained and incorporated within the proposed development 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 Tree Constraints Plan (TCP) 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)
G1	5 x Birch *Betula pendula*	7	<150	N-2 S-2 E-2 W-2	2	Y	10	G	Group of five trees each with a single trunk merging to form a canopy feature within the front garden. Negligible roost potential. No structural faults noted from ground level.	No arboricultural work required.	C2	1.8
G2	6 x Birch *Betula pendula*	7/8	<300	N-3 S-3 E-3 W-3	2	SM	20	G	Line of Birch each quite uniformly with 2 or 2 trunks forming a merging linear canopy along the garden boundary with a hedgerow underneath. Negligible roost potential. No structural faults noted from ground level.	No arboricultural work required	B2	3.6
T3	Cherry *Prunus non-native Cul*	4	<150	N-2 S-2 E-2 W-2	2	Y	10	G	Single trunk supporting a small ascending canopy. Negligible roost potential. No structural faults noted from ground level.	No arboricultural work required	C2	1.8

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)
G4	3 x Birch *Betula pendula*	10	175	N-3 S-3 E-2 W-2	1	Y	20	G	Three Birch each with a single trunk supporting ascending lightly branching canopies merging together. Negligible roost potential. No structural faults noted from ground level.	None. No arboricultural work required.	B2	2.1
G5	2 x Birch *Betula Cul*	5	<150	N-2 S-2 E-2 W-2	1	Y	10	P	Pair of non-native single trunk Birch with sparse canopies which are irregular and appear in decline. Negligible roost potential. No structural faults noted from ground level.	Not a priority for retention due to poor condition.	U	1.8
G6	*5 x Whitebeam Sorbus aria*	6	255	N-3 S-2 E-3 W-3	2	SM	20	G	Five specimen trees each with a single trunk planted in the front garden supporting merging ascending canopies visible from the road. Negligible roost potential. No structural faults noted from ground level.	None. No arboricultural work required.	B2	3.0
T7	*Variegated Maple Acer palmatum Cul.*	8	290	N-3 S-4 E-4 W-4	2	SM	20	G	Single trunk divides into a roundly ascending canopy with multiple leaders visible from the road Negligible roost potential. No structural faults noted from ground level.	None. No arboricultural work required.	B2	3.4
T8	Horse chestnut *Aesculus hippocastenum*	9	520	N-4 S-3 E-5 W-5	3	M	20	F	Single trunk coarsely dividing at 2magl into an unbalanced canopy with a large branch and canopy extension removed on the south side. Low roost potential. No structural faults noted from ground level.	If retained consider reducing the crown to improve shape and balance.	B2	6.2

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)
T9	*Oak* *Quercus petraea*	11	620	N-7 S-7 E-6 W-6	4	M	40	G	Single trunk dividing acutely into three leaders at 3magl supporting a roundly broad headed balanced canopy. Low roost potential. No structural faults noted from ground level.	No arboricultural work required. Priority for retention.	A2	7.4
T10	*Oak* *Quercus petraea*	9	325	N-5 S-4 E-4 W-5	3	SM	20	F	Single trunk supporting an irregular canopy suppressed on the east side and sparse on the south east. Negligible roost potential. No structural faults noted from ground level.	Consider reducing canopy to improve shape and balance.	B2	3.9
T11	Horse chestnut *Aesculus hippocastenum*	10	465	N-4 S-5 E-5 W-4	2	M	20	G	Single trunk acutely dividing at 2magl into a round canopy with moderate dead wood present but no indication of significant loss of vigour. Low roost potential. No structural faults noted from ground level.	Remove dead wood if retained and consider reducing canopy to improve balance.	B2	5.5
T12	Birch *Betula pendula*	15	335	N-2 S-3 E-3 W-2	3	M	20	F	Single trunk supporting a sparse pendulous canopy, quite upright and lightly branching. Negligible roost potential. No structural faults noted from ground level.	None. No arboricultural work needed.	B2	4.0
T13	*Ginko* *Ginko biloba*	7	<150	N-2 S-1 E-1 W-1	1	Y	10	G	Single trunk with a strong central vertical leader and a lightly branching canopy Negligible roost potential. No structural faults noted from ground level.	None. No arboricultural work needed.	C2	1.8
G14	Field Maple x 4 *Acer campestre*	10	<250	N-4 S-3 E-3 W-3	2	SM	10	P	Line of Maple situated between the glasshouse and the garden shed with little space to develop fully in this location. Lower canopies trimmed and crowded. Negligible roost potential. Structurally compromised due to lack of space to develop.	Removal recommended due to proximity of glasshouses.	C2	3.0

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)
T15	Birch *Betula pendula*	14	300	N-3 S-3 E-3 W-3	2	M	20	G	Single trunk supporting an upright lightly branching slightly pendulous canopy. Negligible roost potential. No structural faults noted from ground level.	None. No arboricultural work required.	B2	3.6
G16	*Spruce, Ash and Apple*	<3	<150	N-3 S-3 E-3 W-3	0	Y	10+	F	Group of young tree planted as specimen trees within a grassed area that is regularly mown. None of significant size or stature. Negligible roost potential. No structural faults noted from ground level.	None	U	1.8
T17	Ash *Fraxinus excelsior*	18	600 est	N-8 S-5 E-5 W-5	1	M	20	F	Single trunk with a large extending branch at 2magl on the north side. Canopy is openly broad headed with dense ivy cover into the crown. Low roost potential. No structural faults noted from ground level.	Consider removing ivy and reassess structural integrity if positioned near to new structures.	B2	7.2
T18	Ash *Fraxinus excelsior*	15	500 est	N-6 S-6 E-6 W-4	2	M	20	G	Single trunk with dense ivy growth into the crown dividing into three leaders. Trimmed on the west side at 4magl due to proximity of glasshouses. Low roost potential. No structural faults noted from ground level.	Consider removing ivy and reassess structural integrity if positioned near to new structures.	B2	6..0
T19	Ash *Fraxinus excelsior*	15	500 est	N-5 S-6 E-5 W-5	3	M	20	G	Single trunk with dense ivy growth into the crown dividing into three leaders. Trimmed on the west side at 4magl due to proximity of glasshouses. Low roost potential. No structural faults noted from ground level.	Consider removing ivy and reassess structural integrity if positioned near to new structures.	B2	6.0

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)
T20	Ash *Fraxinus excelsior*	9	300 est	N-4 S-4 E-4 W-4	2	SM	20	G	Single trunk dividing into an upright irregular canopy with minor ivy growth into the crown. Negligible roost potential. No structural faults noted from ground level.	Consider removing ivy and reassess structural integrity if positioned near to new structures.	B2	3.6
T21	Ash *Fraxinus excelsior*	9	300 est	N-4 S-3 E-4 W-3	2	SM	20	G	Single trunk supporting an ascending crown with good balance and minor ivy growth. Negligible roost potential. No structural faults noted from ground level.	Consider removing ivy and reassess structural integrity if positioned near to new structures.	B2	3.6
G22	Juvenile mixed woodland	4-6	<150	N-3 S-3 E-3 W-3	0	Y	10	G	Group planted young tree stock at1.5m centers Negligible roost potential. Crowded.	Will require thinning in the future if retained.	C2	1.8
G23	Juvenile mixed woodland	5-7	<200	N-3 S-3 E-3 W-3	0	Y	10	G	Group planted young tree stock at1.5m centers Negligible roost potential. Crowded.	Will require thinning in the future if retained.	C2	2.4