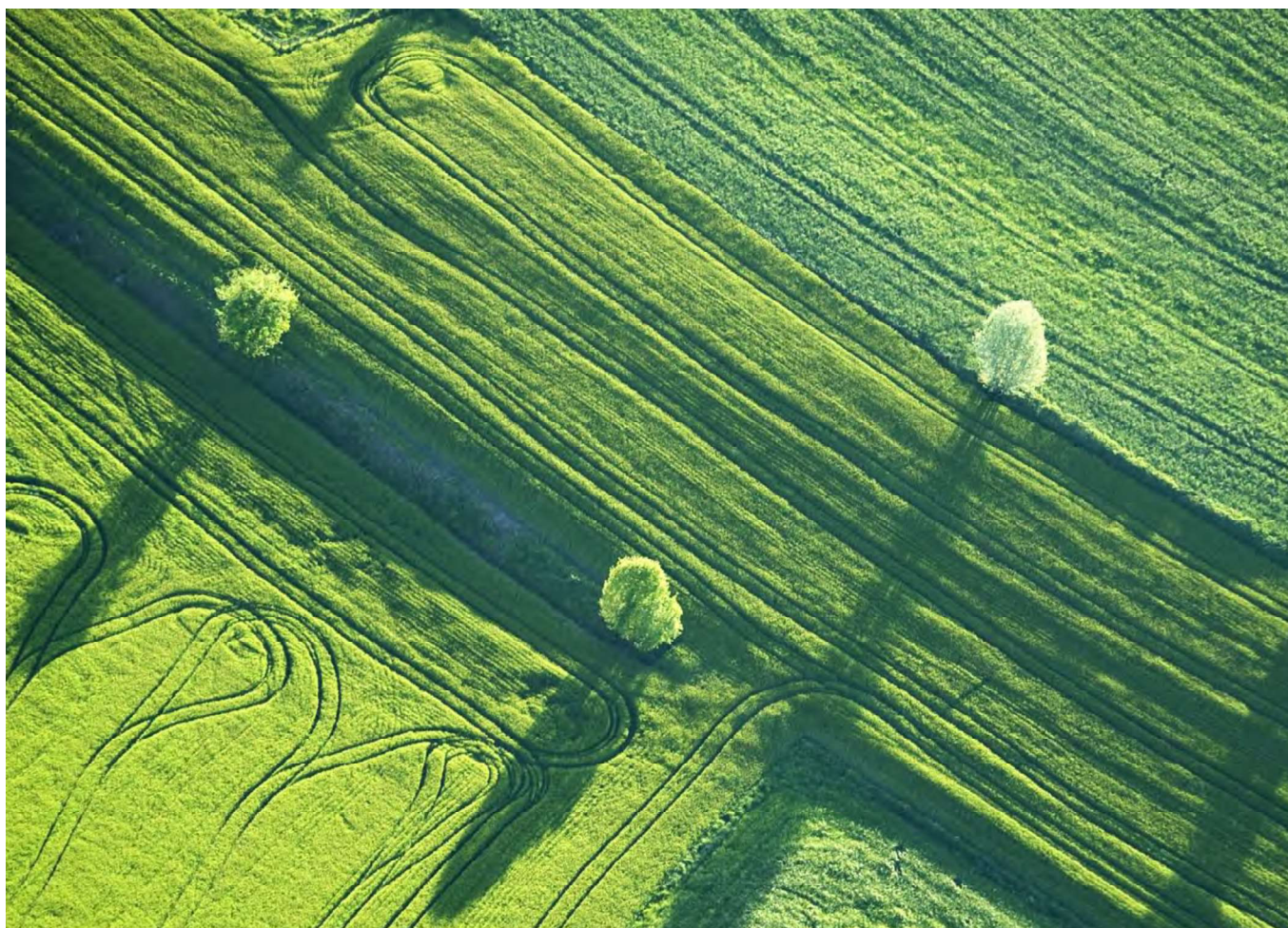


Document 11
Arboricultural Impact Assessment
Prepared by RSK



**Proposed Redevelopment of
existing Dobbies Garden Centre at
Grovelands, Reading**



Avison Young

**Dobbies Garden Centre, 166 Hyde End Rd,
Shinfield, Reading**

**Stage 1-3 Arboricultural Impact Assessment
and Method Statement Report.**

2482533

AUGUST 21

RSK GENERAL NOTES

Project No.: 2482533

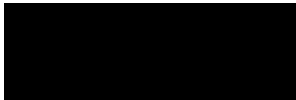
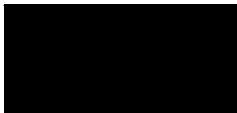
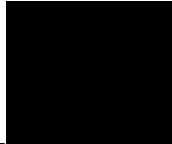
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Client: Avison Young

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Biocensus Ltd.

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1 INTRODUCTION

1.1 General

This report describes the results of a tree survey at Dobbies Garden Centre at Shinfield near Reading. The work was commissioned by Avison Young; the survey was undertaken by Trevor Heaps, on behalf of RSK in September 2019. This report was prepared by Edmund Lusk, on behalf of RSK, in August 2021.

1.2 Purpose of the Report

The survey was carried out in connection with proposed development, in accordance with criteria outlined in the British Standard BS5837:2012¹. The aim was to:

- identify the quality and value of the trees;
- categorise them in respect of their suitability for retention; and
- identify the impacts of the development on the arboricultural features present.

This report is principally concerned with trees in relation to the proposed development. Although obvious structural defects and the condition of trees have been noted, this survey was not undertaken with health and safety in mind, and a detailed hazard assessment was not carried out.

1.3 Site Context

1.3.1 General

The survey area was identified on plans provided by the client and this covered the boundaries, buildings and car parks within the Dobbies Garden Centre site; which covers c.2.5 hectares on level ground in a semi-rural part of Shinfield.

1.3.2 Soil

The underlying soil types will affect structural aspects of building designs and foundation depths, and this will need to be considered in relation to existing, proposed and removed trees. To avoid conflicts between trees and built structures, engineering advice will be required, and foundations will need to be designed with due regard for trees and the shrinkable soils.

The British Geological Society data indicates that the survey area sits on sandy loam. The soil parent material is river terrace sand and gravel². This is only a best estimate as no soil samples were taken, or lab analysis carried out for the purpose of this report.

¹ British Standards Institute (2012) *BS5837:2012 Trees in Relation to Design, Demolition and Construction-Recommendations*. British Standards Publications Ltd.

² <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>

1.3.3 Protected Species

Mature trees can be used by birds and bats. All species of bat and nesting birds are protected in the UK by The Wildlife and Countryside Act 1981 (as amended), extended by the Countryside and Rights of Way Act 2000, and (for bats) the Conservation of Habitats and Species Regulations 2017 (as amended). If the presence of a legally protected species is suspected while undertaking any tree work, then the task should be halted immediately, and appropriate advice should be obtained from an ecologist.

1.4 Statutory Designations

Trees can be given statutory protection in a number of ways, including:

- tree preservation orders;
- planning conditions;
- felling licences; and
- location within a designated conservation area.

Protected trees can only be removed or pruned if permission is granted, either as part of a planning permission or in response to a separate application to the local authority (or the Forestry Commission).

The existence of a tree preservation order or conservation area does not automatically mean that a tree deserves to be a material constraint in a planning context. A formally protected tree can be in poor physiological or structural condition, making it unsuitable for retention. In that case it is inappropriate that it should influence the future use of a site.

1.5 Root Protection Area (RPA)

To ensure that a tree is not harmed by development activities, a theoretical root protection area is calculated. The British Standard (BS5837) defines the root protection area as *'the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability'*. It is initially plotted as a simple circle on the tree constraints plan with roots assumed to have colonised the ground around the tree radially.

In some instances, root growth may have been impeded by inhospitable ground conditions and so a simple circular root protection area may not be relevant to its protection. This may apply near roads, building foundations, retaining walls or water courses and, providing there is suitable rationale, the root protection area can be adjusted to reflect this. A similar overall area should be allocated to the tree so that it can continue to thrive.

Once a design layout has been completed and tree removals agreed, the retained trees should be subject to a fenced zone encompassing the root protection area or tree crown (whichever is larger) for the duration of works. No construction, level changes, installation of services, storage of spoil or materials, discharge of chemicals or any other activity which may affect tree health negatively should take place within this area.

Where sites are heavily constrained by trees which can be embraced into the development, there may be a need to build very close to their root protection area and protective fencing. This often leads to issues at the construction build stage,

particularly where extreme changes in levels are required. It is therefore prudent to observe a buffer from the edge of a root protection area to allow for safe working space. A 5-metre buffer is sufficient to avoid conflicts at construction stage.

1.6 Supplied Documents

This report was prepared using data collected on site and the following reports and plans:

- Annotated Topographical Survey – Ref. DSR Q 001 – Dated Aug 19 – Prepared by John Richards
- Full Planing Stage Landscape Proposals, DSR-100-Rev.D prepared by John Richards Landscape Architects.
- Proposed Re-development of the Grovelands Garden Centre Site at Hyde End Road, Reading: Design Changes & Sustainability Statement - Revision C Dated February 2021 - Prepared by Mill Architects
- Proposed Site Layout, Drawing No. (00)05 Rev F - Prepared by Mill Architects

2 METHOD

2.1 General

All inspected trees and tree groups were categorised using the British Standard BS5837:2012 and the attached tree constraints plan (TCP) (Appendix 3, *Figure 1*) shows tree positions, numbers and retention categories. A schedule of the trees is included in *Section 6, Table 1*, which includes species, physiological and structural condition, age, recommendations and retention values.

The survey followed the method described in *Appendix 1* in accordance with guidance in BS5837:2012. The life expectancy and condition of each tree and tree group informs the estimate of its suitability for retention.

2.2 Tree Categorisation

Trees were categorised in terms of their useful life expectancy and condition as summarised below. Full details of categorisation criteria are given in *Appendix 2*. Each category has three sub-categories relating to arboricultural (1), landscape (2) and cultural and conservation (3) qualities. Trees that have been categorised as A, B or C should be considered in the planning process whereas trees categorised as U are not a consideration in the planning process.

Table 2.1: Tree categorisation

BS5837:2012 Categories	Definitions	Retention implications to a site
Category A (marked light green on the TCP*)	Trees of high quality and value able to make a substantial contribution to the site.	Every effort should be made to retain trees and amendments to a proposed scheme should be identified in preference to tree removal.
Category B (marked mid-blue on the TCP)	Trees of moderate quality and value able to make a significant contribution to the site.	Where possible amendments to a proposed scheme should be considered in preference to tree removal.
Category C (marked in grey on the TCP)	Trees of low quality and value in an adequate condition until new planting can be established, trees with impairments downgrading them from A or B category OR young trees with a stem diameter of less than 150mm.	The retention of trees may be advantageous in the short term, but they should not be seen as a constraint to development.
Category U (marked in dark red on the TCP)	Trees that have limited condition that will fail or die within 10 years and/or should be removed for reasons of arboricultural best practice	Not a material consideration in the planning process but may have other benefits.

* TCP = Tree Constraints Plan – Figure 1

2.3 Distinction Between Individual Trees and Tree Groups

Trees have been recorded as individuals or as groups. BS5837:2012 sets out the

description of a group as follows: “The term “group” is intended to identify 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 respect to each of the tree subcategories.”

Where a tree in a group has characteristics that distinguish it from the rest of the group, it is generally recorded as an individual. Such trees may *inter alia* include veteran trees, trees with significant defects, and specimen trees that stand out within the feature.

2.4 Constraints and Limitations

The trees were viewed from ground-level and from within the site boundary only. The trees were inspected using the Visual Tree Assessment method (Mattheck & Breloer 1994⁴) and guidance given in *Principles of Tree Hazard Assessment* (Lonsdale 2007⁵). Detailed inspections including decay detection, soil assessment or aerial inspections have not been carried out. Inspection was restricted in some instances by dense ivy cover, being within third-party gardens or behind security fencing with restricted access.

Trees are living organisms and their health and condition is not static. Findings and recommendations in this report are therefore only valid for one year. The health and condition of the trees may also change with other factors such as extreme weather or development work.

The presence of shrinkable soils, and their relationship between tree root activity and volumetric changes in soils that may cause structural damage to buildings, is beyond the scope of this report and has not been investigated.

Where all tree positions were not shown on the supplied topographical survey, a note has been made within the tree data tables where trees were plotted without the aid of topographical survey data.

⁴ Mattheck, C. Breloer, H. (2003) *The Body Language of Trees, A handbook for failure analysis*. The Stationary Office

⁵ Lonsdale, D. (2007) *Principles of Tree Hazard Assessment and Management*. The Stationary Office

3 RESULTS

3.1 Summary

A total of 44 individual trees, 5 groups and 8 hedges are associated with this assessment area and are shown on *Figure 1; Tree Constraints Plan*.

The trees being assessed are mainly around the perimeter of the Dobbies garden centre, but there is also an eclectic group of trees near the pond sales area. These range from newly planted to mature trees from a number of different planting eras.

There are 9 category A features (trees or groups of high quality and value), 39 category B features (trees of moderate quality and value), 8 category C features (trees of low quality or value) and 1 category U feature. Further details on the individual trees and tree groups can be found in *Section , Table 1. Tree Data*.

3.2 General Observations

From the existing main entrance, working clockwise around the site, the first tree is a Box Elder (T1) which has an asymmetric crown but is otherwise in good health. A young purple-leafed Plum (T2) is growing beneath its crown and is being suppressed.

Along the northern boundary of the car park, there are several third-party trees (T4 – T10) growing close to the boundary; these form the southern edge of a wooded area to the north of the car park. Most of the boundary trees are in good condition but need to be crown lifted where they overhang the car park.

Beyond this group of third-party trees, to the east, there is a small sub-plot containing a house, garden and shed; this is fenced off from the rest of the garden centre. There are several small trees and a ‘Leylandii’ hedge (T11 – T15) growing along the boundaries of this area; there are also some very large trees growing within the garden including a maturing Lime and very large Poplar (T19 and T20 respectively).

Moving east, a clipped Cypress hedge (H22) grows along the last section of the northern boundary. The boundary then turns north, where another Cypress hedge (H23) grows along a ditch (this second hedge is not clipped). At the end of the second hedge, another hedge (H24) grows to the east. This third hedge is more of a scattered linear group of trees, mainly consisting of Cypress. These hedges provide a valuable green screen in this part of the site.

Moving east and then south, there are a few young, scattered trees (maturing Willow, Oak and Ash) growing along the boundaries (the tree locations are shown as G58), however the majority of these boundary areas are scrub and bramble.

Moving south, there is a large scattered group of trees (T25 to T47) within the central-northern section of the site. There is no real cohesion between the trees, due to the differing species and age groups. Most have been planted around the various pond and decking displays, and were probably intended to be ornamental additions, which have now far outgrown their locations.

Moving across to the eastern boundary, a maturing, third-party Oak (T48) is situated close to the south-eastern corner of the site. It overhangs very slightly but can be cut back with no detriment to its health or appearance.

A line of maturing Hawthorns (G49) grow west along the majority of the southern boundary (along the southern side of the delivery access road). There is a pair of Oaks (G50) at the eastern edge of the linear Hawthorn group, and another (T51) close to the western end of it. The three Oaks have all been struck in the past by delivery vehicles and so will benefit from some minor crown lifting.

To the west of Oak T51 lies another linear group of trees (G52). This consists mainly of maturing Field Maples, but also contains a Hawthorn and Hazel. This group is likely to be an outgrown hedge.

Lastly, the south-western corner of the site contains another sub-plot with house and garden. The sub-plot is bordered on its northern, eastern and southern boundaries by Cypress trees; hedge H55 has been clipped, but hedges H53 and H56 consists of mature trees, perhaps more outgrown hedges. The group of close-growing, maturing Beech (G54) in the south-western corner of the site is almost certainly the result of an outgrown hedge.

4 PROPOSALS AND IMPACTS

4.1 Development Proposal

The proposal is to demolish the existing buildings within and around Dobbies Garden Centre and construct a new garden centre and associated carpark.

4.2 Tree Removals

The proposed development requires the removal of thirty-three individual trees, two groups of trees and four hedges. The proposed tree removal has been detailed in the Tree Retention Removal Plan, Figure 2.

The tree removals proposed comprise of 4 category A trees, 25 category B trees, 2 category C trees and 2 category U trees. In addition the removal of 2 category B tree groups, 2 category B hedges and 2 category C hedges is proposed. One further category B tree group will be subject to partial removal. The reasons for the proposed tree removal are discussed further below.

The removal of T1 and T2 is required to facilitate construction of the new entrance into the site from Hyde End Road. T1 is situated within the proposed new highways footpath and whilst T2 is within an area to be landscaped post development levels changes and engineering works to form the new entrance would jeopardise its retention and as it is a low value category C specimen its removal and replacement is considered to be pragmatic.

It is noted that a significant quantity of new tree planting is indicated along the Hyde End Road frontage of the site and this will adequately mitigate the loss of these specimens.

Within the site the removal of T11, H12, T13, T14, T15, T16, T19, T20, T21, H55, H56 and T57 is required to facilitate construction of the proposed car parking layout. As these trees are located internally within the site their loss is not considered likely to result in a significant landscape impact. New tree planting is proposed within the new car park and this will mitigate the removals proposed.

In the central section of the site, at the northern end, the removal of T25, T26, T27, T28, T29, T30, T31, T32, T33, T34, T35, T36, T37, G38, T39, H40, T41, T42, T43, T44, T45, T46 and T47 is proposed as they are within the footprint of the proposed new garden centre building. Also within this area some trees forming part of G58 will require removal to facilitate provision of an external sales area and G50 will be removed to form the proposed service yard.

Due to the existing structures within the site these trees are not of significant visual prominence in the local landscape and as such it is not considered that their loss will have a significant amenity impact.

4.3 Retained Trees

4.3.1 General

The trees to be retained include T4, T5, T6, T7, T8, T9, T10, T17, T18 which are located off-site along the south-western boundary of the site, H22, H23 and H24 located along the western / north-western boundaries and T48, G49, T51, G52, H53, G54 and G58 which are located along the eastern boundary of the site.

The retained trees offer a degree of screening of the proposed development from adjacent land and their retention, along with supplemental replacement planting, will mitigate the visual impact of tree removal within the site.

Whilst some aspects of the development will require works to be undertaken in close proximity to the retained trees it will be possible to complete these operations without significant harm occurring due to existing site conditions having been likely to impair tree root growth in affected areas.

4.3.2 Root Protection Areas (RPA)

The proposed development will require the demolition / removal of existing hard surfaces within the Root Protection Areas of T5 - T10, H22, H23, T48, G49, T51, G52, H53 and G54.

It is likely that the existing hard surfaces will have restricted root development within the affected areas due to sub-optimal growing conditions for tree roots. However, root growth is not likely to have been prevented entirely and thus during the removal of these surfaces a risk of harm to tree roots does exist. Therefore, all hard surface removal works to be undertaken within the RPAs of retained trees should be completed in accordance with the precautionary methodology set out in Section 5 of this report and the works should be supervised by an arboricultural consultant.

Following hard surface removal the affected sections of the RPAs of G49, T51, G52, H53 and G54 are to be finished as soft landscaped areas. The development is likely to therefore result in improved growing conditions for the retained trees and no additional risk of harm from additional construction activities is anticipated.

The areas within the RPAs of T5 - T10 where hard surfacing is removed are to be finished as new gravel car parking spaces. The alignment of the proposed car parking spaces is less intrusive into the RPAs of the trees than the existing hard surfacing and thus the development has the potential to improve growing conditions for these trees. To minimise the potential for harm to occur to the root systems of the retained trees during the construction of the new car parking spaces it is recommended that the new spaces are designed so that excavation beyond that necessary to remove the existing surfacing is avoided. The new surfacing should then be constructed following no-dig principles. The proposal to use a gravel finished surface is welcome in this location as this will maintain permeability to any underlying tree roots and maintain soil conditions conducive to future root growth.

Within the RPAs of T48 and H23 the existing surfaces are concrete and tarmac and it is proposed to replace these with new hard surfacing, the new hard surfacing will extend no further into the RPAs of the retained trees than the existing and thus no material change in the growing conditions for the trees is anticipated. Again, it will be necessary

to ensure that excavation beyond that necessary to remove the existing surfacing is avoided. The new surfacing should then be constructed following no-dig principles.

4.3.3 Facilitation Pruning

The lower, lateral branches of several of the third-party boundary trees (T5 to T9; T20; T21; T48; T51; and G52) are potentially vulnerable to damage during demolition and construction.

To remove the risk of accidental damage the lateral branches on the vulnerable sides of the trees will be pruned. Pruning specifications are found in Section 6 Table 1 (Tree Survey Data).

The proposed pruning is minor and will not affect the health or appearance of the trees.

4.3.4 Post-development Pressure

No significant post-development pressure is anticipated as the trees to be retained are located at a suitable distance from the proposed buildings.

However some trees are growing within close proximity to car parking spaces, but any issues this may pose in the future could be managed with routine, minor tree maintenance (such as crown lifting).

4.4 Impact Assessment Summary

The proposed development involves the felling of a number of high and moderate value trees, together with a small number of lower value trees which appear unavoidable under the current proposed design.

Providing a robust replacement planting scheme is implemented for those trees lost, it is considered to be acceptable from an arboricultural point of view.

To ensure the potential for harm to occur to retained trees is minimised during the construction period all works within the RPAs of retained tree should be completed in accordance with the methodologies set out in Section 5. Subject to adherence to these methods it is considered that the trees can be successfully retained and protected from harm.

5 ARBORICULTURAL METHODS AND MITIGATION MEASURES

5.1 General

The following section describes the methods that will be used and the sequence of events that will be followed during construction near the trees.

The sequence and methodology must not be deviated from unless the approval of the appointed Arboricultural Consultant (ArbCon), has been given. All operatives working on site must be made aware of this sequence and methodology, and the reasons behind it.

5.2 Arboricultural Supervision

5.2.1 Appointment

Arboricultural supervision will be required prior to commencement and during the course of construction. An arboricultural consultant will be appointed by the principal contractor well in advance of any site works so that adequate resource can be allocated to the project. The role of the appointed arboricultural consultant will be to advise on tree-related matters, tree protection elements and supervision prior to and throughout the course of construction. They will be responsible for keeping an auditable record of all arboricultural related issues and circulating this record to all relevant parties. However, they will not be responsible for instructing external contractors or managing them in any way.

5.2.2 Initial site meeting

A site meet will take place between the appointed arboricultural consultant (ArbCon), construction contractor (CC) and local planning authority (LPA) tree officer (as necessary) before any preparation works start on site. This report will inform the agenda of the meeting and all parties will agree the specification of construction methods, protection measures, dates for supervision and that inspection intervals are feasible and reasonable.

5.2.3 Supervision

All works around trees will require the site supervision of the ArbCon, these are detailed in section 5.4. A record will be kept, detailing each element of supervision and this will need to be kept and circulated by the ArbCon. Elements of supervision include:

- a) supervision or agreement during site meet of extent of pruning and tree removal with tree works contractor;
- b) site checks to ensure tree protection fencing is in place and secured;
- c) site supervision of hard surface removal within the RPAs of retained trees.
- d) site supervision of 'no-dig' hard surface construction.
- e) site supervision of any required tree protection fencing movement or alteration;

- f) regular interim site checks to ensure tree protection is in place and to monitor tree condition;
- g) post-construction site check to evaluate tree condition and specify any remedial works.

5.3 Pre-Construction Phase

5.3.1 Tree Works

Any tree works required to facilitate the development should be carried out before construction begins and be in accordance with the British Standard, BS 3998:2010 Tree Work – Recommendations.

- All facilitation pruning undertaken as detailed within Table 1.

5.3.2 Tree Protection Measures

Fencing

Prior to the commencement of any construction in the tree protection fencing (TPF) is to be erected to protect the retained trees as identified on the tree protection plan. (Figure 3).

The position of the TPF has been calculated by taking into account recommendations set out in BS5837:2012, which aim to protect the RPAs of all retained trees.

The specification of the TPF will consist of the Heras 151 Steadfast System (Appendix 6), with a rear stabilising brace and secured to the ground with ground pins. The fencing should be maintained to ensure it means rigid and fit for purpose.

All-weather signs are to be attached to the fencing to highlight its designation as a CEZ. The signage to be used has been included in Appendix 7. This will be printed out, laminated and fixed at appropriate intervals for example every third panel.

The area inside the TPF is known as the Construction Exclusion Zone (CEZ) and is to be regarded as sacrosanct. The importance of the CEZ and restrictions of working within it will be communicated to all staff through the induction and periodical tool box talks. The following prohibitions will apply within the CEZ:

- no storage of plant, equipment or materials;
- no vehicular or plant access;
- no fire lighting;
- no handling or spillage of any chemical substance;
- no action likely to cause localised water logging; and
- no changing of ground levels (Unless agreed in writing with the LPA).

Once the TPF has been installed the ArbCon will conduct an onsite inspection before construction works begin.

Under no circumstances will it be altered or dismantled without the permission of the ArbCon.

Any site offices, welfare units, and storage areas must respect the trees and their root protection areas, shown in pink on the supplied plans. These will be sited outside tree root protection areas.

5.4 Construction Phase

5.4.1 Demolition of Existing Hard Surfaces

Where demolition operations are to be undertaken within the RPAs of the retained trees care must be taken to avoid damaging underlying tree roots.

The following guidance will be adhered to for the removal of any hard surfaces within the RPAs of retained trees:

1. The initial 'breaking up' of the hard surface will be done with pedestrian operated tools (not breakers attached to diggers or JCBs) or, if possible, by using manual hand-held tools.
2. Removal of the surface will occur in 2.0 m bands working away from the trees. Any exposed roots will be covered with good quality topsoil or high-grade compost to avoid desiccation and make the levels good.
3. The debris resulting from breaking up the hard surface and the exposed sub-base will be excavated and removed by hand. Should mechanical means be required due to the size of the debris then a small (<1.5 tonne) digger may be used providing the bucket does not cause any damage to the underlying soil surface. No reduction in levels of the underlying soil will occur.
4. If any roots are damaged during the removal of hard surfaces, then they will be cut using a sharp knife or secateurs to leave a clean wound with as small a surface area as possible.

The works shall be supervised by the ArbCon.

5.4.2 Design and Construction of New Hard Surfaces

The proposed development will require the construction of new hard surfacing within the RPAs of T5-T10, H22, H23 and T48.

It is noted that these trees all have existing hard surfaces within their RPAs within the affected areas and that in no case does the proposed hard surfacing extend to cover a greater proportion of any RPA than an existing hard surface.

Where it is intended to construct new hard surfaces within the Root Protection Areas of these trees, precautions must be taken to maintain the condition and health of tree's root systems.

In particular:

- Works shall be conducted in such a manner as to prevent physical damage to roots during demolition or construction, such as soil compaction or root severance. To minimise the risk of root severance new surfaces shall be designed so that excavation below the depth of the sub-base of the existing surfaces present is not required to permit their construction.

- Provision for water and oxygen to reach the roots must be made and the soil structure must not be disturbed.
- Provision must be made for future root growth and precautions taken to ensure that such root growth does not cause unacceptable levels of damage to the finished construction.
- The soil must not be compacted and soil bulk density must be maintained at suitable levels for tree root growth and function. In this respect a soil bulk density of over 1.8g/cm³ is likely to impede root growth and function.

To achieve the above requirements for tree root growth and function the proposed new hard surfaces shall be designed so that:

- No excavation of bare ground is required for their installation; to ensure that physical root damage does not occur.
- The surface can be installed without compaction of the existing soils; thus ensuring damage to the soil structure does not occur.
- The surface is permeable; thus ensuring that oxygen and water can reach the root system and that CO₂ can diffuse vertically out of the soil as high concentrations can cause root suffocation.

There are various methods of creating such a surface, however one that is commonly in use and is therefore recommended here is the use of a three-dimensional cellular confinement system, to provide for load suspension above the existing soil grade and reducing vertical loads on the underlying soils.

All works involved within the construction of the new hard surfaces within the RPAs of retained trees will be supervised by the ArbCon and be completed in accordance with the following methodology.

- Following removal of the existing hard surfaces a geotextile membrane should be laid out across the areas where new hard surfacing is proposed within the RPAs of retained trees. The geotextile should overlap the edges of the proposed construction by 300mm and be temporarily retained in place by staking with metal road pins or by weighting around the perimeter.
- The cellular confinement system shall be spread out over the geotextile membrane in accordance with the manufacturers recommendations.
- The edges of the cellular confinement system shall be retained by timber edging boards pinned into place with steel rebars. The CCS will then be filled with the specified aggregate in accordance with the manufacturer's recommendations. This will be 20-40mm washed clean angular stone with no fines. The stone used to fill the cellular confinement system must not contain any limestone or other soluble materials that may contaminate the underlying soil through water runoff. MOT type I, two, and three are not suitable for infill material.
- All works involved in filling the cellular confinement system with aggregate will proceed from outside of the RPA of the trees with the equipment used to fill the cells only progressing into the RPA of the tree across the filled cellular confinement system sections.

- The infill aggregate will then be rolled (<5T non vibrating roller) to ensure cohesion within the cells and 25 mm overfill is achieved.
- Once the stone infill and 25 mm overfill is achieved A second geotextile fabric layer will then be laid over the filled CCS and the finished surface course installed, this should be permeable.

5.5 Post-Construction Phase

Once all construction is complete the tree protection fencing should be removed.

Final site visit by the appointed ArbCon to ensure that no damage to trees has occurred and that no further tree works are required.

Replacement planting, where necessary, should then be scheduled during the next planting season (October to March) with coordination from the ArbCon on species, stock, locations and protection measures.

5.5.1 Replacement Planting

A suitable landscaping scheme incorporating replacement planting will go some way to mitigate for the losses on the site. This should aim to integrate trees of differing sizes appropriate for the space afforded to them.

Suitable ground conditions and aftercare are vital to the success of new trees, and the recommendations provided in the British Standard, BS 8545⁶ and the Trees and Design Action Group publication – *Trees in the hardscape*⁷ should be followed. This includes ensuring that soils are not compacted prior to planting and that adequate below ground space is provided with suitable volume requirements to support mature root growth and withstand compaction. Aftercare in the form of watering and sympathetic formative pruning in the first five years after planting will also help to ensure that the replacement trees thrive.

⁶ British Standards Institute (2014) *BS 8545:2014 Trees: from nursery to independence in the landscape – Recommendations*. British Standards Publications Ltd.

⁷ Trees and Design Action Group (2014) *Trees in Hard Landscapes: A Guide for Delivery*. TDAG Publication.

6 APPENDICES

TABLE 1

TREE DATA TABLE

Ref. No.	Species	DBH (mm)	Height m (Lower crown height m)	BS4337 Category	Life Stage	Est. Remain	Condition	Spread (m)				General Observations	Recommendations	RPA Radius M	RPA Area M ²
								N	S	E	W				
T1	<i>Acer negundo</i> (Box Elder)	320	9(1,5)	B2	EM	40+	Normal	6	4,5	3,5	4,5	Maturing tree growing near site entrance. Asymmetrical crown. Sparse.	No works required at present		3,84
T2	<i>Prunus ceratifica</i> 'Pissardii' (Purple-leaved Cherry)	190	6(2)	C2	EM	20+	Fair	1,5	2,5	2,5	1,5	Maturing tree growing close to T1 - leading to an asymmetrical crown. Epicormics at base and on stem. Short lived species so BS category downgraded.	Remove to facilitate development		2,28
S3	<i>Prunus</i> sp. (Flowering Cherry)	250	1(0)	U	D	<10	Dead	0,5	0,5	0,5	0,5	Stump extracted by trees. 3,5m from boundary	Remove to facilitate development	3	28,28
T4	<i>Fraxinus excelsior</i> (Ash)	450	18(1,5)	B2	M	40+	Fair	5	5	5	5	Growing on thick-parity land (dbi estimated) by lower parities, and very high crown, due to being previously overtopped by trees. 3,5m from boundary	No works required at present	5,4	91,62
T5	<i>Fraxinus excelsior</i> (Ash)	450	18(3,5)	A2	M	40+	Normal	5	5	5	5	Growing on thick-parity land (dbi estimated) 1,2 from boundary	Crown lift overhanging lateral branches (southern side of crown) to 5m to provide clearance for development	7,63	113,01
T6	<i>Taxus baccata</i> (Yew)	600	18(3,5)	A2	M	40+	Normal	5	5	5	5	Growing on thick-parity land (dbi estimated) 2,5 from boundary	Crown lift overhanging lateral branches (southern side of crown) to 5m to provide clearance for development	7,2	112,88
T7	<i>Acer platanoides</i> (Norway Maple)	250	18(3,5)	B2	M	40+	Normal	2,5	5	5	2,5	Growing on thick-parity land (dbi estimated). Suppressed. Asymmetrical crown. 5 from boundary	Crown lift overhanging lateral branches (southern side of crown) to 5m to provide clearance for development	4,25	56,7
T8	<i>Acer platanoides</i> (Norway Maple)	400	18(3,5)	B2	M	40+	Normal	3,5	3,5	3,5	3,5	Growing on thick-parity land (dbi estimated) On boundary	Crown lift overhanging lateral branches (southern side of crown) to 5m to provide clearance for development	4,8	71,29
T9	<i>Acer platanoides</i> (Norway Maple)	400	18(3,5)	B2	M	40+	Normal	3,5	3,5	3,5	3,5	Growing on thick-parity land (dbi estimated). Twin-stemmed at base. Tight forks noted. Sparse. 2m from boundary	Remove to facilitate development	4,8	71,29
T10	<i>Acer platanoides</i> (Norway Maple)	400	18(3,5)	B2	M	40+	Normal	3,5	3,5	3,5	3,5	Growing on thick-parity land (dbi estimated). Sparse.	No works required at present	4,8	71,29
T11	<i>X Cupressocypripis hybrid</i> (Leyland Cypress)	450	6(2,5)	B2	M	20+	Fair	4,5	4,5	4,5	4,5	Sparse. Short lived species so BS category downgraded.	Remove to facilitate development	5,4	91,62
H12	<i>Prunus serotina</i> (Blackthorn)	300	12(2,5)	C2	EM	40+	Fair	3	3	3	3	Outgrown hedge	Remove to facilitate development	3,6	48,72
H13	<i>Prunus serotina</i> (Blackthorn)	300	12(2,5)	C2	EM	40+	Fair	3	3	3	3	Outgrown hedge	Remove to facilitate development	3,6	48,72
H14	<i>Salix caprea</i> (Goat Willow)	250	8(2)	C2	EM	20+	Fair	2	2	2	2	Mark-stemmed at base. Epicormics. Recent pruning would reduce. Sparse. Die-back in crown.	Remove to facilitate development	4,25	56,7
H15	<i>Acer negundo</i> (Box Elder)	350	8(2,5)	B2	EM	40+	Fair	3	3	3	3	Mark-stemmed at base. Epicormics. Recent pruning would reduce. Sparse. Die-back in crown.	Remove to facilitate development	3	28,28
H16	<i>Acer platanoides</i> (Norway Maple)	370	12(2,5)	C2	EM	40+	Normal	4,5	4,5	4,5	4,5	Growing close to storage container	Remove to facilitate development	4,44	61,54
H17	<i>Acer platanoides</i> (Norway Maple)	370	12(2,5)	C2	EM	40+	Normal	4,5	4,5	4,5	4,5	Growing close to storage container	Remove to facilitate development	4,44	61,54
H18	<i>Quercus robur</i> (Common Oak)	450	18(3,5)	A2	M	40+	Normal	5	5	5	5	Growing on thick-parity land (dbi estimated). By heavy covering.	No works required at present	5,4	91,62
H19	<i>The cordata</i> (Small-leaved Lime)	700	18(2)	A1	M	40+	Normal	5,5	5,5	5,5	5,5	Tree with very good form growing in rear garden of house	Remove to facilitate development	4,8	71,29
T20	<i>Populus x canadensis</i> (Hybrid Black Willow)	700	25(5)	B1	M	20+	Normal	2,5	2,5	2,5	2,5	Very large tree with good form growing in rear garden of house. Downgraded from A due to limited life expectancy. Suppressed by nearby Populus. Asymmetrical crown.	Crown lift to 5m	8,48	288,37
T21	<i>Acer platanoides</i> (Norway Maple)	250	17(3)	B2	EM	40+	Normal	2,5	2,5	2,5	2,5	Suppressed by nearby Populus. Asymmetrical crown.	Crown lift to 5m	3	28,38
H22	<i>X Cupressocypripis hybrid</i> (Leyland Cypress)	300	5(0,5)	C2	EM	40+	Normal	1,5	1,5	1,5	1,5	Outgrown hedge. Consider re-planting in the future	No works required at present	3,6	48,72
H23	<i>X Cupressocypripis hybrid</i> (Leyland Cypress)	300	8(0,5)	C2	M	40+	Normal	3	3	3	3	Linear group of trees growing along the eastern bank of a ditch. Consider trimming into a hedge in the future.	No works required at present	3,6	48,72
H24	<i>X Cupressocypripis hybrid</i> (Leyland Cypress)	300	8(0,5)	C2	M	40+	Normal	3	3	3	3	Linear group of trees growing along the eastern bank of a ditch. Consider trimming into a hedge in the future.	No works required at present	3,6	48,72
T25	<i>The cordata</i> (Small-leaved Lime)	250	8(2)	A1	EM	40+	Normal	3,5	3,5	3,5	3,5	Maturing tree growing near corner of pond centre. Outgrown hedge	Remove to facilitate development	3,6	48,72
T26	<i>Alnus glutinosa</i> (Common Alder)	150	8(2)	B2	EM	40+	Normal	3	3	3	3	Maturing tree growing near corner of pond centre. Outgrown hedge	Remove to facilitate development	1,8	10,18
T27	<i>Alnus glutinosa</i> (Common Alder)	170	11(5,4)	B2	EM	40+	Normal	3	3	3	3	Vertical bark wound on stem. Sealing	Remove to facilitate development	2,4	18,1
T28	<i>Alnus glutinosa</i> (Common Alder)	250	8(4)	B2	EM	40+	Normal	3	3	3	3	Sparse.	Remove to facilitate development	4,8	58,18
T29	<i>Alnus glutinosa</i> (Common Alder)	300	15(4)	B2	EM	40+	Normal	3	3	3	3	Short lived species so BS category downgraded.	Remove to facilitate development	3,6	48,72
T30	<i>Betula pendula</i> (Silver Birch)	200	15(4)	A2	EM	40+	Normal	3	3	3	3	Maturing tree growing near to water features	Remove to facilitate development	2,4	18,1
T31	<i>Betula pendula</i> (Silver Birch)	150	12(5)	B2	EM	40+	Normal	2,5	2,5	2,5	2,5	Maturing tree growing near to water features	Remove to facilitate development	1,8	10,18
T32	<i>Betula pendula</i> (Silver Birch)	200	15(4)	A2	EM	40+	Normal	3	3	3	3	Maturing tree growing near to water features	Remove to facilitate development	2,4	18,1
T33	<i>The cordata</i> (Small-leaved Lime)	250	8(2)	B2	EM	40+	Normal	3,5	3,5	3,5	3,5	Maturing tree growing near to water features	Remove to facilitate development	3	28,28
T34	<i>The cordata</i> (Small-leaved Lime)	250	8(2)	B2	EM	40+	Normal	3,5	3,5	3,5	3,5	Maturing tree growing near to water features	Remove to facilitate development	3	28,28
T35	<i>The cordata</i> (Small-leaved Lime)	250	8(2)	B2	EM	40+	Normal	3,5	3,5	3,5	3,5	Maturing tree growing near to water features	Remove to facilitate development	3	28,28
T36	<i>The cordata</i> (Small-leaved Lime)	250	8(2)	B2	EM	40+	Normal	3,5	3,5	3,5	3,5	Maturing tree growing near to water features	Remove to facilitate development	3	28,28
T37	<i>Quercus robur</i> (Common Oak)	250	18(3,5)	A2	M	40+	Normal	5	5	5	5	Small line of mature trees forming a hedge	Remove to facilitate development	3	28,28
T38	<i>Quercus robur</i> (Common Oak)	250	18(3,5)	A2	M	40+	Normal	3	3	3	3	Small line of mature trees forming a hedge	Remove to facilitate development	3	28,28
T39	<i>Quercus robur</i> (Common Oak)	250	18(3,5)	A2	M	40+	Fair	3	3	3	3	Small line of mature trees forming a hedge	Remove to facilitate development	3	28,28
H40	<i>X Cupressocypripis hybrid</i> (Leyland Cypress)	250	9(0,5)	C2	EM	40+	Normal	2,5	2,5	2,5	2,5	Outgrown hedge	Remove to facilitate development	3	28,28
T41	<i>Acer platanoides</i> (Norway Maple)	150	6(1,5)	B2	EM	40+	Normal	2	2	2	2	Small sapling growing near corner of pond centre.	Remove to facilitate development	1,8	10,18
T42	<i>Populus sp.</i> (Poplar)	530	23(5)	B2	M	20+	Normal	6	6	6	6	One of a group of four very large Populus growing within the central part of the pond centre. Downgraded from A	Remove to facilitate development	6,36	117,09
T43	<i>Populus sp.</i> (Poplar)	470	23(5)	B2	M	20+	Normal	6	6	6	6	One of a group of four very large Populus growing within the central part of the pond centre. Downgraded from A	Remove to facilitate development	6	113,11
T44	<i>Populus sp.</i> (Poplar)	470	23(5)	B2	M	20+	Normal	6	6	6	6	One of a group of four very large Populus growing within the central part of the pond centre. Downgraded from A	Remove to facilitate development	5,64	98,95
T45	<i>Populus sp.</i> (Poplar)	525	23(5)	B2	M	20+	Normal	6	6	6	6	One of a group of four very large Populus growing within the central part of the pond centre. Downgraded from A	Remove to facilitate development	6,3	124,71
T46	<i>Thuja plicata</i> (Western Red Cedar)	300	6(0,5)	B2	EM	40+	Normal	3	3	3	3	Maturing crown growing in pond centre	No works required at present	3,6	48,72
T47	<i>Acer negundo</i> (Box Elder)	300	8(2)	B2	EM	40+	Normal	3,5	3,5	3,5	3,5	Maturing crown growing in pond centre	No works required at present	3,6	48,72
T48	<i>Quercus robur</i> (Common Oak)	450	15(2,5)	A1	M	40+	Normal	6	6	6	6	Growing on thick-parity land (dbi estimated).	To reduce overhanging lateral branches back to boundary - to provide clearance for new entry turning circle	5,4	91,62
G49	<i>Crataegus monogyna</i> (Hawthorn)	200	4(1,5)	B2	EM	20+	Fair	2,5	2,5	2,5	2,5	Part of a group of trees.	No works required at present	2,4	18,1
G50	<i>Quercus robur</i> (Common Oak)	350	12(5)	B2	EM	40+	Normal	5	5	5	5	A pair of 0,5m-growing Oaks. Some epicormic growth on stems	Crown lift lower branches to 5m - to improve access for vehicles	4,2	55,42
T51	<i>Quercus robur</i> (Common Oak)	450	15(2,5)	A1	M	40+	Normal	6	6	6	6	Growing on thick-parity land (dbi estimated). Twin-stemmed at base.	Crown lift to 5m to improve access for vehicles	7,63	113,01
G52	<i>Acer campestre</i> (Field Marsh Oak)	300	7(2,5)	B2	EM	40+	Normal	3,5	3,5	3,5	3,5	Part of a group of trees.	Cut back lower lateral branches by 2,5m on northern side to improve access	3,6	48,72
H53	<i>Chamaecyparis lawsoniana</i> (Lawson Cypress)	200	6(2)	C2	EM	40+	Fair	2,5	2,5	2,5	2,5	An outgrown hedge that has become sparse	No works required at present	2,4	18,1
G54	<i>Fagus sylvatica</i> (Beech)	250	9(1,5)	B2	EM	40+	Normal	3,5	3,5	3,5	3,5	Group of maturing and vigorous Beech trees.	No works required at present	3	28,28
H55	<i>Castilleja juncifolia</i> (Castilleja)	200	4,5(1,5)	B2	EM	40+	Normal	2	2	2	2	Clipped hedge running along northern boundary of house and garden.	Remove to facilitate development	2,4	18,1
H56	<i>X Cupressocypripis hybrid</i> (Leyland Cypress)	450	9(2)	B2	M	40+	Normal	4,5	4,5	4,5	4,5	Outgrown hedge running along eastern boundary of house and garden.	Remove to facilitate development	8,4	91,62
T57	<i>Cedrus deodora</i> (Deodar Cedar)	350	9(2,5)	B2	EM	40+	Normal	4,5	4,5	4,5	4,5	Shoreward by Leyland hedge.	Remove to facilitate development	4,2	55,42
G58	<i>Prunus spinosa</i> (Blackthorn)	250	6(1,5)	B2	EM	40+	Normal	2,5	2,5	2,5	2,5	Group of self-seeded trees growing along the north and north-western sides of the rear storage area	No works required at present	3	28,28

APPENDIX 1: METHOD

General

On the site data was recorded with a windows mobile data collector and Trimble GPS unit. In instances where trees were not shown on the topographical survey tree positions were estimated.

The data recorded includes:

- Canopy Height - data gathered using a 'tru-pulse laser-ace' digital clinometer or visually estimated to the nearest metre.
- Stem Diameter (DBH) - measurements taken at 1.5 metres above ground level (complying with requirements for BS5837). Girth data was gathered using a metric diameter tape, callipers or estimated when access was restricted.
- Tree crown spread – estimated measurement of the four cardinal points to provide information to be used with the arboricultural constraints plan.
- Tree category - judged using the guidelines produced in the report. The condition is indicated with the appropriate colour on the plan found in the report. (see *Figure 1*)
- Age class - estimated from an examination of the tree in question.

Age Classification

The following classification is employed:

- Y - Young: Saplings and young trees under 10 years of age
- EM – Early Mature: Trees older than 10 years but less than one third of the life expectancy of their species, normally making substantial extension growth.
- SM – Semi Mature: Trees between one third and two thirds of the life expectancy of their species. More or less full Height and large girth, increasing only slowly.
- M – Mature: Trees beyond two thirds of the life expectancy of their species. No significant extension growth.
- V – Veteran: Trees that shows features of biological, cultural or aesthetic value that are characteristic of an individual surviving beyond the typical age range for the species.

Estimated Remaining Contribution in Years

The estimated remaining contribution in years is an estimate based on currently known factors of the possible remaining life of the tree as an asset. Clearly, it is impossible to predict changes in condition which may occur in the future and this reflects what is considered reasonable under existing circumstances, the classification that has been used is in accordance with the British Standard 5837.

The estimated remaining contribution in years will be dependent on the interaction of the typical longevity of the species, its current age and condition with prevailing environmental factors. The estimated remaining contribution in years also dependent on future tree management that can extend useful life in some instances.

Tree Condition

The tree survey assessed the individual condition of all trees identified on the site. The assessment of condition is based on a visual and professional view.

The categories considered for Physiological Condition are good, fair, poor and dead. Structural Condition is also commented on and this will include items such as the presence of decay and physical defects.

Trees are living organisms and their condition can change rapidly in response to environmental variables. Condition remarks refer to the date of survey and cannot be assumed to remain unchanged. While there is no such thing as a safe tree, regular inspection of trees is recommended to reduce the foreseeable risks associated with trees. There is currently no published guidance from the UK insurance industry on the frequency of tree inspections. In the German courts a bi-annual routine inspection is normally expected for older street trees, giving an indication of the rapidity of change in condition that can occur.

Preliminary Management Recommendations

Recommendations are given where it is felt by the arboriculturist that further investigations are required due to suspected defects and work recommendations.

Tree Categorisation Using BS 5837 Methodology

The trees surveyed were categorised using the method explained in BS5837 Trees in Relation to Construction 2012. This method categorizes individual trees, groups and woodlands in a systematic way.

Groups are identified as those trees forming a single arboricultural feature with trees that provide companion shelter, are avenues or screens or cultural.

Initially the surveyor will determine if the tree should be regarded as a U category tree. U category trees are those that are low value trees that have little future due to physiological and structural condition.

Other trees are graded A, B or C. The initial category should reflex the trees value in making an important contribution to the amenity of the site over a period of time. The higher the tree category the longer the perceived time period.

A subcategory is included 1, 2 or 3. This subcategory reflects the type of value the surveyor feels the tree presents in regards its value to 1 – arboricultural, 2 – landscape, 3 – cultural or conservation.

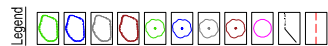
The cascade chart used is included as *Appendix 2* of this report.

APPENDIX 2: BS5837:2012 CASCADE CHART

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	- Trees that have a serious, irremediable structural defect, such that their early loss is expected due to collapse, including those that will become unstable 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 NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.	See Table 2
Trees to be considered for retention		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	1 Mainly arboricultural qualities: 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) 2 Mainly landscape qualities: Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features 3 Mainly cultural values, including conservation: 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	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	See Table 2

APPENDIX 3: FIGURE 1 TREE CONSTRAINTS PLAN



	Tree Group BS5837 Category A
	Tree Group BS5837 Category B
	Tree Group BS5837 Category C
	Tree Group BS5837 Category U
	Tree BS5837 Category A
	Tree BS5837 Category B
	Tree BS5837 Category C
	Tree BS5837 Category U
	Root Protection Area
	Tree or tree group number (Denotes approximate position)
	Site Boundary

Doc.	Date	Amendment	Drawn	Chia	App



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Tree Constraints Plan

Drawn	Scale	Checked	Date	Approved	Date
EL	1:400	JB	08/21	RF	08/21
Project No.		Drawing Title		Revisions	
4492553		01		-	
Drawing by		01		Scale	
				24,000.0004	
				36000	

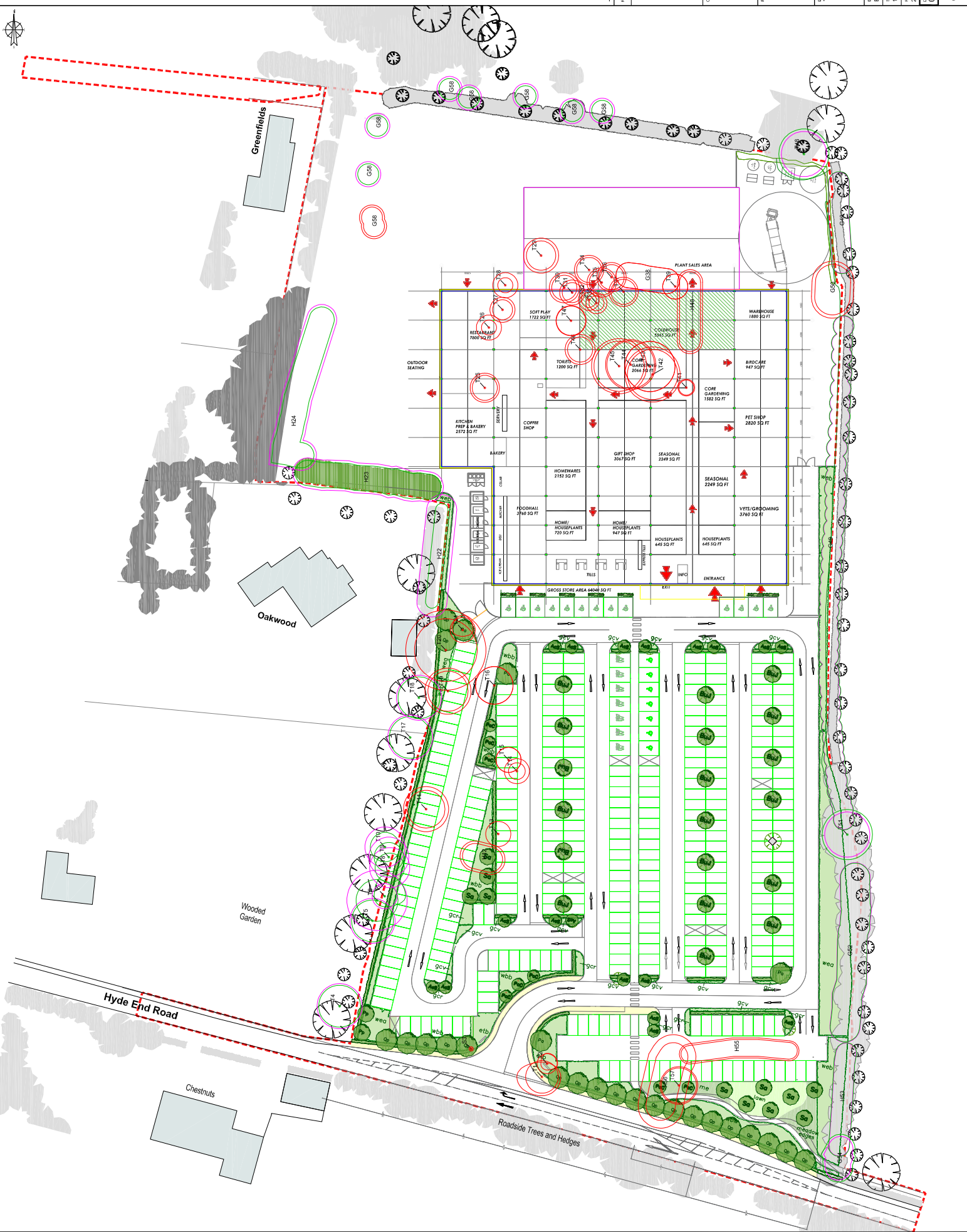


APPENDIX 4: FIGURE 2 TREE RETENTION REMOVAL PLAN



Legend

- Trees Retained
- Trees Removed
- Groups Retained
- Groups Removed
- Root Protection Area
- Tree or tree group number (r Denotes approximate position)
- Site Boundary



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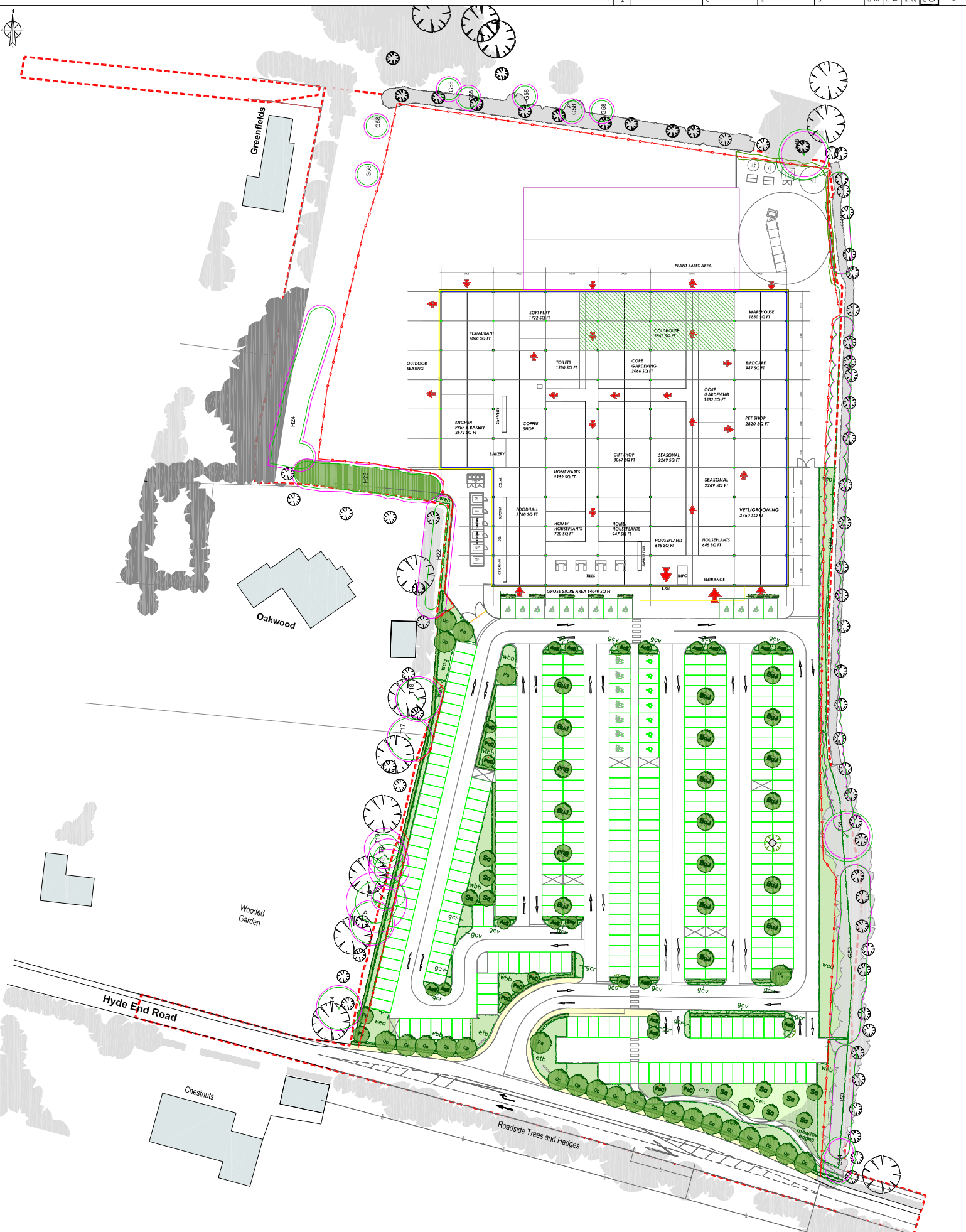
Project Title: **Dobbies Garden Centre
166 Hyde End Road, Shinfield**

TREE RETENTION REMOVAL PLAN

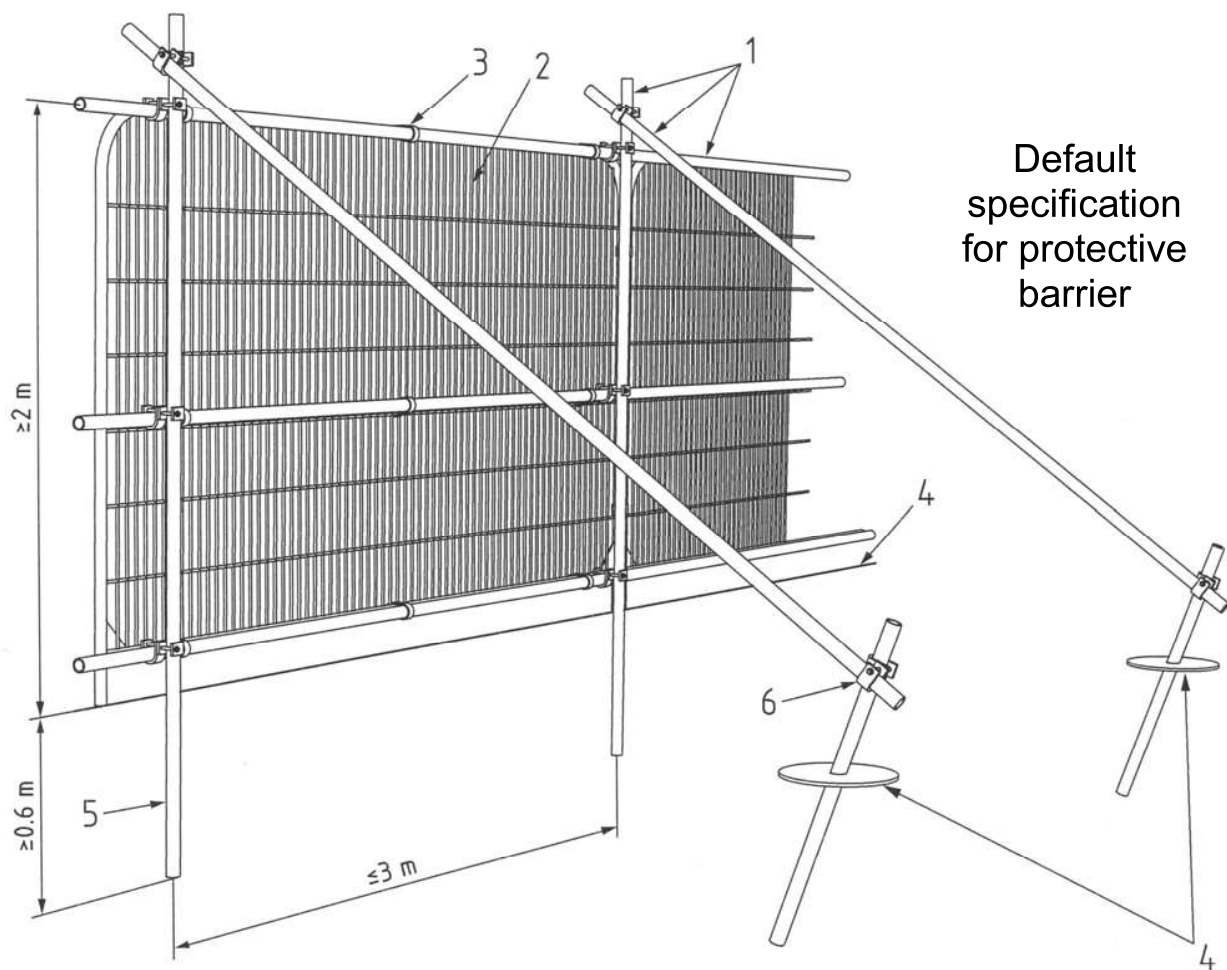
Drawn: EL	Date: 08/21	Checked: JB	Date: 08/21	Approved: RF	Date: 08/21
Scale: 1:400	Client: AY	Drawn: AY	Checked: AY	Approved: AY	Scale: METRES
Project No: 2402533	Client: AY	Drawn: AY	Checked: AY	Approved: AY	Scale: METRES
Drawing No: 02	Client: AY	Drawn: AY	Checked: AY	Approved: AY	Scale: METRES

Scale: 1:400
Drawing No: 02

APPENDIX 5: FIGURE 3 TREE PROTECTION PLAN



APPENDIX 6: TREE PROTECTION FENCING SPECIFICATION



Key

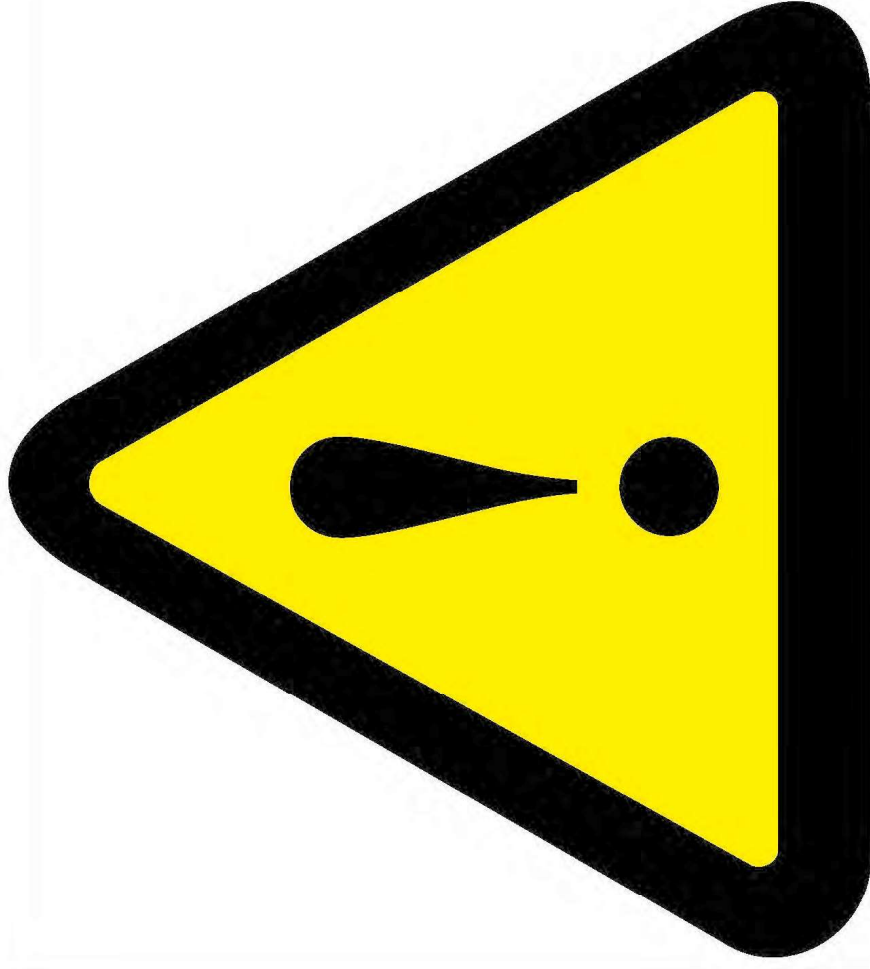
- 1 Standard scaffold pole
- 2 Heavy gauge 2m tall galvanised tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6m)
- 6 Standard scaffold clamps

BS 5837:2012
Default specification for protective barrier

APPENDIX 7: TREE PROTECTION SIGNAGE



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

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