



SJ Stephens Associates

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Arboricultural Impact Assessment

- Tree Survey
- Tree Protection Plan
- Arboricultural Method Statement

For:-

A single floorplate development, split into 4 separate units, to create flexible B2/B8 light industrial use

At:-

Lindenwood
Chineham Business Park
Basingstoke
RG24 8QY

On behalf of:-

Frasers Property
1000 Eskdale Road
Winnersh Triangle
RG41 5TS

Prepared by:

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Survey Date: 7th July 2023
Report Date: 15th December 2023
Project no: 2125

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1 BACKGROUND

- 1.1 This Arboricultural Impact Assessment has been instructed by Frasers Property to specify tree protection measures and to assess the arboricultural impact of the proposed single floorplate development of four separate units for flexible B2/B8 light industrial use at Lindenwood.
- 1.2 Trees were surveyed, with findings shown in the Tree Schedule in Appendix B and plotted on the Tree Protection Plan in Appendix A. This also shows tree protection measures, which are specified in the Arboricultural Method Statement in section 5 below. The arboricultural impact is assessed in section 6, which assumes that these measures are followed.
- 1.3 The tree survey was undertaken, and this report has been prepared, by Catherine Fforde HND Hort, Dip Arb L4(ABC), MCIHort, MArborA and approved by Simon Stephens MA Oxon, Dip Arb (RFS), MArborA, C Env, MICFor a Registered Consultant with the Arboricultural Association, with over 20 years relevant experience.
- 1.4 This survey and report have been prepared in accordance with the recommendations of BS 5837:2012, Trees in relation to design, demolition and construction - Recommendations.

1.5 Documentation supplied:

- Topographical Survey
- SJ Stephens Associates, Tree Constraints Plan, dated July 2023
- The Harris Partnership, Proposed Site Plan: drawing no: 106 G
- The Harris Partnership, Pre-Application Design Document: ref 18117 Pre App 01B

2 SURVEY DETAILS AND SCOPE

- 2.1 The site survey included trees and shrubs, within and immediately adjacent to the red line boundary, with a stem diameter over 75mm at 1.5m height, as shown located on the Tree Protection Plan, included as Appendix A.
- 2.2 Tree inspection took place from ground level with the use of binoculars, sounding hammer and metal probe using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could increase the risk of structural failure were noted.
- 2.3 Tree diameters were measured using a girthing tape and tree heights were measured using a hypsometer. Where use of a tape was restricted by site factors, diameters were estimated, with the diameter recorded in the tree schedule preceded by the word "est".
- 2.4 At the time of the survey, the weather was fine with no restrictions to visibility. Broadleaf trees were in leaf. In places, dense undergrowth restricted access/dense ivy restricted visibility of tree stems.
- 2.5 The suitability of trees for inclusion in the future development was considered, in particular considering the safe useful life expectancy, and sustainability, of trees on the site after development is completed.
- 2.6 Tree details are shown on the Tree Protection Plan included as Appendix A. Tree locations have been taken from the topographical survey provided. Where not included on the topographical survey, they have been determined by measuring distances from features shown on the plan, using a laser measuring device. The following information was recorded for each tree, and is shown in the Tree Schedule included as Appendix B:
- **Number:** an identity number for each tree, prefixed with a "T", which cross references locations shown on the plan with the schedule in Appendix B. Where a number of trees are located close together and are similar in character and management requirements, they have been treated as a Group under a single number, prefixed with a "G".
 - **Species:** common name.
 - **Tree height:** approximate height in metres.
 - **Stem diameter:** diameter in millimetres, taken at 1.5m above ground. Where there are a number of stems, stem diameters are recorded in the condition column.

- **Branch spread:** approximate spread in metres to N,S,E and W of the trunk. The approximate branch spread is drawn on the plan.
- **Canopy clearance:** approximate height of the canopy above ground. Where a significant, low lateral branch is present, its height and direction of growth is included in the Condition column.
- **Age class:** Young, Semi-mature, Early mature, Mature, Over-mature, Veteran.
- **Condition:** features that affect the safe useful life expectancy and amenity of the tree, including the presence of decay or any physical defect.
- **Management Recommendations:** recommendations to ensure the health and safety of the tree, within the future development.
- **Estimated Remaining Contribution:** <10 years, 5-15 years, 10-20 years, 15-30 years, 20-40 years, >40 years.
- **Category grading:** tree classification taken from BS 5837:2012, Trees in relation to design, demolition and construction (see Appendix C for details), as follows:
 - Category U: Unsuitable for retention, trees with less than 10 years life expectancy, normally recommended for removal (Red)
 - Category A: high quality trees, able to make a substantial contribution for at least 40 years, normally retained unless there is an over-riding reason for removal and appropriate mitigation. (Green)
 - Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained. (Blue)
 - Category B/C: an intermediate category between categories B and C (not specifically described in BS5837). Trees, which should be retained wherever possible, providing retention does not unreasonably constrain the layout. (Blue)
 - Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter. Trees which can be removed to allow the desired layout or new planting. (Grey)

For category A, B and C trees, a subcategory has been allocated, providing information on the reasons for selection of a specific category, as follows:

- Subcategory 1: mainly arboricultural values.
- Subcategory 2: mainly landscape values.
- Subcategory 3: mainly cultural values, including conservation.
- Trees have been classified irrespective of the possible proximity to future construction. The BS 5837 category is colour coded, as indicated above, on the plan included as Appendix A.
- **Protection Distance:** the protection distance in metres required to provide the Root Protection Area recommended in BS 5837, assuming a circular area centred on the tree.
- **Root Protection Area (RPA):** the area in m², as recommended in BS 5837, to provide sufficient rooting area to ensure tree survival and which, in most situations, should be fenced off to prevent root damage from construction activities.

3 SURVEY LIMITATIONS

- 3.1 No internal decay devices, or other invasive tools to assess tree condition, were used.
- 3.2 No soil excavation or root inspection was carried out.
- 3.3 This survey has not considered the effect that trees or vegetation may have on the structural integrity of future building through subsidence or heave.
- 3.4 The tree survey has been undertaken for planning purposes. Although any obvious structural defects have been noted, a Tree Hazard Assessment has not been carried out. Mature trees close to highly populated areas or public highways should normally be checked for safety annually, by a suitably qualified person.

4 LEGAL PROTECTION OF TREES

- 4.1 The Basingstoke and Deane Borough Council website was viewed on 13.07.2023, which showed that the site does not contain any Tree Preservation Orders, nor does it fall within a Conservation Area. The presence of Planning Conditions currently attached to the site, was not checked.

5 ARBORICULTURAL METHOD STATEMENT

5.1 Site Overview

- 5.1.1 The proposal is for a single floorplate development of four units for flexible B2/B8 light industrial use. The proposed site plan is included as Appendix F and has been added to the survey drawing, along with tree details, to create the Tree Protection Plan attached as Appendix A.
- 5.1.2 At the time of survey, the site contained five office buildings together with parking and access roads. It is understood that demolition of the buildings has already commenced. Established trees are located in wooded areas along the northern and western site boundaries. Landscape amenity planting, including trees, is located on the southern and eastern site boundaries.
- 5.1.3 Amendments to the existing hard landscape layout are proposed. A new vehicular access is to be created from Crockford Lane, which will be suitable for HGV use. The new access will include a short extension of the pavement through the root protection area of T7 to provide a suitable crossing place for pedestrians. An existing vehicular access, in the centre of the southern boundary, is to be closed off. The extent of the existing parking area in the northeast corner of the site is to be reduced, with areas of hard surfacing replaced by a soft surface.

5.2 Tree Work

- 5.2.1 Details of proposed tree works are included in the Tree Schedule included as Appendix B.
- 5.2.2 Two trees and four groups are proposed for removal, as detailed in section 6.1 below.
- 5.2.3 All tree work must be undertaken to the standards set out in BS 3998:2010 Tree work – Recommendations.

5.3 Root Protection Areas

- 5.3.1 Root Protection Areas are shown for all trees in the Tree Schedule included as Appendix B. They are also shown for all retained trees, as circular areas centred on the trunk, on the Tree Protection Plan included as Appendix A. Where there are physical obstructions to root growth the Root Protection Area should be shown as an equivalent area that is more likely to reflect actual root growth. The Root Protection Area shows the area around a tree in which all construction activity must normally be excluded, unless appropriate protection measures are implemented.
- 5.3.2 For tree numbers T11 and T12, where the building within the Root Protection Areas will have prevented root growth, the Root Protection Areas have been shown as polygons of equivalent area, to more closely reflect the likely actual root spread.

5.4 Tree Protection Fencing

- 5.4.1 Tree Protection Fencing must be erected where shown on the Tree Protection Plan, included as Appendix A. This will provide full protection of the Root Protection Areas of all retained trees within the site, other than for:
- area hatched in blue on the Tree Protection Plan, where No-Dig Construction must be used, as described in section 5.5 below, to protect underlying roots.
 - areas hatched cyan on the Tree Protection Plan, indicating Ground Protection Areas, where roots must be protected, as described in section 5.6 below.
 - area cross hatched red on the Tree Protection Plan, where there will be excavation at the edge of a Root Protection Area, but where hand excavation must be used, as described in section 5.7, to minimise potential root damage.
- 5.4.2 Tree works can be completed before Tree Protection Fencing is erected, however no contractors plant or vehicles must be allowed to track within the Root Protection Areas unless ground protection panels are laid.
- 5.4.3 Tree Protection Fencing must be from weldmesh panels, at least 2m high, securely fixed, with wire or scaffold clamps, to a rigid framework. This framework must be constructed from scaffold tubes with vertical tubes, at a maximum interval of 3m and driven into the ground at least 0.6m. The structure must be well braced to resist impacts, constructed as per Figure 2 of BS5837:2012, which is reproduced in Appendix D. Alternatively, weldmesh panels can be supported on blocks, providing the blocks are pinned to the ground with road pins, or similar, and the panels are braced, as per Figure 3 of BS5837:2012, which is also reproduced in Appendix D.

- 5.4.4 Tree Protection Fencing must initially be erected where indicated “D/G” on the drawing while work to remove existing hard surfaces from the Root Protection Areas of trees is undertaken, as specified in section 5.5.4 below, then moved to where indicated “C”, as soon as the work is completed.
- 5.4.5 After erection of Tree Protection Fencing two days’ notice must be given to the local planning authority before demolition or construction, including any ground work, starts on site.
- 5.4.6 Tree Protection Fencing must be maintained and retained for the duration of the works, or until such time as agreed in writing with the local planning authority.
- 5.4.7 Weatherproof notices must be fixed to the Tree Protection Fencing, and maintained, stating:-

**TREE PROTECTION AREA
KEEP OUT**

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS
CONTRAVENTION MAY LEAD TO CRIMINAL PROSECUTION
THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:

- The Protection Fence must not be moved
- No person or machine must enter the area
- No materials or spoil must be deposited
 - No excavation must be permitted

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN
PERMISSION OF THE LOCAL PLANNING AUTHORITY

5.5 No-Dig Construction Area

- 5.5.1 The No-Dig Construction area is shown hatched blue on the Tree Protection Plan included as Appendix A. This covers an area within Root Protection Areas where the existing hard surfacing is to be replaced by new hard surfacing.
- 5.5.2 Where existing hard surfacing within the No-Dig area is to be replaced by new hard surfacing, no excavation must be permitted beneath the existing sub-base. If existing sub-base remains, it can be used as a base for the new build up. If the existing sub-base is removed, engineering details for the new build must avoid localised compaction, using both a two dimensional geogrid, and a three dimensional cellular confinement system as integral components of the sub-base. As well as being fit for purpose, the design and methodology must protect tree roots, by ensuring the following:-
- following leveling with soil or sand, a permeable, non-woven geotextile membrane, must be laid.
 - a suitable two dimensional geogrid, such the TriAx Geogrid supplied by Tensar International (www.tensar.co.uk), or the Biaxial Geogrid supplied by Geosynthetics Ltd (www.geosyn.co.uk), must be laid over the entire area and underneath the edging.
 - Kerb stones must be laid on top of the geotextile and geogrid. If required steel reinforcing rods can be driven to provide additional anchorage for kerb stones.

- a suitable cellular confinement system must then be laid to manufacturers instructions on top of the geogrid. Products that might be considered include Geoweb, supplied by Greenfix (www.greenfix.co.uk) or Cellweb, supplied by Geosynthetics Ltd (www.geosyn.co.uk). The depth of the system must be adequate to take the maximum axle weight, as per manufacturers guidance.
- the cellular confinement system must be filled with clean (no fines), washed angular, 4/20mm, stone to provide load support, while allowing air and moisture to permeate to the root zone.
- a further permeable, non-woven geotextile membrane, such as TreetexT300, or an alternative approved product which has similar oil trapping qualities, must be laid over the cellular confinement system.
- a porous, surfacing material, free from contaminants, must then be laid. A porous asphalt would be suitable.

5.5.3 Following removal of the existing block paviour surfacing which is providing protection to underlying tree roots, site traffic, including pedestrians, must not be allowed on the No-Dig area until roots are protected by the No-Dig surfacing, or unless suitable ground protection has been laid. If access is required across No-Dig area for plant, before the No-Dig surfacing is laid, ground protection panels must be laid. Either Trakmats (supplied by the Marwood Group, www.marwoodgroup.co.uk), Groundtrax panels (see www.groundtrax.com), Ground-Guards, as supplied by Greentek (www.greentek.org.uk), or a similar approved product, must be used, laid on top of a compressible layer of sand or woodchips, laid onto a geotextile. If access is required for pedestrians, 25mm plywood or side butting scaffold boards must be laid, on top of a compressible layer of sand or woodchips, laid onto a geotextile.

5.5.4 No-Dig construction may result in an increase in levels. This must be fully taken account of in all other aspects of the design.

5.6 Ground Protection Areas

5.6.1 The Ground Protection Areas, which are hatched cyan on the Tree Protection Plan, contain hard surfacing which is protecting any underlying roots and which must stay in place during the construction period unless further protection measures are implemented.

5.6.2 Hard surfacing in Ground Protection Areas can be replaced if the existing sub-base remains in place and if the new surfacing is permeable.

5.6.3 If the existing sub-base is removed, ground protection must be laid immediately and then a No-Dig construction method, as detailed in section 5.5, used for the build up. No excavation must be permitted beneath the base course in these areas and excavation must stop immediately if roots are found.

5.6.4 An excavator must only be used for the removal of the existing hard surfacing within the Root Protection Areas of T4, T5, T6, T9, T10, T15, T24, T25, T27, T29, T30, T41, T42, T48, T49 and T50, if it can work only from areas of hard standing, or from outside the Root Protection Areas. A banksman must be present during this operation and excavation must go no deeper than the existing base course and must cease immediately if roots are found. Once hard surfacing has been removed, the new soft landscape areas must immediately be topsoiled using good quality topsoil supplied to BS3882:2015. Tree Protection Fencing must then be erected around the outer edges of the Root Protection Areas, where indicated 'C' on the Tree Protection Plan, to prevent damage to underlying roots during the construction period.

5.7 General measures

- 5.7.1 No construction activity whatsoever, including routing of underground services, storage of materials or on-site parking, must be allowed within Root Protection Areas, other than that specifically described above.
- 5.7.2 No mixing or storage of cement, concrete, oil, fuel, bitumen or other chemicals must be permitted within 10m of the trunk of any retained trees, nor in any position where the slope of the ground could lead to contamination of the Root Protection Area.
- 5.7.3 Fires must not be lit in a position where their flames could extend to within 10m of foliage, branches or trunk.
- 5.7.4 Landscape works carried out within Root Protection Areas must be undertaken with great care so as not to damage shallow roots. Tractor mounted rotovators or other heavy mechanical cultivation must not be used within the Root Protection Areas.
- 5.7.5 If any tree shown for retention is removed, uprooted or destroyed, another tree must be planted in the same location, at a size and species to be agreed in writing with the Local Planning Authority.
- 5.7.6 A copy of this report and the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

5.8 Hand Dig Area

- 5.8.1 The ground level is to be reduced in the Root Protection Area of the black pine, T4, to facilitate the construction of an extension to the pavement. The Hand Dig trench, shown cross-hatched red on the Tree Protection Plan, must be dug to the formation level of the new pavement by hand, neatly severing any roots found, using secateurs or other sharp bladed tool. Following severance of the tree roots within the trench, any further excavation required, outside the hand dug trench, can be carried out with an excavator. On no account must an excavator be used within the Root Protection Area until the roots have been severed along the line of the hand dig trench.
- 5.8.2 Exposed tree roots must be covered with hessian to protect them from damage by desiccation or frosting until such time as the works are completed and the roots are covered by soil to the back of the new kerb.
- 5.8.3 Heavy-duty polythene must be used to line the side of the trench adjacent to the tree, before any cementitious product is used, to avoid the toxic effects of cement on tree roots.

5.9 Bat roosts

- 5.9.1 The current legislation makes it a criminal offence to disturb, damage or destroy any bat roost or hibernation area. Contractors must be reminded of their responsibilities and should contact the relevant authorities if any signs of bats are found.

5.10 Birds

- 5.10.1 The current legislation makes it a criminal offence to disturb nesting birds. The nesting season is generally assumed to be from 1st March to 31st July, however this can vary depending on species and location. During these months a careful inspection must be made before work commences and works must be postponed if active nests are found.

6 ARBORICULTURAL IMPACT ASSESSMENT

6.1 The following trees / tree groups, categorized as per BS 5837 (see Appendix C for details), are proposed for removal:

- Category U – unsuitable for retention: One tree – T31 – removal is required for reasons of sound arboricultural management.
- Category C – low quality or trees with a stem diameter <150mm: One tree group – G1, and three shrub groups – G3, G51 and G52.
- Category B – moderate quality: One tree:
 - T2 – an 8.5m, early mature oak.

6.2 Protection measures have been specified to protect the Root Protection Area of all retained trees, other than for:-

- T4, where there will be excavation with root loss of approximately 14.2m², or 6.6% of the Root Protection Area.

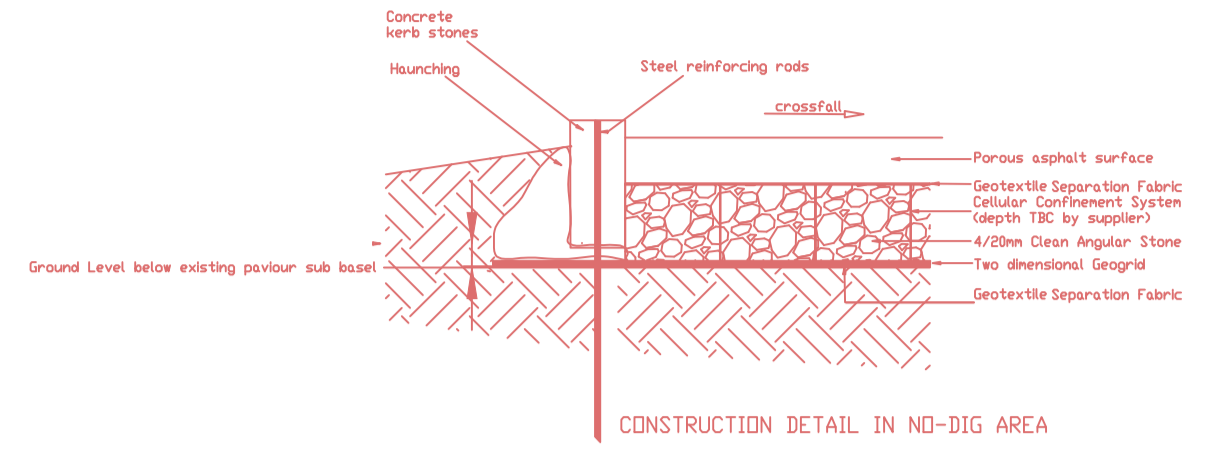
An extension to the pavement is proposed to provide a crossing point over the new vehicular access. The ground level is banked up in the area for the new section of pavement and excavation is therefore necessary in order to marry up the level of the new section with the existing pavement. Hand Dig excavation and root severance has been specified in order to prevent unnecessary damage and to minimise the area of wounding of retained roots. The amount of projected root loss is considered to be too small to produce a noticeable adverse impact on the tree.

6.3 Only one moderate quality tree is proposed for removal. Removal is required to allow construction of a new access from Crockford Lane. The loss of the tree will be mitigated by new tree planting which is to be undertaken as part of landscape enhancement works for the site. The proposed landscape works include the removal of some areas of existing hard surfacing from the Root Protection Areas of early mature and mature landscape trees which are located along the northern and western site boundaries. The replacement of hard surfacing with a soft surface will provide improvement to the rooting environment of these trees, which is considered likely to be beneficial to their physiological health.

6.4 Protection measures have been specified to protect all retained trees. Provided the recommendations in this report are followed, the arboricultural impact of this development on existing tree cover is considered acceptable.

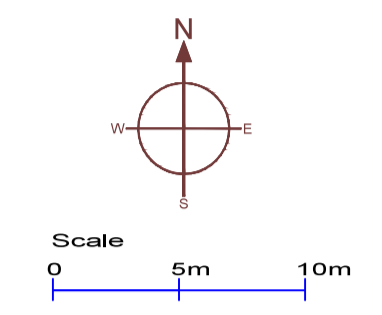
7 REFERENCES

- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*
- *BS3998:2010 Tree Work. Recommendations.*
- *Common sense risk management of trees (FCMS024). Published by the National Tree Safety Group (www.ntsgroup.org.uk)*



Existing trees and tree protection areas retained. The line of the new yard is defined to mitigate any impact on tree positions.

Existing tree line to the boundary of the site and the adjacent woodland retained. Existing kerb line retained and reused as the edge of the new hardstanding to mitigate any disruption to trees.



NEW ACCESS

Key

- Category U
- Category A
- Category B
- Category C
- Crown spread: retained trees
- Trees For Removal
- Root Protection Area
- Tree Protection Fence
- D/G location: demolition/ground work
- C location: construction
- No-Dig Construction
- Ground Protection Area: existing hard surface
- Hand Dig Area

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JOB TITLE
 LINDENWOOD

DRAWING TITLE
 TREE PROTECTION PLAN

DRAWING NUMBER 2125-02	REV A
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SCALE 1:300 at A1	DATE DEC 23	DRAWN BY cf
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Lindenwood

Appendix B
BS 5837: 2012 Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Clearance (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect- ion Distnce (m)	Root Protect. Area (m2)
				N	S	E	W								
G1	3no. Fastigate oak	7 - 8	110 - 140	0.5	0.5	0.5	0.5	1.5	Semi-mature	Good vitality.	Remove to facilitate development.	>40	C2	1.7	9
T2	Oak	8.5	270	3.5	3.5	2.5	3	W 1.2 E 2	Early mature	Good crown shape. Mildew.	Remove to facilitate development.	>40	B2	3.2	33
G3	Shrubs	0.7 - 1.2	25					0.0	Mature	Species including elaeagnus, brachyglottis, Ionicera nitida Baggesens Gold, prunus lusitanica Otto Luyken. All tightly clipped. Good vitality.	Remove to facilitate development.	5-15	C2	0.3	0
T4	Black pine	17.5	690	5	4.5	6	3	3.0	Mature	Tree in prominent location. Surface roots to east with mower abrasion damage. Good vitality.		20-40	A-B2	8.3	215
T5	Oak	14	610	3	4.5	4	4	3.0	Early mature	Tag 3624. Major deadwood in upper crown reduced to stubs. Good vitality. Ivy beginning. Root disruption of block pavours.	Clear ivy from base.	>40	B2	7.3	168
T6	Oak	15	530	2.5	4	3.5	4	3.0	Early mature	Tag 4189. Minor deadwood. Low limbs removed.		>40	B2	6.4	127
T7	Oak	12	340	5.5	5	5	5	2.0	Early mature	Small basal bark wound, north side. Crown a little sparse but a reasonable tree.	Consider replacing grass in rooting area with bark mulch to improve rooting environment.	>40	B2	4.1	52
G8	Wooded area	1.5 - 20	75 - 750					0	Early mature/mature	Majority oak, with ash, field maple, hazel, thorn, blackthorn, crab apple and holly. Ivy. Occasional dead stems. Providing amenity value and habitat. Area not surveyed in any detail.		20-40	B2	9.0	254
T9	Oak	10	420	3.5	3.5	5	3.5	2	Early mature	Curved upper stem. Top of leading stem removed. Low vigour and epicomic growth. Contributing to woodland and providing habitat.	Remove section of ivy from base.	15-30	B-C2	5.0	80
T10	Oak	11.5	480	1.5	6	2.5	4	3	Early mature	Tag 4177. Tops of two leading stems removed at 11m, with decay in wounds. Dieback at branch extremities in upper crown. Asymmetric crown. Woodland edge tree.		15-30	B-C2	5.8	104
T11	Oak	10.5	270	3	5	3	3	2.5	Early mature	Stem fork at 6m with one stem extending to south, with crown oversailing building. Branches abraded where rubbing on building. Shaded out by building but could develop if building removed. Minor deadwood.		20-40	B2	3.2	33
T12	Lime	11	270	3.5	3.5	3.5	4	1.5	Early mature	Crown oversailing and in contact with building. Extensive network of surface roots. Good vitality. Good potential.		>40	B2	3.2	33

Lindenwood

Appendix B
BS 5837: 2012 Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Clearance (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect- ion Distnce (m)	Root Protect. Area (m2)
				N	S	E	W								
T13	Oak	7	420	1	3.5	2.5	1	4.5	Early mature	Tag 4164. Stem extensively decayed. Almost a monolith with a few branches to south. Fungal brackets of <i>Laetiporus sulphureus</i> at 0.9m to northeast. Dense ivy. Providing habitat.	Retain as habitat.	<10	U	5.0	80
T14	Oak	18	520	2.5	6	3.5	2.5	4.5	Mature	T4155. Crown weighted to south, with few scaffold limbs to north. Deadwood up to 200mm diameter but over unoccupied area.	Remove section of ivy from base.	20-40	B2	6.2	122
T15	Oak	17.5	830	1.5	6	4	5	S 1.5	Mature	Tag 4152. Stem bifurcates at 1.8m - very tight fork. Base surrounded by holly. Crown weighted to south due to group pressure. Reduced in past. Dead and broken branches. Woodpecker holes in major lateral at approx 12m to south. Providing habitat. Good vitality.		20-40	B3	10.0	311
G16	Thom/Holly	3 - 5	25 - 150					0	Semi- mature/ Early mature	Understorey growth extending out from wooded area. Bramble.		10-20	C2	1.8	10
T17	Oak	18	670	6	4.5	4	5	4	Mature	Tag 4145. Deadwood throughout upper crown with dieback at branch extremities but showing reasonable vitality.		20-40	B2-3	8.0	203
T18	Oak	17.5	700	3	5.5	4.5	3.5	3.5	Mature	Tag 4137. Reduced in past. Occasional deadwood but over wooded area. Good vitality.	Remove section of ivy from base.	>40	B2	8.4	222
T19	Oak	17.5	510	4	4.5	1	4.5	3	Early mature	Tag 4136. Sparse upper crown. Major deadwood over wooded area. Ivy.	Remove section of ivy from base.	15-30	B3	6.1	118
T20	Oak	16.5	670	5.5	6.5	4.5	5	2.5	Mature	Tag 4130. Stem curves to southwest at 4m, then straightens. Majority of crown weight to southwest. Mildew. Good vitality. Ivy.	Remove section of ivy from base.	>40	B2	8.0	203
T21	Oak	9	380	6	4	2	3.5	1.5	Early mature	Tag 4129. Crown weighted to northwest due to group pressue. Minor deadwood. Ivy.	Remove section of ivy from base.	20-40	B2	4.6	65
T22	Oak	11	490	3.5	4.5	1.5	4.5	1	Early mature	Tag 4128. Historically twin stem or multi stem, with wounds fully callused to south side. Residual stem curved out above base, then straightening. Leaf damage. Ivy.	Remove section of ivy from base.	20-40	B2	5.9	109
T23	Ash	18.5	est 400	7	5	6	5	4.5	Mature	Tag 4127. Ivy over stem. Blackthorn at base. In decline.		5-15	C2	4.8	72
T24	Oak	16.5	530	2	5.5	4.5	1.5	2	Mature	Tag 4123. Asymmetric crown. Buttress root to north. Ivy over stem.	Remove section of ivy from base.	>40	B2	6.4	127

Lindenwood

Appendix B
BS 5837: 2012 Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Clearance (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect- ion Distance (m)	Root Protect. Area (m2)
				N	S	E	W								
T25	Oak	16.5	630	2	9	4	7	4	Mature	Tag 4122. Majority of crown weight to south due to group pressure. Good vitality. Good tree.		>40	A2	7.6	179
T26	Oak	16	750	4	4	4	6.5	2	Mature	Tag 4121. In wooded area. Twin stem from 1.2m - 480 & 580mm - tight fork. Eastern stem resonant on hammering to east side, indicative of underlying decay, and with upper stem with dead and broken sections. Small cavity in western stem at 3m. Decline through upper crown, more advanced above eastern stem, but better vitality below. Providing habitat.	Management dependent on proposed proximity of new development.	5-15	C3	9.0	254
T27	Oak	14	est 450	1.5	5.5	3	6.5	5	Mature	Tag 4119. In wooded area. Blackthorn around base. Drawn up through group pressure, with crown weighted to south. Dense ivy.	Remove section of ivy from base.	20-40	B2	5.4	92
T28	Oak	14	530	0	6	1	8	3.5	Mature	Tag 4118. Heavily asymmetric crown with all growth to southwest. Lowest laterals cut back over site. Deadwood over wooded area. Dense ivy.		20-40	B2	6.4	127
T29	Oak	16	580	4	4.5	5	1	2.5	Mature	Tag 4103. Bird box at 3m to north. Declining with sparse crown. Deadwood up to 250mm.	Consider replacing grass in rooting area with bark mulch to improve rooting environment.	15-30	B3	7.0	152
T30	Oak	16.5	540	2	9	3	14	2	Mature	Tag 4102. Asymmetric crown. Good vitality.		>40	B2	6.5	132
T31	Ash	16	est 300	3	4	3	4.5	6	Early mature	In wooded area - base not inspected. Significant area of dysfunctional bark on main stem at approx 3.5-4m. In decline.	Remove.	<10	U	3.6	41
G32	Hedge	2 - 4	25 - 50					0	Early mature	Mixed species including beech, field maple, hazel, and thorn. Sides clipped but growing out above in places.	Cut to maintain as hedge.	10-20	C2	0.6	1
T33	Lime	1.5	est 200	3.5	3	3.5	3	2	Semi-mature	Growing through hedge - base not inspected. Ivy.	Remove section of ivy from base.	>40	B2	2.4	18
T34	Lime	9	180	3	3	3.5	1	1.8	Semi-mature	Asymmetric crown due to group pressure from woodland trees to west. Good vitality.		>40	B2	2.2	15
T35	Scots pine	13.5	270	3	3	4	3	2	Early mature	Good form and structure. Good vitality.		20-40	B2	3.2	33
T36	Oak	17	est 380	5	4	1	7	4.5	Early mature	Growing through hedge - base not inspected. Ivy over stem. Scattered deadwood but reasonable tree.	Remove section of ivy from base.	20-40	B2	4.6	65

Lindenwood

Appendix B
BS 5837: 2012 Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Clearance (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect- ion Distnce (m)	Root Protect. Area (m2)
				N	S	E	W								
T37	Lime	7	190	2.5	2	3.5	0	2	Semi-mature	Stem bends to east at 2m. Asymmetric crown due to group pressure. Poor form.	Remove small stems shoots to maintain 2m clear stem.	10-20	C2	2.3	16
T38	Oak	17	510	6	5	6	6	3.5	Early mature	Tag broken. In wooded area. Epicormic growth. Minor deadwood. Ivy.		>40	B2	6.1	118
T39	Oak	7	110	3	3	2	0	2.5	Young	Growing in hedge. Suppressed by woodland trees.		20-40	C2	1.3	5
T40	Field maple	7	est 170	3.5	3.5	3.5	1	2.5	Early mature	Growing through hedge. No clear leader. Asymmetric crown. Ivy.	Remove section of ivy from base.	15-30	B-C2	2.0	13
T41	Oak	14.5	540	4.5	4.5	4	1	3	Early mature	Tag 0921 and Tag 4092. Occasional broken branches and old tear out wounds. Only moderate vigour. Deadwood over wooded area.	Consider removal of mown grass area and replacement with woodchip mulch to improve rooting environment.	20-40	B2	6.5	132
T42	Oak	13	1120	6	12	11	3	5	Mature	Tag 0922. Three stems from wide base - 630, 640 & 670mm. Cavity under base of central stem. Cavity between connecting buttresses to west side. Dense ivy. Minor deadwood throughout crown.	Remove section of ivy from base.	20-40	B2	13.4	567
T43	Lime	7	210	3	2	3.5	3	1.2	Early mature	Good vitality. Good potential.		>40	B2	2.5	20
T44	Lime	7.5	240	4	4	4	4	1.2	Early mature	Good vitality. Good potential. Growing through shrubs.		>40	B2	2.9	26
T45	Silver maple	10.5	340	3	4.5	3.5	4	2.5	Early mature	Tag 0176 - tag becoming embedded. Good vitality. Attractive tree.		>40	B2	4.1	52
T46	Silver maple	10	300	5.5	3.5	5	2.5	2	Early mature	Spots of black exudate at base to northeast. Good vitality. Surface roots with abrasion damage. Attractive tree.		>40	B2	3.6	41
T47	Silver birch	10.5	280	4.5	4	4	3.5	1.5	Early mature	No clear leader. Attractive tree.		20-40	B2	3.4	35
T48	Silver maple	10.5	370	4.5	4.5	6	6	2	Early mature	Basal bark dysfunction, north side but no decay. Attractive tree.		>40	B2	4.4	62
T49	Silver maple	10.5	340	4	4	5.5	6	2	Early mature	Attractive tree.		>40	B2	4.1	52
T50	Silver maple	10.5	350	5	4.5	5.5	4.5	2	Early mature	Attractive tree.		>40	B2	4.2	55
G51	Box hedge	0.5	10					0	Mature	Low clipped hedge.	Remove to allow new landscaping.	5-15	C2	0.1	0

Lindenwood

Appendix B
BS 5837: 2012 Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Cleara- nce (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect- ion Distnce (m)	Root Protect. Area (m2)
				N	S	E	W								
G52	Shrubs	0.5 - 1	10					0	Mature	Species including dogwood, laurel, brachyglottis, lonicera, elaeagnus and snowberry.	Remove as required to allow new landscaping.	5-15	C2	0.1	0

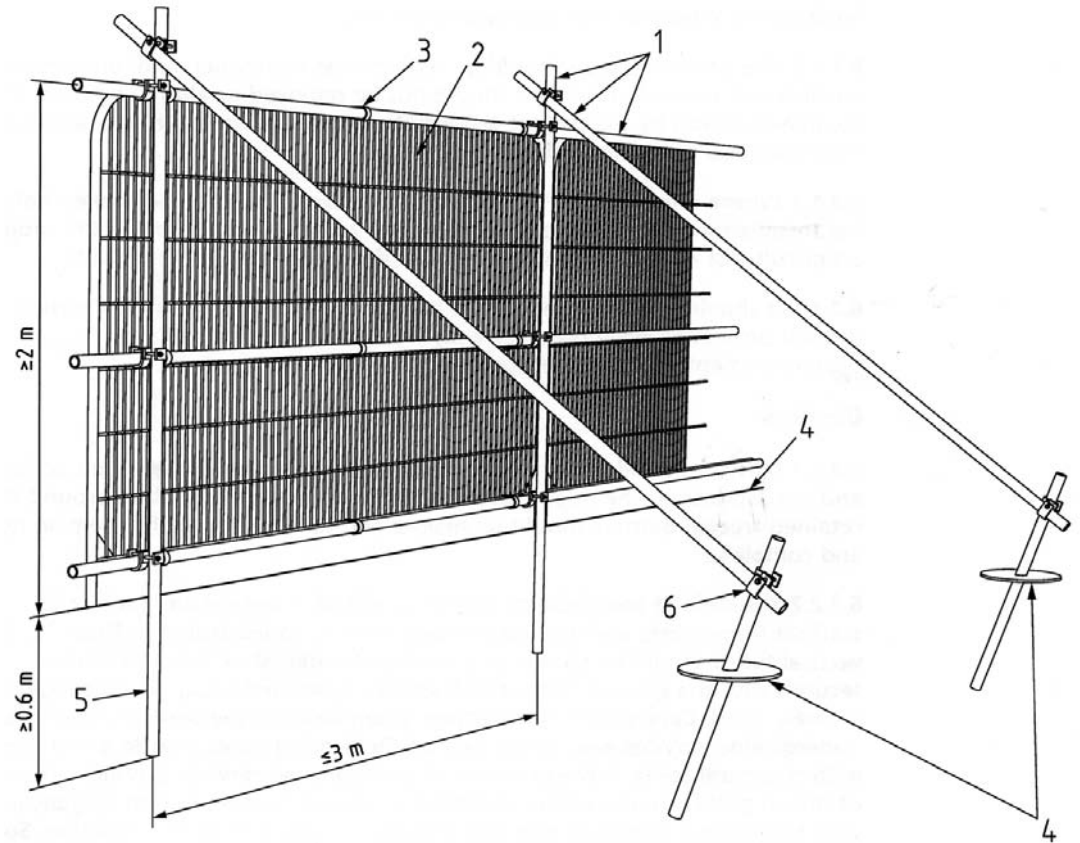
BS 5837:2012, Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> 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 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 <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
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)	See Table 2
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	See Table 2
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	See Table 2

Figure 2

Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m galvanised tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps



Examples of above-ground stabilising systems

Figure 3a

Stabiliser strut with base plate secured with ground pins

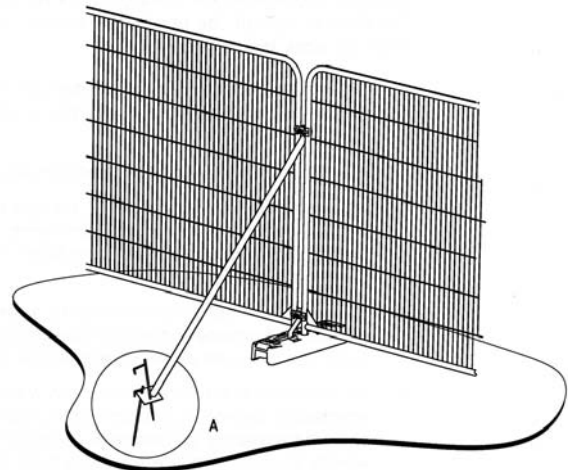
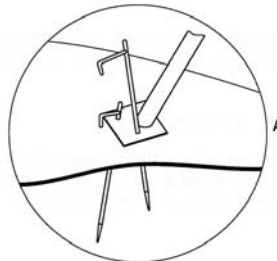
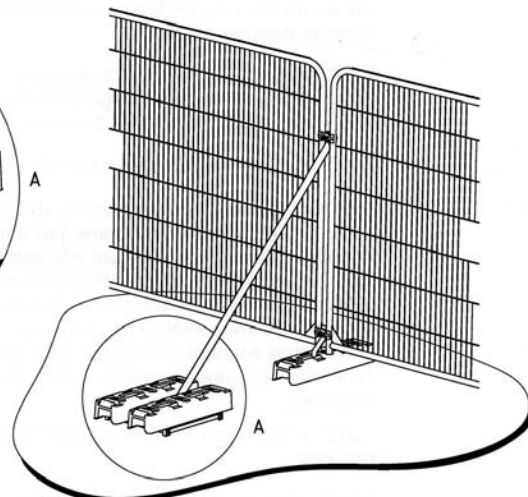


Figure 3b

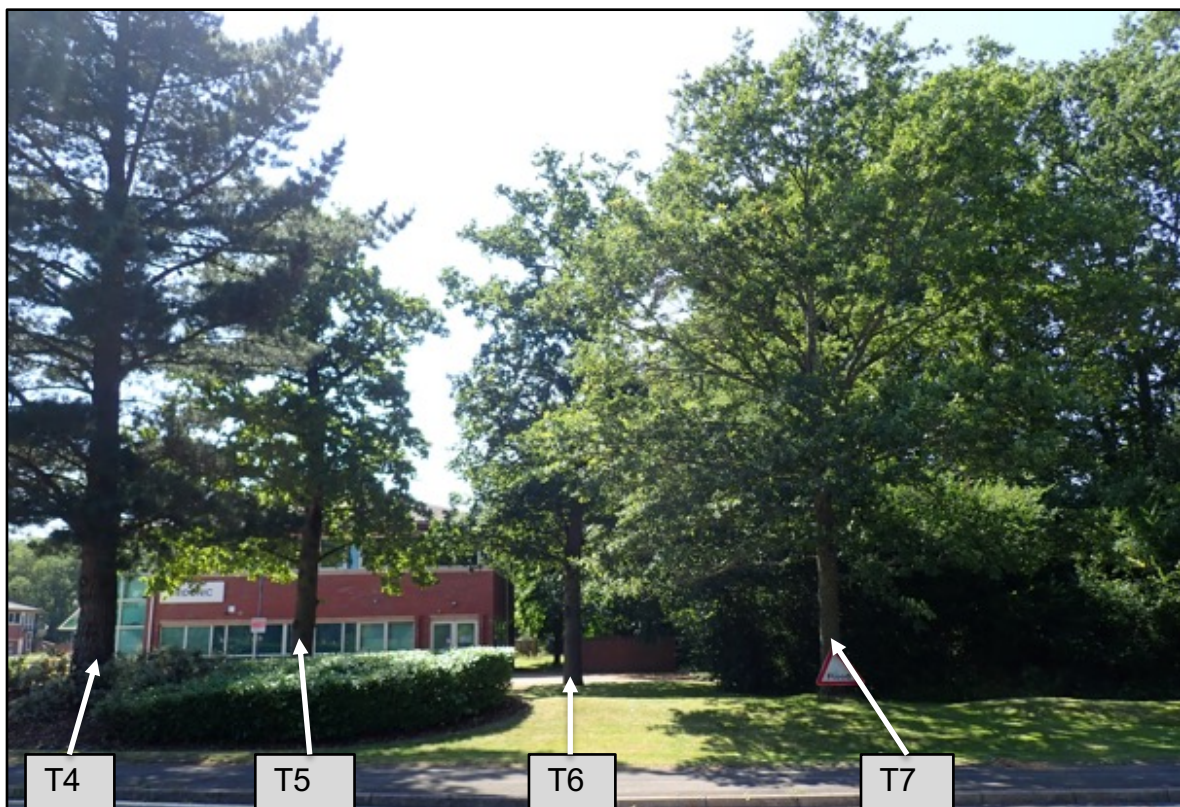
Stabiliser strut mounted on block tray





Above: Trees in northeast corner of site, viewed from south.

Below: Trees in northeast corner of site, viewed from Crockford Lane





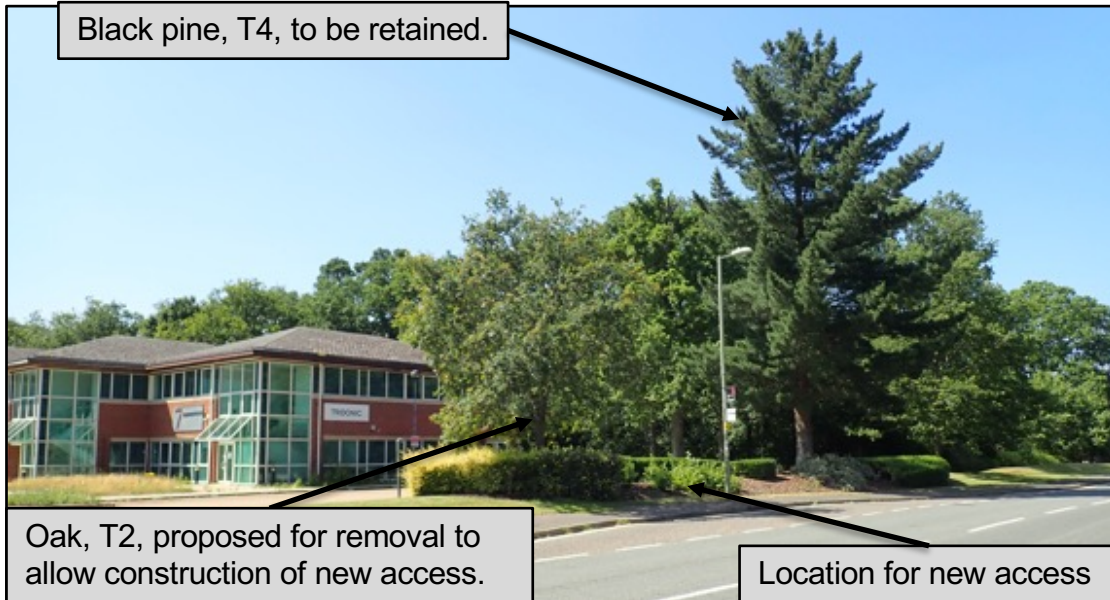
Above: View of trees along northern edge of site. Below: Trees in between car parking spaces

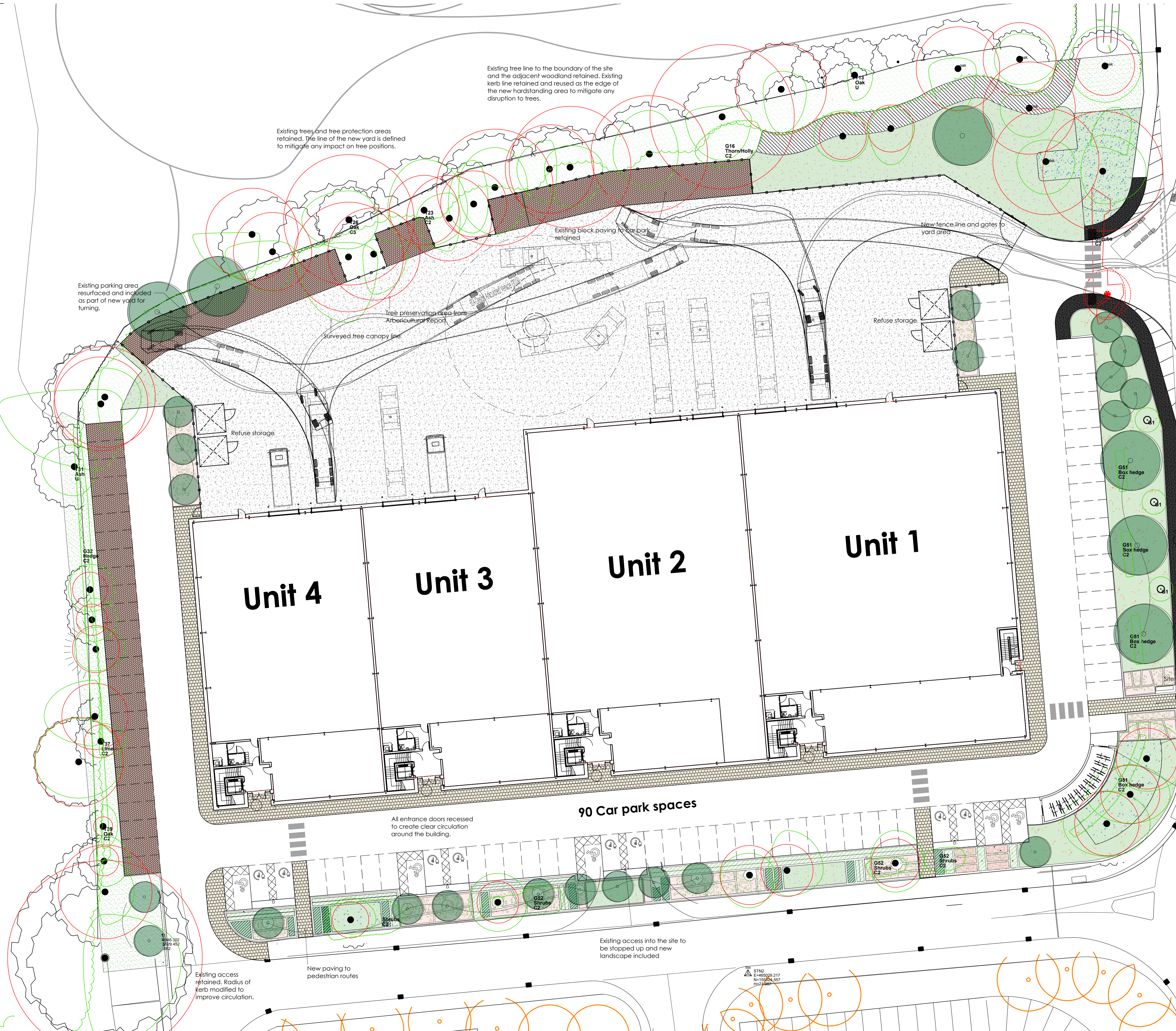




Above and below right: View to north, along western boundary. Below: Southwestern corner.







Crockford Lane

New access on Crockford Lane subject to highway authority approval.

New relocated bus lobby. Existing trees removed and replaced as part of landscape enhancement works.

Existing trees and perimeter landscape retained and enhanced. See separate landscape design information for details.

22 Cycle Spaces (11 cycle hoops)

Pedestrian link

WAKEFIELD - T. 01924 291800
312 Broad Street, Wakefield WF1 3QU

MANCHESTER - T. 0161 2368555
Cannon Warehouse, 77 Dale Street, Manchester, M1 2DG

MILTON KEYNES - T. 01908 211 577
The Old Rectory, 19 High Street, Milton Keynes MK1 1BA

READING - T. 0118 950 7700
101 London Road, Reading RG1 1PR

LONDON - T. 020 7409 1215
10 Green Court, 39 Chesham Street, London, W1A 1JU

Client

THE HARRIS PARTNERSHIP

ARCHITECTS

FRASERS PROPERTY

Project Title
Lindenwood Workshops
Chineham Business Park
Basingstoke

Drawing Title
Proposed Site Plan

Drawn	Checked	Scale	Sheet	Status	Date
CC	CB	250	NA	NA	12.23

Drawing Status
Stage 3 Planning

Rev. G

TWP Project No. 18817

Project No. 18817

Originator Volume Level Type Role Number
THPW XX XX DR A 106