KEY TREE SOLUTIONS

ARBORICULTURAL CONSULTANTS

BS 5837: 2012
Arboricultural Constraints Report

Site Address:	Vernon House Yews Lane Kendray Barnsley S70 3LJ	Client:	Richard Senior
Report Ref:	YLKB01-23	Report Date:	19th September 2023
Author:	Laurence Smith BSc (Hons) Arb, M Arbor A	Signed:	Laurence Smith

Terms of Reference

Richard Senior commissioned Key Tree Solutions to undertake an arboricultural survey in accordance with the British Standard BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' to identify the quality and value (in a non-fiscal sense) of the existing arboricultural assets. This will allow an informed decision regarding which trees could be considered for removal or retention by identifying constraints considering both above and below-ground structures.

The arboricultural survey was carried out by Laurence Smith, BSc (Hons) Arb, M Arbor A, an Arboricultural Consultant. Laurence has a degree in Arboriculture and a BTEC National Diploma in Forestry and Arboriculture. He is a professional member of the Arboricultural Association with over a decade of experience within the arboricultural industry, initially as an arborist and for the last seven years as a consultant.

Summary

The boundary of the site is difficult to delineate due to the overgrown nature of the boundary features and the lack of fencing through most of the site. The centre of the site is relatively devoid of trees with most of the arboricultural elements being located around the perimeter. While there are a number of individual trees of quality around the edges most of the hedge elements are either in poor condition due to a lack of management or their scale is restricting light or blocking valuable views.

To the northeast of the survey area, there are a number of fire-damaged trees, some of which are not considered safe for retention as they could impact the site. It is unclear exactly where the boundary lies in this region and who is responsible for their management.

According to information on the local authority's website, the site does not fall within a conservation area and no TPO designations are located within or adjacent to the site.

development constraints within the site are relatively limited and are confined to the overhanging canopies and root protection areas.

1 Introduction

1.1 Arboricultural Report

This report categorises and reports on the trees within and directly adjacent to the site boundary and the constraints they pose within the potential development site.

1.2 Scope of Works

This report presents arboricultural information captured on Monday the 18th of September 2023, by Laurence Smith BSc (Hons) Arb, M Arbor A. The scope of work includes:

- A cascade chart for tree quality assessment at **Appendix A2**
- A survey of arboricultural elements in **Appendix B**
- A map of any statutory protection which may impact the site at **Appendix C**
- A scale drawing showing tree location, categorisation, stem and canopy size/distribution in **Appendix D**
- Relevant site photographs in **Appendix E**

2. Methodology

2.1 General

This tree survey has been undertaken and compiled in line with BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations (BS5837). This document contains guidance and recommendations regarding the relationship between trees and the design, demolition and construction processes, providing an overview of the principles and procedures to ensure a harmonious and lasting relationship between trees and structures.

BS5837:2012 does not provide explicit parameters for measuring an arboricultural resource's sensitivity, nor does it assess the impact of a proposed development on trees (other than listing the number of trees that would have to be removed or pruned for the undertaking). By using the parameters specified in the British Standard, arboriculturalists are able to determine the quality of all trees and other arboricultural features that may be affected by a development.

While the BS categories may be interpreted differently, the cascade chart in BS5837:2012 provides guidance on defining a tree's qualities so that the design process can determine how to maintain the higher-quality trees.

2.2 Spatial Scope

In some instances, trees may be located outside the site boundary but still have the potential to impact any development, for example, overhanging branches and root protection zones. In these instances, they have been included in the survey. However, data may have been estimated if access is not permitted. Trees on access routes are not part of this survey unless specifically requested.

2.3 Data Gathering

Data has been collected in accordance with BS 5837, as outlined in Appendix A within this report. The tree categorisation method applied by the arboriculturist was to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions about which trees should be removed or retained if development is to occur.

For a tree to qualify under any given category, it should fall within the scope of that category's definition as defined in Appendix A (categories U, A, B, C) and, for trees in categories A to C, it should qualify under one or more of the three sub-categories (1, 2, 3). Sub-categories 1, 2 and 3 are intended to reflect the arboricultural, landscape and cultural values, respectively.

Trees were recorded as individual specimens and groups. Where trees were recorded as groups, measurements were typically taken from the largest tree within the group. This survey level meets the requirements of BS 5837:2012, which states that 'trees growing as groups or woodland should be identified and assessed as such. The British Standard defines the term group as 'trees that form cohesive arboricultural features either aerodynamically (e. g. trees that provide companion shelter), visually (e. g. avenues or screens) or culturally including for biodiversity (e. g. parkland or wood pasture)'.

In all reasonable circumstances, tree diameters were measured via a specialist measuring tape at 1.5 m from ground level. Where access was not possible, measurements have been estimated and indicated with an asterisk (*) on the arboricultural data sheets. The crown spread of the surveyed trees was measured in each of the four cardinal points using a laser distometer or paced out if access was not feasible. This survey level is deemed sufficient by the arboriculturist to establish the extent of the crown spread. All crown spread measurements should be taken from the Arboricultural Data Sheet (Appendix B of this report).

The trees were assessed using the Visual Tree Assessment (VTA) methodology devised by Mattheck and Breloer (1994). VTA is a ground-level visual assessment of a tree, carried out to identify obvious mechanical defects, signs of ill health, potential mechanical failure and the suitability of a tree to a site.

2.4 Survey

The approach to the survey involved a ground-level walk assessment with tree and vegetation locations plotted over the topographical data collected by Haycock + Todd and provided by Richard Senior. No checking of this document was undertaken, and any comments are given on the assumption that this supplied document is correct.

Trees which were not included in the topographic data but had the potential to impact any development have been indicated with an 'X' over the stem on the constraints plan. These locations have been estimated via a handheld GPS device and aerial photography where possible. Given this lack of topographical data, Key Tree Solutions can not be held responsible for any inaccuracies in asset location.

Survey elements have been prefixed with a descriptive letter which can include Trees (T), Groups (G), Woodlands (W) and Hedges (H).

2.5 Limitation to Survey

Where access was permitted, trees were identified and inspected from ground level only and were not climbed. No invasive examination techniques (such as increment boring or internal decay detection) were carried out. As such, no assessment of the internal condition of the wood of these trees can be given.

The tree survey undertaken is not intended to be a tree risk management survey targeting safety-related issues. However, where specific hazards have been identified, these have been recorded, and management recommendations provided and are detailed within the tree survey schedule (see Appendix B of this report).

BS 5837:2012 does not include arguments for or against any development or for the removal or retention of trees. Where development is to occur, the standard guides on deciding which trees are appropriate for retention.

The reliability of the tree locations will relate directly to the accuracy of the supplied topographical data, *if applicable*, available aerial imagery and in-field plotting. Tree locations are potentially open to discrepancies, and their exact locations may need verifying.

The report does not comment on the possible effects of trees on neighbouring properties, including in relation to subsidence or heave or with regard to potential hazards presented by trees surveyed.

Trees are living organisms subject to changes outside human control. Trees and their environment alter with the seasons, and it is important to inspect trees whilst in full leaf and when out of leaf. Following harsh or unexpected weather conditions or heavy storms, it is also prudent to check trees. Changes to groundwater conditions will affect the root growth of a tree. Such changes do not always result from human influence, and other factors may be involved.

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3. Existing Site Conditions

3.1 Existing Land Use

The site is currently derelict with the ruins of an old building located on the northern boundary. The location of the boundary is difficult to delineate at present due to the lack of fencing and fragmented and overgrown boundary features.

3.2 Existing Trees

Trees on site are located around the assumed boundary and are principally comprised of overgrown hedgerows consisting of Cypress trees, Hawthorns and Privet. Interspersed and slightly set back from these hedgerows are several Beech, Sycamore and Birch trees although a number of these trees in the northeast have suffered fire damage with large vertical columns of cambial damage and decay.

3.3 Site Topography

The site has a significant fall in height from east to west.

3.4 Soil Assessment

No soil assessment was carried out on site by the Arboriculturist. However, baseline data from the British Geological Survey states that the area's underlying bedrock is considered to be part of the Pennine Middle Coal Measures Formation.

Further information collected from the Cranfield Soil and Agrifood Institute states that the local soilscape is comprised of "Slowly permeable seasonally wet acid loamy and clayey soils" with a Loamy and clayey texture.

Where clay-based soils are present, the ground may be susceptible to volumetric changes resulting from the uptake and release of moisture by tree roots, which may influence any potential foundation development.

3.5 Statutory Protection

Local Planning Authorities (LPAs) can preserve selected trees and woodlands by making Tree Preservation Orders (TPOs). Similarly, special provision is provided to trees located within Conservation Areas (CAs) which are not the subject of a TPO. The LPA's powers to do this are provided by the following Act of Parliament and its associated regulations:

- Town and Country Planning Act 1990
- Town and Country Planning (Determination of Appeals by Appointed Persons) (Prescribed Classes) (Amendment) (England) Regulations 2008
- Town and Country Planning (Trees) (Amendment) (England) Regulations 2012

The principal effect of a TPO is to prohibit the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees without first obtaining the consent of the relevant Local Authority. Where works to trees within a CA are proposed, six weeks' notification must first be given to the appropriate Local Authority. Unauthorised works on trees protected by a TPO or those located within a CA could result in an unlimited fine.

The interactive map on the Barnsley Council's website visited on the 19th of September 2023, shows that the site **does not fall within a conservation area**. In addition, **no TPO designations are listed** within 15m of the site.

Trees should be checked for protected species before any recommended works are undertaken. While it is outside of the scope of this tree survey to comment on the confirmed or likely presence of protected animal species, it is against the law to disturb bats or their roosts under the Conservation of Habitat and Species Regulations (2010). Likewise, nesting birds are protected by the Wildlife and Countryside Act (1981) (as amended) and Badgers by the Protection of Badgers Act (1992). If protected species are discovered, works should cease immediately, and Natural England should be contacted for advice.

Alongside these animal protections, landscape features may also be protected under the following acts and regulations.

- The Hedgerow Regulations 1997
- Countryside and Rights of Way Act 2000
- Natural Environment and Rural Communities Act 2006 & Environment (Wales) Act 20164. Arboricultural Constraints and Considerations

4. General Principles

4.1
The quality and value of existing trees: a proposed design must make every effort to retain all category A trees and, where possible, should retain category B trees. Category C trees should be retained if there is scope to do so, but they should not be considered a constraint to any proposed design or subsequent development.

4.2
The ownership and control of existing trees: the site owner (subject to regulatory protection) has control of the trees growing on the site, but conversely, the site owner has no power over the trees growing immediately adjacent to the site. Off-site trees may be privately or publicly owned. In general, private owners will often negotiate the potential removal of trees, whereas public owners will not.

4.3
The Root Protection Area (RPA), as defined in *BS 5837:2012*, is the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority. This area should be protected from disturbance "to avoid unacceptable damage to the tree as a result of severance or asphyxiation of the root system".

The recommended minimum area (m2) to avoid potentially harmful disturbance has been calculated and entered into the tree schedule (see Appendix B of this report) for all trees. The RPA for each tree has been illustrated on the site plans as a pink circle centred on the tree's stem.

This representation of the RPA does not consider pre-existing site conditions or other factors that can influence or modify the shape and disposition of tree roots. Accordingly, the Arboriculturist may make modifications or judgements on the possible extents of RPAs, where through professional judgement, it is deemed likely that the root zones have been restricted in a specific direction because of limiting factors such as topography, drainage or the presence of existing built infrastructure.

No RPAs have been modified as part of this assessment.

4.4
The foliage, flowers, fruit, other debris: the foliage, flowers, fruit and other debris associated with the normal functions of a healthy tree can block gutters and be a general nuisance, albeit not a nuisance in the legal sense.

4.5
The obstruction of sunlight or daylight by retained trees has both advantages and disadvantages.

Shading of buildings: Shading buildings by trees can be a problem, particularly in rooms requiring natural light. Proposed buildings should be designed to take account of existing trees, their ultimate size and density of foliage, and the effect these will have on the availability of light.

Shading of open spaces: open spaces such as gardens and sitting areas should be designed to meet the standard requirement for direct sunlight for at least a part of the day.

Benefits of shading: shading can be desirable to reduce glare or excessive solar heating or to provide comfort during hot weather. The combination of shading, wind reduction and evapotranspiration effects of trees can be utilised in conjunction with the design to offer microclimatic benefits.

4.6
The physical presence of large trees: the physical presence of large trees can cause apprehension to occupiers and users of buildings and open spaces. In general, the older generation tends to worry more than the younger. Worry is an example of apprehensive behaviour. Worry is imagining that a future situation or circumstance has the potential to cause you, or someone or something you care about harm or injury.

4.7
The characteristics and condition of retained trees: allowance must be made for the characteristics and condition of individual trees, for example; lime and sycamore trees are prone to aphids which typically results in honeydew, a sugar-rich sticky liquid, landing on vehicles (or anything else) parked/placed beneath the tree. Crack willows are aptly named because they are highly susceptible to wind, ice and snow damage. All parts of the yew tree contain toxic alkaloids except for the bright red arils. The dark green seeds are especially dangerous unless you are a nuthatch!

4.8
Tree Preservation Orders and Conservation Areas: there is a general presumption in favour of retaining protected trees and against development that may threaten their successful long-term retention. The extent to which the presumption applies may depend on the nature of the proposed development.

4.9
Ancient and veteran trees, ancient woodland and wood pasture: The National Planning Policy Framework (NPPF) states that planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location outweigh the loss.

4.10
The access and working area required to enable construction, including the effects of pruning on the amenity value of retained trees.

4.11
Overhanging canopies: the requirement to protect the overhanging canopies of retained trees where they may be damaged by construction activity.

4.12
Infrastructure: the requirements of infrastructure, e.g. easements for underground or above-ground apparatus; highway safety and visibility splays; substations, refuse stores, lighting, signage, solar panels, satellite dishes and CCTV sight-lines.

4.13
Mitigation: the potential for new planting to mitigate proposed tree loss. All new tree planting proposals are essential in the layout, design and future use of a development site, the local landscape character and the contextual surroundings. As trees generally form the dominant elements of a site's long-term landscape structure, careful consideration must be given to their ultimate height and spread, form, habit and colour, the density of foliage and maintenance implications.

5 Site-Specific Principles

5.1
The quality and value of existing trees: There are limited trees of quality within the assumed boundary. The notable exception is the small group along the eastern bank which forms part of the Yews Lane character. Other notable individual trees of reasonable quality are located along the assumed boundary line and include Sycamore (T1937, T1944 & T1945), Beech (T1940) and Lime (T19) specimens. Where possible these specimens should be prioritised for retention.

The western boundary has several coniferous trees and groups (G16, T1942 & G17) which are assumed to have once been part of a cohesive boundary feature. However, due to differences in growth speed and a lack of management, this feature has now become fragmented with some of the taller trees blocking the views of Barnsley. While some reduction pruning could be feasible for parts of this feature (G17 & T1942), it would not be feasible for all of it (G16) as this would bring the canopy below the height of any viable growth within the site. In addition, the Leyland Cypress (T1942) which makes up part of this boundary feature typically has a fast rate of growth and will need to be constantly managed to prevent its size from becoming out of scale within any development proposal.

Around large parts of the perimeter of the survey area is a further unmanaged hedge feature which has become suppressed where it exists under the larger woody elements and overgrown in other locations. This feature is predominantly Hawthorn but also includes Privet in the northeast. While this has some ecological merit its retention viability is questionable.

There are several trees in the northeastern corner of the site which have suffered significant fire damage and may not be viable for long-term retention.

5.2
The ownership and control of existing trees: Trees within the survey boundary are the responsibility of the owner, however, as there is currently no clear boundary delineation for much of the site it is difficult to tell where management responsibilities end. This is particularly

problematic in the northeastern corner where there are several trees which are unsuitable for retention. Where possible an agreement should be sought on how any arboricultural features in this region will be managed.

5.3
Root protection areas: The radius of the root protection areas of all trees is identified within the tree survey in **Appendix B**. The root protection areas of all category A, B and C trees are annotated on the Tree Constraints Plan in **Appendix D**.

5.4
The obstruction of sunlight or daylight by retained trees: The measured heights of all trees and hedges identified within the tree survey are given in the 'Height (m)' column of the tree survey in **Appendix B**. The obstruction of sunlight is represented by a segment equal to the tree's estimated height through the day's central part. No shadow patterns are annotated on the Tree Constraints Plan. Trees that are most likely to be the cause of significant shadows are located along the southern boundary and principally include The large Sycamore (T1945) and the group of Lawson's Cypress (G17), however the height of this group could easily be managed with pruning.

5.5
The physical presence of large trees: There is a general lack of significant trees within the site, however, the small group on the eastern boundary (T1932, T1933 & T1934) could appear larger than they are due to the higher elevation.

5.6
The site does not fall within the local conservation area and no TPO designations have been listed within the site.

5.7
Ancient and veteran trees, ancient woodland and wood pasture: No ancient or veteran trees are on or immediately adjacent to the site. Reference: https://ati.woodlandtrust.org.uk/

5.8
The access, working area and overhanging canopies: Limited canopies are extending into the site which could cause constraints on development work. The one exception is the T1945 whose canopy is as low as 4m above the site at its lowest.

5.9
Infrastructure: Establishing the details of services is often difficult until the construction is in progress. Where possible, existing services should be used, and all new services should be outside the root protection areas of retained trees.

6. Preliminary Management Recommendations

The arboricultural data sheets (see Appendix B) show management recommendations for those trees that were identified as requiring management intervention at the time of the survey.

As part of a duty of care, the tree owner is responsible for ensuring the health and safety of all trees within the boundary. As such, monitoring should be an ongoing process with periodical inspections by a qualified arborist.

7 Protection for Retained Trees

Trees that are to be retained will require protective measures during the development, typically involving temporary fencing around the RPA securely anchored to the ground. Where this is not possible or practicable, ground protection can be utilised, which is specific to the vehicle's weight.

No material storage is permitted within the RPA of retained trees unless confirmed to be acceptable by the consulting arboriculturalist. The exact details and location of protective measures should be included within an Arboricultural Method Statement (AMS) if necessary by the planning authority.

Positioning of any site compound, including office, facilities, toilets and storage of materials, should be carefully considered and, where possible, be located away from trees and their associated RPAs.

Appendix A: Key & British Standard BS5837:2012 Survey Table

A1. Survey Key

Column Heading	Description
ID	Each surveyed element has been given a unique reference number as shown on the survey drawings. Each number is prefixed with a letter to represent the element type. (T) Tree, (G) Group, (H) Hedge, (W) Woodland.
Age Class	The tree is described as Young, Semi Mature, Early Mature, Mature, Over Mature, Veteran or Dead.
Species	The English common name has been used. In some instances the botanical name is also given in *italics*.
Height (m)	An indication of the tree's height measured in metres.
Stem Diameter (mm)	The diameter of the tree stem when measured at 1.5 metres from ground level.
Branch Spread (m) N E S W	The distance the live crown extends in each fo the four cardinal directions.
First Main Branch Height (m) / Direction	Height given in meters that the first significant branch extends from the stem and the direction of which it points towards.
Canopy Height (m)	Height given in metres of the lowest part of the canopy.
Vitality	A quick reference guide to the trees overall health and condition. Given as Good, Fair, Poor or Dead **Normal** – a tree with little or no obvious physiological defects; leaf density and colour are typical for the species, bud, flower and fruit production are good and there are no signs of dieback at any point throughout the crown. **Fair** – a tree with moderate physiological defects may have some or all of the following factors; leaf density is less than typical for the species, leaf cover is chlorotic, bud, flower or fruit production are deficient, there are signs of minor dieback within the crown, there is a moderate degree of deadwood within the crown. **Poor** – a tree with major or multiple physiological defects; evidence of extensive crown thinning, bud, flower or fruit production is poor or missing, there are signs of advanced dieback throughout the crown, there is extensive or major deadwood throughout the crown. **Dead** – a tree that has died due to either old age, drought, disease, pest infestation, physical damage to the main stem or rooting system, or a combination of these factors.
General Observations	Narrative comment on the general condition including significant defects and overall appearance.
Preliminary Management Recommendations	Any works recommended in order to minimise risk, improve form or maintain a high value.
Estimated Remaining Contribution	An estimation of how long the feature will contribute to its surroundings in the current landscape context. Recorded in bands of either 10< years, 10> years, 20> years and 40> years.
Category Grading	The trees are graded to the categories prescribed within BS5837:2012 (U, A, B & C). These letters are suffixed with a number which gives an indication of how the tree sits within the landscape. More information on these values is given in the cascade chart in A2.
Root Protection Area Radius (m)	The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability.

A2. BS5837: 2012 Cascade Chart

Trees to be considered for retention	**(1) Mainly arboricultural qualities**	**(2) Mainly landscape qualities**	**(3) Mainly cultural values, including conservation.**	**Identification on plan**
Category A **Trees of high quality** 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)	**Light Green**
Category B **Trees of moderate quality** 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	**Mid Blue**
Category C **Trees of low quality** 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	**Grey**
Trees unsuitable for retention				
Category U Those in such a condition that they cannot realistically be retained as living trees in the contact of the current land use for longer than 10 years.	• 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). • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. • Tree infected with pathogens of significant to health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality **NOTE**: Category U trees can have existing or potential conservation value which it might be desirable to preserve.			**Red**

Appendix B: Arboricultural Survey Data

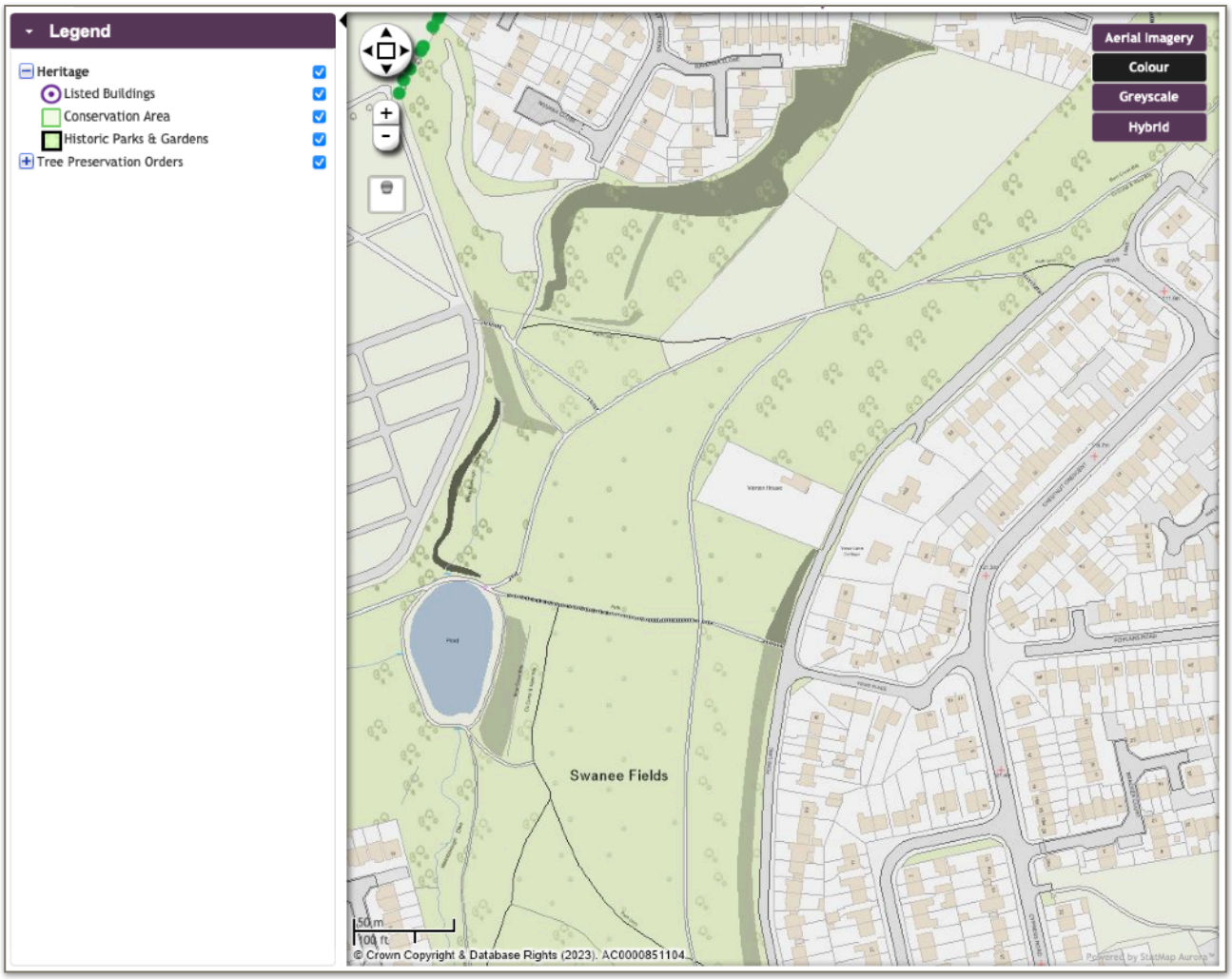
ID	Age Class	Species	Height (m)	Stem Diameter (mm)	Branch Spread (m) N E S W	First Main Branch Height (m) / Direction	Canopy Height (m)	Vitality	General Observations	Preliminary Management Recommendations	Estimated Remaining Contribution	Category Grading	Root Protection Area Radius (m)
T1	Mature	Wild Cherry (*Prunus avium*)	12	640	7, 4, 5, 7	2 W	0.5	Normal	High pruned to 6m over the highway with two large pruning wounds. To the west of the canopy are numerous young stems with diameters <75mm.	None	>10	C1	7.7
T2	Early Mature	Ash (*Fraxinus excelsior*)	15	400, 280, 150, 270	4.5, 7, 6, 4.5	5.5 E	2	Fair	4 stems from the ground level share the same root plate. The canopy has been lifted to 6m over the highway with one large pruning cut. Early signs of Ash dieback although not considered significant at present.	None	>10	C1	5.8
T1932	Early Mature	Sycamore (*Acer pseudoplatanus*)	12	460	2.5, 4, 7.5, 4	4.5 E	4	Vitality	The stem has a minor lean south with multiple occluded pruning wounds. The canopy is approximately 6m above the current site but lower over the highway.	None	>20	B2	5.5
T3	Young	Ash (*Fraxinus excelsior*)	6.5	180	3, 1, 1, 2	N/A	3	Poor	Standing deadwood with young shoots extending from close to the base. Leaves appear to be infected with Ash Dieback.	Fell	<10	U	2.2
T1933	Early Mature	Ash (*Fraxinus excelsior*)	14	450	4.5, 7.5, 6.5, 4	5 E	7	Normal	Two moderate pruning wounds partially occluded on the north side of the stem. One with minor decay. Some minor deadwood but no indication of Ash Dieback at present.	None	>20	B2	5.4
T1934	Early Mature	Ash (*Fraxinus excelsior*)	15	430*	6.5, 8, 2.5, 2.5	5 E	5	Fair	The lower canopy is becoming entangled with Russian vine and Ivy. Minor internal deadwood	Remove climbing vine	>20	B2	5.2
T1935	Semi Mature	Ash (*Fraxinus excelsior*)	12	300	3, 3, 3, 3	4 S	4.5	Fair	A large vertical column of decay from ground level to around 6m. Assumed historic fire damage. Possible habitat and not considered at risk of failure at present.	None	<10	U	3.6
T4	Young	Ash (*Fraxinus excelsior*)	8	110	3, 4, 0, 1	N/A	2.5	Normal	A relatively insignificant stem which leans to the east.	None	>10	C2	1.3

ID	Age Class	Species	Height (m)	Stem Diameter (mm)	Branch Spread (m) N E S W	First Main Branch Height (m) / Direction	Canopy Height (m)	Vitality	General Observations	Preliminary Management Recommendations	Estimated Remaining Contribution	Category Grading	Root Protection Area Radius (m)
T1936	Semi Mature	Silver Birch (*Betula pendula*)	12	200	2, 2, 1.5, 4	N/A	3	Poor	Hollowing stem with limited structural integrity. High failure potential into the site within 10 years.	Fell	<10	U	2.4
T5	Early Mature	Silver Birch (*Betula pendula*)	13	210	3, 1.5, 3, 2.5	N/A	8	Poor	A large decay column from ground level to 6m. Assumed fire damage.	Potential to fell depending on ownership.	<10	U	2.5
T6	Early Mature	Silver Birch (*Betula pendula*)	13	220	5, 3, 0, 0	N/A	8	Poor	Significant hollowing stem with a large vertical fracture. Stem leans away from the site and is not considered a risk of harm.	None	<10	U	2.6
T7	Early Mature	Silver Birch (*Betula pendula*)	15	400	4, 3, 4, 6.5	5 W	7	Normal	Multiple instances of deadwood are low in the canopy but generally in good condition.	None	>20	B2	4.8
T1937	Semi Mature	Sycamore (*Acer pseudoplatanus*)	12	310	5.5, 3, 5.5, 3.5	2 S	2	Fair	Cambial damage at 2m south, although decay is minimal and occlusion growth strong. Generally good condition.	None	>10	B2	3.7
T1938	Young	Beech (*Fagus sylvatica*)	12	220	4, 1, 5, 5	4 W	2	Normal	Tall, slim, stem with an asymmetrical canopy.	None	>10	C2	2.6
T1939	Young	Beech (*Fagus sylvatica*)	13	240, 190	4.5, 3, 5, 4	N/A	3	Normal	Bark included union at 1.5 m. Tall slim stems above.	None	>10	C2	3.1
G8	Young	Cherry Laurel (*Prunus laurocerasus*)	9	100 x 8 approx.	5, 4, 3.5, 3.5	N/A	Ground Level	Normal	Multiple upright stems from 0.5m.	None	>10	C2	2.8
T9	Semi Mature	Sycamore (*Acer pseudoplatanus*)	12	230, 250	2.5, 6, 4, 4	N/A	6	Normal	Twin stems from ground level. Deadwood is low in the canopy but generally in good condition.	None	>20	B2	3.4
T10	Semi Mature	Sycamore (*Acer pseudoplatanus*)	12	330	3.5, 3, 4, 4	1.5 W	6	Normal	Larger tree with row. Generally good condition.	None	>20	B2	4.0
G11	Semi Mature	Sycamore (*Acer pseudoplatanus*)	9	140-270	2, 2, 4.5, 2	N/A	2	Normal	A row of Sycamore trees with one Field Maple. Assumed to have been part of a woodland planting given the uniform spacing and similar characteristics.	None	>20	B2	3.2
T1940	Early Mature	Beech (*Fagus sylvatica*)	14	320, 280	5.5, 5.5, 4, 5	N/A	3	Normal	Generally good health and vigour.	None	>20	B2	4.3

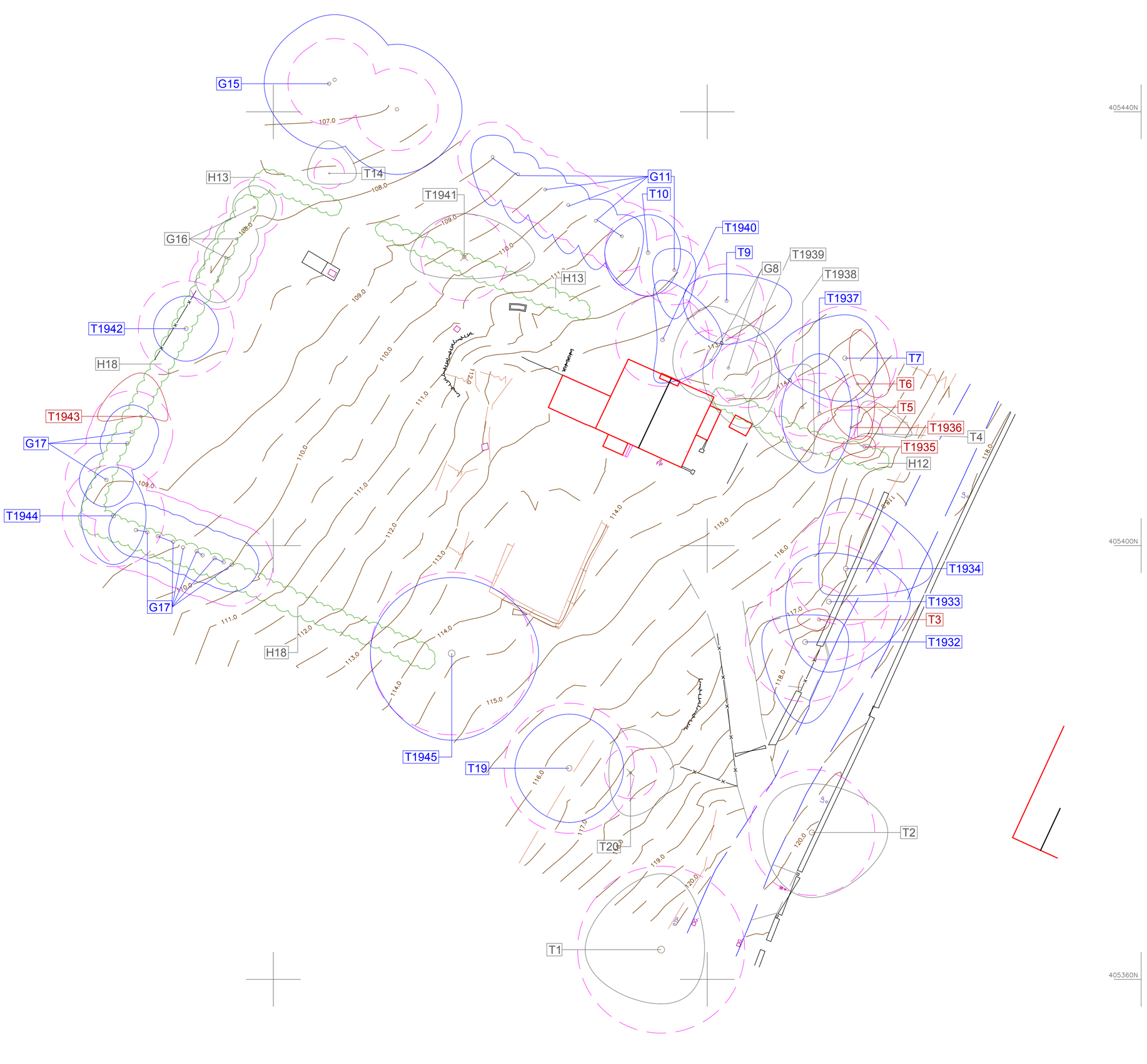
ID	Age Class	Species	Height (m)	Stem Diameter (mm)	Branch Spread (m) N E S W	First Main Branch Height (m) / Direction	Canopy Height (m)	Vitality	General Observations	Preliminary Management Recommendations	Estimated Remaining Contribution	Category Grading	Root Protection Area Radius (m)
T1941	Semi Mature	Sycamore (*Acer pseudoplatanus*)	11	330	4, 6.5, 2, 5	1 W	4.5	Normal	Squirrel damage around the crown will likely lead to failures of the main upright stems in time.	Potential to prune out damaged limbs.	>10	C2	4.0
H12	Early Mature	Privet (*Ligustrum ovalifolium*)	6	<75	N/A	N/A	3	Normal	Originally managed as a hedge feature, it has now become somewhat overgrown. The canopy arches into the site by around 2m.	None	>10	C2	1.0
H13	Semi Mature	Hawthorn (*Crataegus monogyna*)	6.5	<75	N/A	N/A	2	Normal	All stems lean to the north with the canopy extension approximately 3m north of the stems' location.	None	>10	C2	1.0
T14	Young	Aspen (*Populus tremula*)	8	120	3, 2.5, 1, 2	N/A	N/A	Normal	Tall slim stem with a minor lean to the north.	None	>10	C2	1.4
G15	Semi Mature	Aspen (*Populus tremula*)	13	250, 280*	6, 6, 6, 6	6 S	3	Normal	End trees of a shelter belt of Aspens which extends further east. Lower deadwood but generally in condition typical of the species.	None	>20	B2	3.8
G16	Semi Mature	Lawson's Cypress (*Chamaecyparis lawsoniana*)	8	150, 150, 150	2, 2, 2, 2	N/A	Ground level	Fair	The southeastern sides are dead with the only viable canopy at the crown and the opposing side only.	Potential to fell and replace.	>10	C2	2.6
T1942	Semi Mature	Layland Cypress (*Cupressus × leylandi*)	11	370	3, 3, 3, 3	2 W	2	Normal	Form and health typical of the species.	None	>20	B1	4.4
T1943	Semi Mature	Goat Willow (*Salix caprea*)	7.5	150, 170	4, 2.5, 0, 4	2 N	3	Poor	Hollowing stems with decay at the base.	Fell	<10	U	2.3
T1944	Early Mature	Sycamore (*Acer pseudoplatanus*)	12	200, 180, 250, 300	4.5, 3, 4.5, 3	3 E	2	Normal	Multi stem from close to ground level. Stems are upright with limited lateral branching.	None	>20	B1	4.7
G17	Semi Mature	Layland Cypress (*Cupressus × leylandi*)	12	320	2.5, 2.5, 2.5, 2.5	N/A	2	Normal	Row of trees which form part of a tall hedge.	None	>20	B2	3.8

ID	Age Class	Species	Height (m)	Stem Diameter (mm)	Branch Spread (m) N E S W	First Main Branch Height (m) / Direction	Canopy Height (m)	Vitality	General Observations	Preliminary Management Recommendations	Estimated Remaining Contribution	Category Grading	Root Protection Area Radius (m)
H18	Semi Mature	Hawthorn (*Crataegus monogyna*)	6	<75	N/A	N/A	Ground level	Normal	Boundary hedge feature which has become overgrown in multiple locations and suppressed by trees in others. Limbs have typically become long and flexible with retention as a boundary feature questionable.	None	>10	C2	1.0
T1945	Mature	Sycamore (*Acer pseudoplatanus*)	12	430, 460, 400	7, 8, 8, 7.5	3 S	2	Normal	The canopy is approximately 4m high above the site with deadwood and hanging branches. The easterly stem has a large region of cambial damage although secondary hardening is currently intact.	None	>20	B1	7.5
T19	Early Mature	Small-leaved Lime (*Tilia cordata*)	12	500	5, 5, 5, 5	2 W	Ground level	Normal	Some minor bark included unions but generally good physiology and structure. Expansion cracking around the stem. Potential for a hollowing stem, but most likely due to high vigour.	None	>20	B1	6.0
T20	Semi Mature	Wild Cherry (*Prunus avium*)	10	140, 200*	4, 4, 4, 2	N/A	3	Fair	Stems twisting around each other, clad in Ivy with overgrown Hawthorn extending through the lower canopy.	Sever and remove Ivy.	>10	C1	2.4

Appendix C: Statutory Protection



Screenshot 1. A screen shot taken from the Barnsley Council's Website showing that the site is not within a conservation area and that there are no TPO designations impact the site.



KEY TREE SOLUTIONS
ARBORICULTURAL CONSULTANTS

KEY- Arboricultural Survey and Constraints Plan
(to be read in conjunction with report ref.YLKB01-23)

- Tree surveyed by Key Tree Solutions - location of tree centre from topographic survey
- Tree surveyed by Key Tree Solutions - tree location approximated by surveyor

Tree categories (BS 5837:2012) - Shape indicates canopy spread

- Category A Trees
- Category B Trees
- Category C Trees
- Category U Trees
- Root Protection Area (RPA)
- Shrubs & Hedges

Site Location
Vernon House
Yews Lane
Kendray
Barnsley
S70 3LJ

Key Tree Solutions
Rolys Cottage,
YO61 2QY
Tel. 07716 638 613
www.KeyTreeSolutions.co.uk

Job
Arboricultural Constraints Report

Title
Appendix D:
Constraints Plan

Drawn by	Date	Scale @ A2	Drg. no.
L Smith	**Sep 2023**	**1:250**	**1/1**

Appendix E: Images

Figure 1. T1.

Figure 2. Trees from left to right: T1934, T1933, T3 & T1932.

Figure 3. T1935.

Figure 4. Trees to the north east of the site.

Figure 5. T1940 with G8 behind. to the left of the image is the overgrown hedge H13.

Figure 6. G11 with uniform planting.

Figure 7. H13 with T1941 emerging in the center.

Figure 8. H13 to the left of the image with T14 and G15 in the background.

Figure 9. Trees along to western boundary.

Figure 10. Trees in the south western corner.

Figure 11. T1945 with H18 below.

Figure 12. T1945 with H18 below.

Figure 13. Derelict building with trees to the rear.

Figure 14. The view west down the site with some of the taller Cypress trees blocking the view.