

# Treestyle CONSULTANCY

## BS 5837:2012 Development Survey

**Date of the Inspection**  
15<sup>th</sup> July 2022

**Site**  
Malt Kiln Brow  
Chipping  
Preston

**Description**  
The four residential developments

**Instructed By**  
Hodson Homes

**Author**  
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## Executive Summary

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Treestyle Consultancy was commissioned to complete a survey to specifications set out in British Standard 5837:2012 *Trees in relation to design, demolition & construction - Recommendations*. This document is an Arboricultural Impact Assessment (AIA) which explains the Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) with regards to the development of four residential properties.

**The Tree Survey** recorded eleven individual trees, two hedges and three groups of trees within influencing distance of the proposed development, all of which are located either around or beyond the boundaries. Four trees were recorded as category A high quality with 40 years life potential, these have the greatest retention value. Two individual trees, two hedges and a group of trees have been categorised as B medium quality with 20 years life potential. Two individual trees are category C low quality and value up to 10 years life potential. Three trees and two groups of tree have been categorised as U, not realistically retainable.

**Threats to the tree population** have been discussed and plans designed in relation to the green infrastructure. A schedule/process of work with regards to the Root Protection Areas (RPA's) of the trees and hedges is detailed within. However, because of the below ground constraints of water courses, there is the potential for tree roots to be impacted by the developments, testing of the soil profile must be carried out prior to construction commencing. Care with the storage and use of building materials over the RPA of the trees is critical, especially in light of the topography with trees being on the lower profile than that of the proposed developments.

### The Proposed Demolition and Development

- The development of four residential properties.
- The demolition of part of the stone wall.

### The Arboricultural Impact Assessment (AIA)

- The removal of trees due to ash dieback on the grounds of health and safety.
- The excavation of the landscape falls outside the RPA's of several high to medium quality trees, however, this requires pre site testing under arboricultural supervision.
- The relocation of soil to a lower profile falls close to the RPA's of high to medium category trees.
- The storage and use of building materials on a higher plateau will be near to the permeable RPA's of several mature trees and hedges which have the potential to leach into their soil profile.
- The presence of tree roots increases into the proposed development due to the below ground constraints of sloped surfaces and water courses redirecting the rooting mass of these trees.
- There is potential for soil compaction.

Tree Category	Trees to be retained	Trees to be removed
A	T1, T5, T7, T9	-
B	H3, T8, T12, H14, G16	-
C	T2, T4	-
U	-	G6, G15, T10, T11, T13

### **Tree Protection Plan (TPP)**

- The landscaping of the upper surface near to retained trees requires to be tested prior to installing retaining walls to ascertain no roots greater than 25mm are to be damaged.
- A Specialised Temporary Surface (STS) to be laid within the proposal along the boundary line covering all permeable surfaces protecting any potential RPA's of the trees. The STS should remain for the duration creating a work zone and allowing for access to aid the development.
- Heras fencing can rest upon it creating a Construction Exclusion Zone (CEZ).
- All efforts should be made in preventing building materials from contaminating the soil profile.

### **The Arboricultural Method Statement (AMS)**

- Will require approval by the Local Planning Authority (LPA).
- Installation of all tree protection measures.
- Pre commencement meeting to confirm all recommended protection is adequate.
- Construction to commence.
- Removal of the tree protection.

It is important that the caveats and limitations of this report are understood, these can be read in Section 11.0 of this document. Photographs of the trees in question are available to prevent unnecessary travel.

## 1.0 Introductions

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- 1.1 Under instruction from Hodson Homes Ltd an arboricultural report has been prepared to accompany a planning application for the development of four residential properties. This report details the arboricultural impact on the site, subsequent mitigation recommendations and protective measures. The latter part of the report explains how the construction of the proposed developments will take place with regards to the protection of the trees to be retained.
- 1.2 The assessment was carried out on the 15th May 2022 by Andrew McLoughlin of Treestyle Consultancy Ltd. This assessment was carried out from the ground in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The categorisation method identifies the quality and value of the existing green infrastructure.
- 1.3 Geo-referenced drawings of the site and the proposed development were supplied by Treestyle Consultancy Ltd who then applied the tree data. An appropriate TPP and AIA have been drafted and revised which now dictates the AMS.
- 1.4 It should be noted that neither soil samples or soil maps have been used to make decisions on this report. If there are any discrepancies with trees locations or queries relating to their location or species within the group, then Treestyle Consultancy should be contacted prior to planning submission.
- 1.5 Eleven individual trees, two hedges and three groups of trees are within influencing distance of the proposal directly or indirectly with regards to the area for development, these are discussed in this report. These can be viewed in Appendix A – Tree Schedule and Drawings 1: Tree Constraints Plan. Drawing 2 - Tree Protection Plan.
- 1.6 This report provides the results of the survey and includes the following;
- A schedule of all trees located on or within influencing distance of the proposed development site (Appendix A – Tree Schedule).
  - An assessment based on BS 5837:2012 of trees in terms of their potential value within any future development. On the basis of this assessment trees have been categorised into one of four categories: High, medium, low or not worthy of retention (A, B, C or U). See Appendix D - BS 5837:2012 Cascade Chart for Tree Quality Assessment.
  - Advice on removal, retention and management of these trees can be read in Sections 5 & 7 of this report.
  - A Tree Constraints Plan detailing tree quality categories, canopy spread (N, E, S & W), Root Protection Areas (RPA's), life span, Diameter at Breast Height (DBH), RPA m2, tree height and condition for all of the trees surveyed.
  - A Tree Removal and Protection Plan detailing the development proposals alongside trees to be retained and removed and any temporary protection measures.

## 2.0 Site and Surroundings

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### The Site

- 2.1 Located north of Chipping village is an unused area of land which comprise of a walled off grassed area surrounded by trees and hedges.

### Surrounding land

- 2.2 To the north is an existing residential property and its extensively planted garden which is lined by a water course. To the south is another water course with a public highway and residential properties beyond. To the west is an open field with an industrial area to the east. Trees and tree groups provide good essential screening and privacy.

### Topography

- 2.3 The topography of the land is fundamental with the proposed area for developments on a raised plateau which descends steeply to the north and east, with a marginal decline to the south.

## 3.0 Statutory Protection and Guidance

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### National Planning Policy Framework (NPPF)

- 3.1 The NPPF assumes protection of all ancient woodland and veteran trees unless it can be clearly demonstrated that the need for, or benefits of, development outweigh the loss. In this respect ancient woodland is defined as an area which has been wooded continuously since at least 1600 AD and a veteran as a tree of exceptional value for wildlife, in the landscape, or culturally because of its great age, size or condition.

### Tree Preservation Orders & Conservation Area Designations

- 3.2 Local authorities reserve the right to create Tree Preservation Orders (TPO) to protect the amenity value conferred to a location by a tree or group of trees. Where a TPO is in place the lopping, topping, felling, uprooting or wilful damage is prohibited. Failure to comply may lead to prosecution or large fines. Work on a TPO'd tree requires permission from the local authority.
- 3.3 Section 211 of The Town and Country Planning Act 1990 (TCPA) relates to the preservation of trees in Conservation Areas. Under Section 211 anyone proposing to remove, uproot or destroy any tree within a Conservation Area is required to give the local planning authority six weeks' prior notice (a "section 211 notice"). During this period the Council may consider serving a Tree Preservation Order to prevent the proposed work from being undertaken.

### Bats as a Protected Species

- 3.4 It is not uncommon for a mature tree with cavities or hollows to be a habitat for roosting bats. Bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as under Schedule 2 of the Conservation of Species and Habitats Regulations 2010 and it is therefore an offence to cause damage to a bat roost.

### Birds as a Protected Species

- 3.5 Nesting birds frequently use trees for nesting. They are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly damage or destroy an active birds nest.

3.6 It is recommended that all tree work is carried out outside the bird nesting season which is March to August. If this is not possible then a detailed inspection of each tree should be undertaken by a suitably qualified ecologist prior to any tree work. Should an active nest be found then any work likely to affect the nest must be halted until the nest becomes inactive.

**National House Building Council**

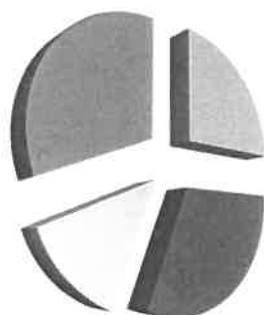
3.7 This report has been written in accordance with BS 5837:2012. Further guidance can be sort at the NHBC website <https://nhbc-standards.co.uk/4-foundations/4-2-building-near-trees/>

3.8 The soils on site were not recorded or assessed for the purpose of this survey. There could be however a possibility of movement due to trees being present on site.

3.9 Geo-referenced mapping was provided and Treestyle Consultancy Ltd have applied the relevant data to this and utilised the information provided. However, trees outside of the boundary which will be affected by the proposed development were not included on the topographical map and therefore, their locations have been approximately plotted.

**4.0 Tree Population**

4.1 Eleven individual trees, two hedges and three groups of trees were recorded. A high percentage of the green infrastructure falls into category B medium quality with 20 years life potential. One church tree warrants category A high quality having 40 years life potential. The remaining trees are mostly sycamore and are category C low quality with 10 years life potential. One category U retention which cannot be realistically achieved. A cascade chart explaining the process used to reach these categorisations can be found in Appendix D – Tree Categorisation Chart.



- Category A - High Quality & Value
- Category B - Medium Quality & Value
- Category C - Low Quality & Value
- Category U - Retention cannot realistically be achieved

4.2 A summary of the trees in each of the four categories is given below in Table 1.

Tree Category	Trees Numbers
A	T1, T5, T7, T9
B	H3, T8, T12, H14, G16
C	T2, T4
U	G6, G15, T10, T11, T13

## 5.0 Arboricultural Impact Assessment (AIA)

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5.1 The logistics of the development pose a threat to the green infrastructure, specifically with two areas, trees located on the higher plateau and the lower northern profile. The development can be divided into two compartments in terms of its potential impact.

- To the west along the upper plateau are two large trees that line the boundary where the landscape is to be excavated to allow for a level surface for the proposals.
- Trees along the northern southern boundaries have potential to house displaced tree roots due to the steep slopes being an unfavourable environment and below ground constraints of the water course possible deflecting roots away from it. These areas will require testing to ascertain that no roots are to experience excessive soil mounding on the lower northern boundary.
- Machinery passing over the RPA's of trees to be retained, either during pre development preparation or during the construction from either tree works or soil relocation.

Another threat comes indirectly through the storage of building materials. The RPA of these trees require protection from soil contamination leaching through the soil profile on the lower landscapes.

- The identification of ash trees which have succumb to ash dieback which has resulted in trees ranging from partial to full decline with their canopies, these have been recommended for removal on the grounds of health and safety.
- Test sites prior to construction are to be carried out on trees to be retained. These tree are located along the upper western boundaries to confirm that there are no roots being impacted.
- The relocation of soil on to T1 beech will not exceed the 20% threshold.

5.2 Table 2 shows the effects of the proposal on the trees of the BS 5837 quality categorisation.

Tree Category	Trees to be retained	Trees to be removed
A	T1, T5, T7, T9	-
B	H3, T8, T12, H14, G16	-
C	T2, T4	-
U	-	G6, G15, T10, T11, T13



## 6.0 General Tree Protection Requirements

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- 6.1 The following information sets out the primary consideration for determining the requirement for tree protective measures and with the assessment impact of the construction.

### **Soil Compaction**

- 6.2 It is imperative the surface of the soil be protected from compaction from plant machinery and/or machinery. This can create a capping effect on the surface which can stop the tree root from oxygenating and preventing any precipitation.

### **Root Protection Areas**

- 6.3 The BS5837:2012 RPA is calculated using the trees Diameter at Breast Height (DBH) at 1.5 m and represents the minimum area around each tree that must be left undisturbed to ensure its longevity.

Tree roots can be found twice the width of the crown and beyond depending on the tree species and its environment. Most tree roots are found in the top 600mm of soil and most fine roots that absorb water and nutrients are located at the top horizon of soil profile. These near surface tree roots allow the tree to breath and oxygenate. The tree roots can extend well beyond the recommended distances within BS5837:2012 and they may not follow the typical circular area centred from the trees stem. See the attached document Appendix E - Guidance for Working in Root Protection Areas (RPA's).

### **Ground Contamination**

- 6.4 Storage areas for liquids such as fuels, oil or paint should not be located within 10m of any tree due to the risk of soil contamination caused by accidental spillage. Particular care must be taken when working on or close to sloping ground to avoid unintentional runoff into the RPA of trees to be retained.

### **Underground Utilities**

- 6.5 Where the installation of services within the RPA of retained trees is unavoidable, appropriate methods will be required to ensure the safe long term longevity of the trees. This process will require additional consultation with Treestyle Consultancy.

### **Ground Level Changes**

- 6.6 Any changes to the landscape and its levels can have major implication on the longevity and health of a tree. It is essential the trees are allowed to have a breathable surface allowing for the continuous gaseous exchange of the trees root system.

### **Drainage & Storm Water Run-off Issues**

- 6.7 Drainage and storm water run-off requires due consideration to prevent excessive and/or polluted run-off into the rooting area of trees to be retained.

## 7.0 Tree Protection Plan

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- 7.1 The greatest threat to the tree population is the logistics of the site with soil compaction, contamination and root severance. The Root Protection Areas (RPA's) of all the trees around the boundaries are Construction Exclusion Zones (CEZ). These also have the potential to have roots within the proposals, however, this is expected to be minimal and testing should confirm this.

In order to be able to facilitate a work area then a Specialised Temporary Surface (STS) must be installed for the duration of the construction. Only once finished can the protection be removed and landscaped. All protection measures need to be in place prior to construction commencing. This includes the protection of all trees whose RPA's are CEZ and no dig areas. It should be noted that one neighbouring tree is dead and its removal is recommended.

- The RPA's of all the trees are to be measured up and marked out prior to the commencement of the construction, areas behind the proposed extension at the rear are CEZ's.
- A Specialised Temporary Surface (STS) should be installed over the permeable surface creating a work area within the RPA's. This will be a requirement for the development of the northern lower retention wall where there are large below ground constraints from T1 beech.
- Hand tools or light machinery are to be used to excavate the landscape to ascertain that no roots incur on to the areas to be developed. I.e. T8 & T9.
- The excavation to create a retaining boundary wall requires investigation to ascertain the presence of roots and must also be carried out with hand tools. This must be documented and/or have arboricultural supervision.
- Where cement is to be installed within or near to the RPA of a retained tree then a non-permeable membrane is required to prevent soil contamination.

### 7.2 Protection examples

- Specialised Temporary Surfaces <https://safefence.co.uk/safe-fence-safe-matting.html>

## 8.0 Tree Constraints

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- 8.1 There are above and below ground constraints all around the proposed area to be developed. The area of most concern is the northern lower boundaries where T1 beech requires the most sensitive of protection, it should be anticipated that this entire lower area houses tree roots.
- T1 beech has a minimum RPA of 15m away from the stem, this maybe vary due to the below ground constraints of the water course and the steep embankment, BS5837 states 15m is the maximum distance.
  - T2 alder has a minimum RPA of 6m away from the stem
  - T5 yew has a minimum RPA of 9.6m away from the stem
  - T7 oak has a minimum RPA of 4m away from the stem
  - T8 sycamore has a minimum RPA of 10.18m from the stem
  - T9 lime has a minimum RPA of 9.6m from the stem
  - Hedges have a minimum RPA of 1m from their stems
- 8.2 The current site has ample room to house construction materials, however, due to the elevated profile and surrounding water courses this needs to be managed well. Storage presents a threat to the tree population through the leaching of building material such as cement. Normally a minimum of 10m distance from vegetation is required which isn't possible, therefore storage of this product must comply to the storage of hazardous waste. Permeable surfaces are not permitted to store building materials, therefore this needs to be managed off site.
- 8.3 No underground services can pass through the RPA of any of the trees that are to be retained.

## 9.0 Arboricultural Method Statement

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- 9.1 The AMS has been written as guidance on how the construction has to be carried out with regards to the protection of the green infrastructure. It is imperative that this is carried out correctly.

### **An Overview of Sequence of Operations**

- 9.2 In overview, it is necessary to undertake the following sequence of operations in relation to arboricultural input for development operations.

1. Method Statement approved by the Local Planning Authority (LPA).
2. Undertake tree works as recommended in Appendix A - Tree Schedule.
3. Installation of the tree protection measures such as a specialised temporary surface.
4. Pre Commencement meeting confirming the fencing to specification.
5. Construction work commences.
6. Removal of tree protection.

### **Specific Sequence of Operations**

- 9.3 The following timeline table informs the key principles for development operations proceeding in relation to arboricultural requirements conditioned as part of this method statement. The action and timescales within this table must be adhered to in order to discharge the arboricultural method statement planning condition for this site. The precise time and order of some of the development operations may need to be changed due to site specific operational requirements, yet any operations that may affect the trees on the site must be done so under arboricultural supervision by a suitably qualified and experience arboricultural consultant.

### **Sequence of Work**

- 9.4 Order of works to be carried out to allow for the protection of retained trees.
1. Measuring and marking out of RPA's.
  2. A specialised temporary surface and heras fencing installed.
  3. Hand tools or light machines only to excavate soil profiles and RPA'S where it has the potential to incur onto the RPA.

<b>Sequence of Operations Overview</b>		
<b>Stages</b>	<b>Action</b>	<b>Arboricultural Input</b>
<b>1 Approval</b>	This AMS is submitted to and approved in writing by the LPA	If necessary, liaise with contractor and LPA to discuss methodologies detailed
<b>2 Tree Works</b>	If required, the tree removals should be carried out as the first operation on site and in accordance with Appendix A - Tree Schedule	Review the tree work requirements with the tree contractor. If necessary liaise with the contractor on site during tree work
<b>3 Tree Protection</b>	Installing the tree protective measures will take place prior to construction and any test holes dug and construction materials being allowed on site	If necessary, liaise with contractor installing the specialised temporary surface, test holes dug and documented, protective fencing installed to the standard specified in Appendix E - Fencing
<b>4 Site Meeting</b>	Following installation of tree protective measures, the LPA shall be invited to inspect the fencing and discuss any other site operations that have implication for the trees	Meeting with the representative of the LPA and the site manager. Alternatively, contractor can confirm the fencing and tree works are as specified by taking photographs of the tree protection measures
<b>5 Construction</b>	Alter the structure of the garage and undertake the construction of the two new properties	If necessary liaise with the local authority and the site foreman to ensure any issues are adequately resolved
<b>6 Site Finishing</b>	Removal of the tree protection measures must only be undertaken when all site traffic and machinery has left the site	If acceptable to the LPA the contractor can take photos of the site to give to the LPA to gain approval for the removal of protective fencing
<b>7 Tree Planting</b>	It is recommended that tree planting is carried out and can be part of a planting scheme for the proposed development	Replanting can mitigate tree removals and further enhance the amenity value of the area and the proposed development

## 10.0 Recommendations

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- 10.1 The retention of the trees and hedges is of importance due to their visual amenity value and their screening of the neighbouring residential properties and industrial areas. Their aesthetics contribute to the landscape and its surrounding environment. The distances for tree roots as recommended in BS5837:2012 do not wholly apply to this site due to the steep embankments to the north and south of the proposed area to be developed. Whilst RPA's on the northern lower areas of the embankment have minimal presence on the upper area to be developed, the southern area would also see some discrepancies with recommended in BS5837:2012. It is therefore recommended that test sites all around the boundaries be hand dug to ascertain where they are located, this in turn would determine where protection is required..
- 10.2 The presence of ash dieback is rife within the area of the proposal and beyond where large ash trees can be seen to be in severe decline. It is strongly recommended that the owners of the residential properties and businesses are contacted and advised of these large dangerous structures with the potential to cause harm and damage to infrastructure and public highways.
- 10.3 The greatest threat to the green infrastructure being from building materials such as cement being washed through the soil profile from storm water. It is therefore recommended that all stages of the pre commencement and post construction be documented in the form of photography.
- 10.4 When tree work is required, all tree work must adhere to BS3998 2010 Tree Work - Recommendations. This must be carried out by qualified, experienced and insured Arborists.

## 11.0 Caveats and Limitations

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- 11.1 This survey was carried out from ground level. No aerial inspection was undertaken and, as such, this report can only identify defects clearly visible from the ground. A VTA (Visual Tree Assessment) is a level two arboricultural tree survey. This normally involves a full 360 degree visual of the buttress, stem and crown of the tree. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.
- 11.2 No tree is entirely safe given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the site.
- 11.3 Underground services were not confirmed around any of the trees surveyed. The potential influences of trees upon building or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effect of incremental root growth are specifically excluded from this report.
- 11.4 The report reflects the tree stock as found on the day surveyed. Change of ground levels, soil conditions, surrounding tree cover or land use, or any ground works within the root zone of any tree may invalidate the content of this report. No root zone excavation was undertaken.
- 11.5 Change of circumstance as a result of unusual weather conditions may invalidate the content of this report. It is recommended that trees should be reassessed after strong gale, 39 – 46 mph wind Beaufort scale 8.

- 11.6 The content of this report is valid for 12 months from the cover date. Any works recommended for beyond this time period are based on expectations rather than in response to currently identified defects. Trees should have their condition re-inspected by a qualified arboricultural consultant within three years of this report being written.





Client: Hodson Homes  
 Project: Malt Kiln Brow, Chipping  
 Survey Date: 15/07/2022  
 Surveyor: Andrew McLoughlin

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Tree and Tag No Species	Height (m)	Stems		Crown		Age	RP A (m <sup>2</sup> ) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)						
G6 A Group --	15	0				M	A: 0 R: 0	Decline	C: Poor S: Ivy B: Poor	Fell :: Unspecified  A group of ash with severe decline	Estimated Measurements U.2  <10 yrs
G15 A Group --	8	1	300	N E S W	1 4 4 4	M	A: 40.7 R: 3.59	Decline	C: Poor S: Ivy B: Fair	Fell :: Fell and replant space  A group of hawthorn, sycamore and ash, the later suffering from from ash dieback with large amounts of deadwood and over hanging parking and road. Ash to be felled then reassess the remaining	Estimated Measurements U  n/a
G16 A Group --	18	1				M	A: 0 R: 0	Good	C: Good S: Good B: Good	No action :: No action  A group of neighbouring trees in a residential garden protected by the water course	B.1.2  20 to 40 yrs
H3 A Hedgerow - Spp.	4	0		N E S W	1 1 1 1	A: 0 R: 0		Good	C: Fair S: Good B: Good	Protection :: Erect protection barriers  A planned beech hedge with good potential, replant spaces in between and reduce canopies of existing to be maintained as a hedge	B.2  20 to 40 yrs
<b>Age Classifications:</b> N Newly planted EM Early Mature Y Young M Mature SM Semi-mature OM Over Mature											
<b>Condition:</b> C Crown S Stem B Basal area											
<b>Stems:</b> Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition <b>ERC:</b> Estimated Remaining Contributio											

Tree and Tag No Species	Hight (m)	Stems		Crown		Age	RP A (m <sup>2</sup> ) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)						
H14 A Group	1	1				M	A: 0 R: 0	Fair	C: Fair S: Fair B: Fair	No action :: No action overgrown hedge lining part of the boundary creating low level screening	B.2 10 to 20 yrs
T1 Common Beech <i>Fagus sylvatica</i>	20	1	1250	N E S W	9 6 7 7	2 2 2 2	M A: 706.9 R: 15	Good	C: Good S: Good B: Good	Protection :: Erect protection barriers Huge tree with below ground constraints being on side of proposal. Great longevity and high visual amenity value	>40 yrs
T2 Common Alder <i>Alnus glutinosa</i>	9	1	500	N E S W	2 2 2 5	2 2 2 2	M A: 113.1 R: 6	Fair	C: Fair S: Fair B: Fair	Protection :: Erect protection barriers A multi stemmed tree with below ground constraints being on side of proposal. Limited longevity and moderate visual amenity value	Estimated Measurements C.1 <10 yrs
T4 Sycamore <i>Acer pseudoplatanus</i>	4	1	300	N E S W	3 2 4 4	1 1 1 1	M A: 40.7 R: 3.59	Fair	C: Good S: Fair B: Good	Fell :: Fell and remove stump(s) Low quality and value, better to remove and replace with a more desirable species	C.2 10 to 20 yrs
T5 Common Yew <i>Taxus baccata</i>	9	1	800	N E S W	5 5 5 5	2 2 2 2	M A: 289.6 R: 9.6	Good	C: Good S: Good B: Good	Protection :: Erect protection barriers Neighbouring tree with great longevity	Estimated Measurements >40 yrs
T7 Common Oak <i>Quercus robur</i>	5	1	328	N E S W	5 5 5 5	2 2 2 2	M A: 48.7 R: 3.93	Good	C: Good S: Good B: Good	Protection :: Erect protection barriers Boundary tree with great longevity	Estimated Measurements >40 yrs
<b>Age Classifications:</b>	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	<b>Condition:</b>	C S B	Crown Stem Basal area	<b>Stems:</b>	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition Estimated Remaining Contributio	

Tree and Tag No Species	Height (m)	Stems		Crown		Age	RP A (m <sup>2</sup> ) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)						
T8 Sycamore <i>Acer pseudoplatanus</i>	17	2	849 (Eq)	N E S W	6 7 6 7	1 1 1 1	M A: 325.8 R: 10.18	Fair	C: Good S: Fair B: Good	Protection :: Erect protection barriers Good quality and value, codominant stem with good union	B.1 20 to 40 yrs
T9 Common Lime <i>Tilia europaea</i>	22	1	800	N E S W	5 5 5 5	2 2 2 2	M A: 289.6 R: 9.6	Good	C: Good S: Fair B: Good	Protection :: Erect protection barriers Remove :: Epicormic growths Re-inspect :: See Comment Neighbouring tree with great longevity. Dense canopy with epicormic growth to be removed and reassessed	Estimated Measurements A.1 >40 yrs
T10 Goat Willow <i>Salix caprea</i>	4	1	150	N E S W	3 2 1 2	SM	A: 10.2 R: 1.8	Fair	C: Fair S: Fair B: Poor	Fall :: Unspecified Low quality and value	Estimated Measurements U.2 <10 yrs
T11 Common Ash <i>Fraxinus excelsior</i>	8	1	350	N E S W	4 2 4 4	2 2 2 2	M A: 55.4 R: 4.19	Poor	C: Poor S: Ivy B: Good	Fell :: Fell and remove stump(s) Ash dieback and over hanging road. Operate side of water course with no constraints	Estimated Measurements U.1 <10 yrs
T12 Sycamore <i>Acer pseudoplatanus</i>	12	1	350	N E S W	4 3 3 4	2 2 2 2	M A: 55.4 R: 4.19	Fair	C: Good S: Ivy B: Good	Protection :: Erect protection barriers Remove :: Ivy Re-inspect :: See Comment Ivy to be removed and reassessed. On proposal side of water course with above and below ground constraints	Estimated Measurements B.1 20 to 40 yrs
<b>Age Classifications:</b> N Newly planted EM Early Mature Y Young IM Mature SM Semi-mature OM Over Mature <b>Condition:</b> C Crown S Stem B Basal area <b>Stems:</b> Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition <b>ERC:</b> Estimated Remaining Contribution TreeMinder											

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m <sup>2</sup> ) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)						
T13 Common Ash <i>Fraxinus excelsior</i>	8	1	350	N	4	2	A: 55.4 R: 4.19	Poor	C: Poor S: Ivy B: Good	Fell :: Fell and remove stump(s) Ash dieback and over hanging road. Operate side of water course with no constraints	U.1 <10 yrs
Estimated Measurements											

Age Classifications:	N	Newly planted	EM	Early Mature	Condition:	C	Crown	Stems:	Ø	Diameter
Y	Young	M	Mature	S	S	S	Stem	(Eq)	Equivalent stem diameter using BS5837:2012 definition	
SM	Semi-mature	OM	Over Mature	B	B	B	Basal area	ERC:	Estimated Remaining Contributio	

## Appendix B - Glossary

Abbreviation	Term	Explanation
DBH	Diameter at Breast Height	The diameter of the tree trunk in question, 'breast height' is taken to be 1.3 metres above ground level. Multi-stem trees have their stems measured separately and indicated as so in the tree schedule. Trees with abnormal growths, branch unions or other obstructions at 1.3 m will have their measurements taken immediately below said obstructions.
RPA	Root Protection Area	The area in metres squared of the potential underground rooting constraints
AMS	Arboricultural Method Statement	This dictates the procedure for works to be carried out around the protected trees
RPA	Root Protection Area	Circular area surrounding tree with a radius based on the DBH of the tree, as calculated in BS 5837:2012. RPA Radius = 12 x DBH
AIA	Arboricultural Impact Assessment	What will the impact be on the trees with the proposed development
VTA	Visual Tree Assessment	A system of tree inspection devised by Claus Mattheck using visual signs to read the body language of trees & aid with the diagnosis of potential defects.
TPP	Tree Protection Plan	This describes the process on how the work is to be carried out around the trees
BS5837 2012	British Standards	British Standard 5837:2012 <i>Trees in relation to design, demolition &amp; construction - Recommendations.</i>
	Codominant stem	Two stems on a tree which can suggest a weakened union
	V union with bark inclusion	Usually with a codominant stem, as above but with up to an additional 42% weak union
Y	Young	Tree which has not yet established a significant rooting structure in the ground & has not developed a significant branching structure - its form is largely 'whip' like in nature & it could normally be easily transplanted or replaced.
EM	Early Mature	Tree which has established a significant rooting structure & has developed a noticeable internal scaffold structure, it differs from a mature version of its species only in size but not in relative proportions of its structure. Trees in this age class will still be developing significantly in height & spread.
M	Mature	Tree which has established a significant root-plate & which is over 50% of the way through its usual life expectancy. Trees in this age class will still be developing significantly in spread but less significantly in height.
OM	Over Mature	Tree which has fully established & will no longer be able to continue increasing in size due to its age, it may be showing signs of decline such as localised dieback but does not need to do so by definition. However it should be expected that signs of structural deterioration will soon become apparent.
V	Veteran	Tree which is showing veteran tree characteristics such as very significant crown retrenchment, extensive internal cavitation & possess significant cultural, ecological &/or historical value. Size is a common indicator of these characteristics but is not an essential requirement, for example, ancient coppices may possess veteran tree characteristics but may have a stunted form. Age is a stronger indicator but again not essential as veteran characteristics can be encouraged in younger trees.
-	Minor Deadwood	Deadwood under 50 mm in diameter
-	Major Deadwood	Deadwood which is equal to or greater than 50 mm in diameter
-	Retrenchment	Retrenchment: progressive reduction in the size of the crown of an old tree, by means of the dieback or breakage of twigs and small branches, accompanied by the enhanced development of the lower or inner parts of the crown.



Appendix C: BS 5837:2012 Cascade Chart for Tree Quality Assessment

Table 1 Cascade chart for tree quality assessment

ID on plan	
Category and definition	Criteria (including subcategories where appropriate)
<b>Trees unsuitable for retention</b> (see Note)	
<b>Category U</b> 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"> <li>- 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 U category trees i.e. where, for whatever reasons, the loss of companion shelter cannot be mitigated by pruning)</li> <li>- Trees that are dead or are showing signs of significant, immediate and irreversible overall decline</li> <li>- Trees infected with pathogens or significance to health and/or safety of other trees nearby (e.g. Dutch elm disease, or very low quality trees suppressing adjacent trees of better quality)</li> </ul> <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>
<b>Trees to be considered for retention</b>	
<b>Category A</b> <b>Those of a high quality</b> with an estimated remaining life expectancy of at least 40 years	<p><b>1 Mainly arboricultural values</b></p> <p>Trees that are particularly good examples of their species, especially if rare or unusual, or those that are essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)</p> <p><b>2 Mainly landscape values</b></p> <p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features</p> <p><b>3 Mainly cultural values, inc. conservation</b></p> <p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>
<b>Category B</b> <b>Those of moderate quality</b> with an estimated remaining life expectancy of at least 20 years	<p><b>1 Mainly arboricultural values</b></p> <p>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</p> <p><b>2 Mainly landscape values</b></p> <p>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</p> <p><b>3 Mainly cultural values, inc. conservation</b></p> <p>Trees with material conservation or other cultural value</p>
<b>Category C</b> <b>Those of low quality</b> with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	<p><b>1 Mainly arboricultural values</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p> <p><b>2 Mainly landscape values</b></p> <p>Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary/transient landscape benefits</p> <p><b>3 Mainly cultural values, inc. conservation</b></p> <p>Trees with no material conservation or other cultural value</p>





## Appendix D - General Tree Protection Considerations

Any tree retained within the design will require protection in accordance with BS 5837, regardless of its initial retention category. This protection will require tree to be fenced off in areas equal to the RPAs plotted on the attached Tree Constraints Plan, located in **Appendix A**.

A protective fence will be erected prior to the commencement of any site works e.g. before any materials are brought on site. The fence will have signs attached to it stating:

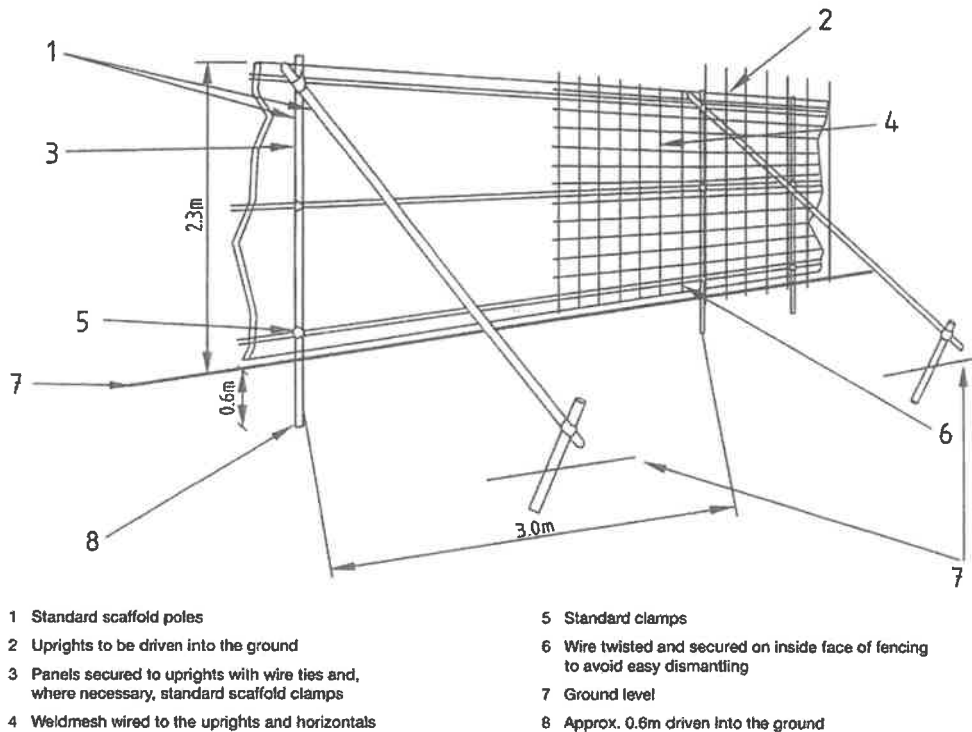
### 'CONSTRUCTION EXCLUSION ZONE – NO ACCESS'

The protected fence may only be removed following completion of all construction works.

The fence is required to be sited in accordance with the Tree Constraints Plan enclosed with this method statement as **Appendix A**. They must ideally be constructed as per figure 2 in BS 5837 and be fit for the purpose of excluding any construction activity (see diagram below). Any other fence/barrier used must be fit for the purpose (as decided by the project arborist).

Once erected all protective fencing will be regarded as sacrosanct, and will not be removed or altered without prior recommendation by the project arborist and approval by the local planning authority.

The diagram below demonstrates the required fence specifications of BS 5837 figure 2.



**Figure 2. – Protective fencing for RPA**

### Appendix D - General Tree Protection Considerations (Cont.)

Should scaffolding be required to be erected within the RPA of any retained trees (so that building works may be carried out outside the extent of the RPA), this should be carried out to the following specifications:

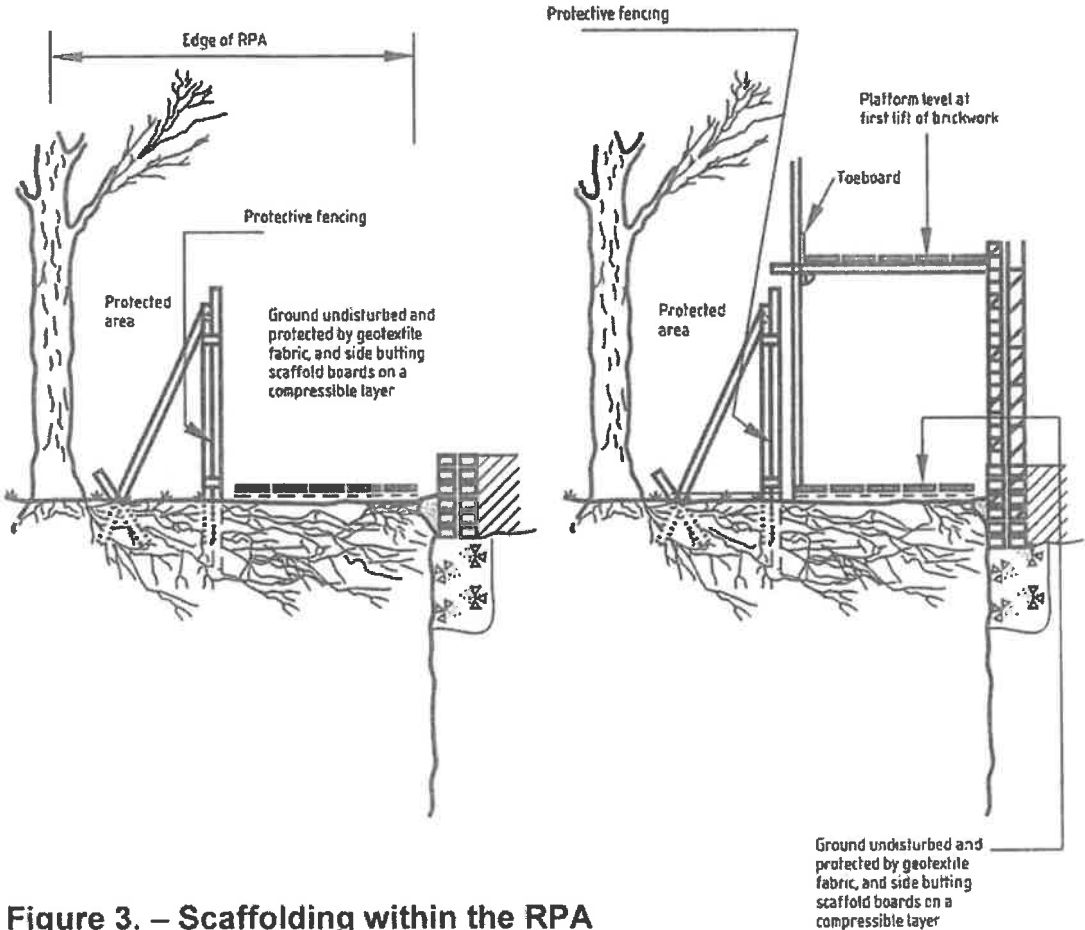


Figure 3. – Scaffolding within the RPA

CONSTRUCTION EXCLUSION ZONE

**KEEP OUT**

RESTRICTED ACCESS  
NO VEHICLES  
NO STORAGE OF MATERIALS

REPORT ANY TREE DAMAGE TO  
TREESTYLE CONSULTANCY  
ON

07872 064 313



# Treestyle CONSULTANCY

**Appendix E - Guidance for Working in Root Protection Areas (RPAs)**

## **1.0 Introduction**

The following sets out the guidance for working in RPAs that should be followed to ensure successful tree retention. It is based on the guidelines and recommendations set out in British Standard 5837 2012 Trees in relation to design, demolition, and construction - Recommendations (hereinafter BS5837) and the National Joint Utilities Group: Guidelines for the planning, installation, and maintenance of utility services in proximity to trees. Volume 4, issue 2. London: NJUG, 2007 (hereinafter NJUG 4).

## **2.0 General Guidance for Working in RPA's**

### **2.1 What is the purpose of this guidance?**

The purpose of this guidance is to set out the general principles that must be followed when working in RPAs as follows.

- a) pre site commencement: to demonstrate that tree protection issues have been properly considered and sets out how they must be implemented, and
- b) post site commencement: to inform all site personnel of their obligations towards protected trees and how to meet them.

### **2.2 What are RPAs?**

RPAs are the areas of root protection were.:

- a) roots must not be severed, cut, or broken i.e. no excavation, no soil stripping
- b) ground levels must not be changed i.e., no soil stripping, no soil level raising
- c) soil must not be compacted - no movement of vehicles. All RPA's close to the construction area are illustrated on the tree protection plan within this report. Any and all works within RPAs must be carried out with great care if trees are to be successfully retained.

### **2.3 When must this guidance be followed are:**

This guidance must be followed by all personnel entering into or working within an RPA.

The main scenarios where this guidance must be followed are.

- a) demolition,
- b) construction of new hard surfacing,
- c) construction of new structures,
- d) subterranean construction,
- e) underground and above-ground utility apparatus, and
- f) landscaping activities.

Broad definitions of surfacing, services, structures, and landscaping are set out in the following sections.

## **2.4 Arboricultural supervision:**

- All work within RPAs must be carried out with care if trees are to be successfully retained. An arboriculturist must be consulted if there is any risk of misunderstanding or misinterpretation. Ongoing work must be inspected regularly, and, on completion, the work must be signed off by the Arboricultural consultant.

## **3.0 Demolition within RPA's**

### **3.1 Basic principles:**

- Demolition within the RPA should accord to the principle that the tree and soil structure take priority, and the most reliable way to ensure this is to preserve the RPA completely undisturbed.
- The ability of a tree to tolerate some disturbance and alteration of its growing conditions depends on specific circumstances, including prevailing site conditions, and in general, the older the tree, the less successfully it will adapt to new conditions.

### **3.2 Avoiding physical damage to the roots during demolition:**

- To avoid damage to tree roots, existing ground levels should be retained within the RPA. Intrusion into soil (other than for piling) within the RPA is generally not acceptable, and topsoil within it should be retained in situ. However, limited manual excavation within the RPA might be acceptable, subject to justification.
- Such excavation should be undertaken carefully, using hand-held tools and preferably by compressed air soil displacement.
- Roots, whilst exposed, should immediately be wrapped, or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.
- Roots smaller than 25 mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g., bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboriculturist as such roots might be essential to the tree's health and stability.
- Prior to backfilling, retained roots should be surrounded with topsoil or un-compacted sharp sand, or other loose inert granular fill, before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots

## **4.0 Construction of New Hard Surfacing within RPA's**

### **4.1 Basic principles:**

- The design should not require excavation, including changes of soil levels other than the removal of turf or other surface vegetation.
- The new hard surface must avoid localised compaction by evenly distributing the loading over the track width and wheelbase of any vehicles expected to use the access.
- New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA.
- If the new surface is likely to be subject to de-icing salt application, an impermeable barrier should be incorporated to prevent contamination of the rooting area and run-off should be directed away from the RPA.
- Where a permeable surface is to be used by vehicular traffic, a geotextile should be used at the base of construction to help prevent pollution contamination of the rooting area below.
- Where there is a risk of water-logging suitable land drainage must be incorporated.
- The new hard surface should be resistant to or tolerant of deformation by tree roots and should be set back from the stem of the tree and its above ground root buttressing by a minimum of 500 mm to allow for growth and movement.
- Mature and over-mature trees are more prone to suffer because of these changes than young and middle-aged trees. Adverse impact on trees can be reduced by minimising the extent of these changes within RPAs.
- The actual specification of the surfacing is an engineering issue that needs to be considered in the context of the bearing capacity of the soil, the intended loading, and the frequency of loading.
- Product and specification are beyond the scope of this guidance and must be provided separately by the appropriate specialist.

### **4.2 Sub-base and finishing layers:**

- Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement systems. Alternatively, piles, pads or elevated beams can be used to support surfaces to bridge over the RPA or following exploratory investigations to determine location, to provide support within the RPA while allowing the retention of roots greater than 25 mm in diameter.
- Suitable surface finishes include washed gravel, permeable tarmac or block pavers set on a sand base.
- In some situations, limited width floating concrete rafts constructed directly on to the soil surface may be acceptable, but the design must not include any strip supports.



#### **4.3 Edge retention:**

- The excavation needed for the placement of kerbs, edgings, and their associated foundations and haunching's can damage tree roots. Within the RPA, this should be avoided either by the use of alternative methods of edge support or by not using supports at all.

#### **4.4 Installing new hard surfacing on top of existing surfacing:**

- In some instances, existing surfacing can be retained and used as a base for new surfacing. Normally, this will not result in significant excavation that could expose roots so special precautions are not necessary.
- If large roots already protrude above the proposed sub-base level, then the precautions and procedures set out above must be observed.

### **5.0 Construction of New Structures within RPA's**

#### **5.1 Basic principles:**

- Construction within the RPA should accord to the principle that the tree and soil structure take priority, and the most reliable way to ensure this is to preserve the RPA completely undisturbed.
- The ability of a tree to tolerate some disturbance and alteration of its growing conditions depends on specific circumstances, including prevailing site conditions, and in general, the older the tree, the less successfully it will adapt to new conditions.
- Where alternative design solutions are not available such that construction is proposed within the RPA, the potential impact of the proposals on the tree should be assessed and a tree protection plan and Arboricultural method statement produced.
- Details of design proposals should be developed in conjunction with the project arboriculturist and, where required, input from a suitably qualified engineer.
- In order to demonstrate that the proposals are technically feasible such details should be included within planning applications. The exception to this is the installation of underground utility apparatus, where it can be demonstrated that this is achievable by the use of trench-less technology and where entry and retrieval pits can be formed outside the RPA.
- Where utility operations do not require planning permission, including those performed by statutory undertakers, they should still be undertaken in accordance with these principles.

## **5.2 Avoiding physical damage to the roots during construction:**

- To avoid damage to tree roots, existing ground levels should be retained within the RPA. Intrusion into soil (other than for piling) within the RPA is generally not acceptable, and topsoil within it should be retained in situ. However, limited manual excavation within the RPA might be acceptable, subject to justification. Such excavation should be undertaken carefully, using hand-held tools and preferably by compressed air soil displacement.
- Roots, whilst exposed, should immediately be wrapped, or covered to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.
- Roots smaller than 25 mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g., bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25 mm diameter and over should be severed only following consultation with an arboriculturist as such roots might be essential to the tree's health and stability.
- Prior to backfilling, retained roots should be surrounded with topsoil or un-compacted sharp sand, or other loose inert granular fill, before soil or other suitable material is replaced. This material should be free of contaminants and other foreign objects potentially injurious to tree roots.

## **6.0 Subterranean construction within RPAs**

### **6.1 Basic principles:**

- Where it is proposed to form subterranean structures, e.g., basement extensions, within the RPA, it is essential to avoid excavating down through routable soil if trees are to be retained. In some cases, it might be technically possible to form the excavation by undermining the soil beneath the RPA. 7.0 Underground and above-ground utility apparatus within RPAs

### **7.1 Basic principles:**

- Mechanical trenching for the installation of underground apparatus and drainage severs any roots present and can change the local soil hydrology in a way that adversely affects the health of the tree. For this reason, particular care should be taken in the routing and methods of installation of all underground apparatus.
- Wherever possible, apparatus should be routed outside RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts. Inspection chambers should be sited outside the RPA. Where underground apparatus is to pass within the RPA, detailed plans showing the proposed routing should be drawn up in conjunction with the project arboriculturist. In such cases, trench-less insertion methods should be used with entry and retrieval pits being sited outside the RPA. Provided that roots can be retained and protected excavation using handheld tools might be acceptable for shallow service runs.

## **8.0 Landscaping within RPA 's**

### **8.1 Basic principles:**

- The general treatment of areas around newly planted and existing trees should allow for adequate infiltration of water and free gas exchange, reduction of water evaporation and the retention of an open soil structure to encourage root growth.

### **8.2 Soil compaction and remediation measures:**

- Soil that has been compacted will not provide suitable conditions for the survival and growth of vegetation, whether existing or new, and is a common cause of post-construction tree loss on development sites.
- Compacted soil will adversely affect drainage, gas exchange, nutrient uptake, and organic content, and will seriously impede or restrict root growth. The risk of soil compaction is greatest in soils with significant clay content and in wet conditions.
- Soil compaction should be avoided around existing vegetation, including trees, and in areas where new planting or seeding is proposed.
- Where soil compaction has occurred in the vicinity of existing trees, Arboricultural advice should be taken before carrying out any remedial or other works within RPAs to mitigate risk of further damage to roots.
- Remedial works may include sub-soil aeration using compressed air, and the addition of other materials, preferably of a bulky, organic nature (but excluding peat), to improve structure. Heavy mechanical cultivation such as ploughing or rotavation should not occur within the RPA.
- Any cultivation operations should be undertaken carefully by hand in order to minimise damage to the tree, particularly the roots. Decompaction measures include forking, spiking, soil auguring and tilled radial trenching. Care should be taken during such operations to minimise the risk of further damage to tree roots.

### **8.3 Use of herbicides:**

- The use of herbicides in the vicinity of existing trees should be appropriate for the type of vegetation to be killed, and all instructions, warnings and other relevant information from manufacturers should be strictly observed and followed. Care should be taken to avoid any damaging effects upon existing plants and trees to be retained, species to be introduced, and existing sensitive habitats, particularly those associated with aquatic or drainage features.

### **8.4 Tree work within RPAs:**

- Care should be taken to ensure during tree removal or remedial work that damage to the retained trees and/or disturbance to the RPA is avoided. Precautions should include dismantling techniques to reduce the risk of accidental damage, and ground protection measures where excessive pedestrian movements or use of plant and machinery might lead to compaction. If temporary access is required for plant or vehicles within the RPA, this should be provided by means of temporary ground protection.



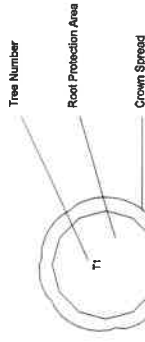
**Malt Kiln Brow, Chipping, PR3 2QP**

SCALE: 1:750 @ A3 DATE: 21/07/2022



**Tree Protection Plan**

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Any work near or within a RPA of a retained tree must be overseen by the appointed arboricultural consultant and documented. These are 'No Dig, Zones'

Root Protection Areas (RPA's) are Construction Exclusion Zones (CEZ's). Any work within an RPA must be overseen by the appointed arboricultural consultant. Hand tools only are allowed to be used within a CEZ.

All stages of tree protection, before and post construction must be document.

The RPA's of retained trees will be fenced off prior to the commencement of any demolition or construction and must remain for the duration of the work. LPA or the appointed arboricultural consultant can allow for the authorisation of it removal.

Many of the tree Root Protection Areas (RPA's) have been adjusted and moved because of the below ground constraints. Roads and ponds provide an inhospitable environment to tree rooting mass would therefore be located in a more hospitable environment such as the feild.

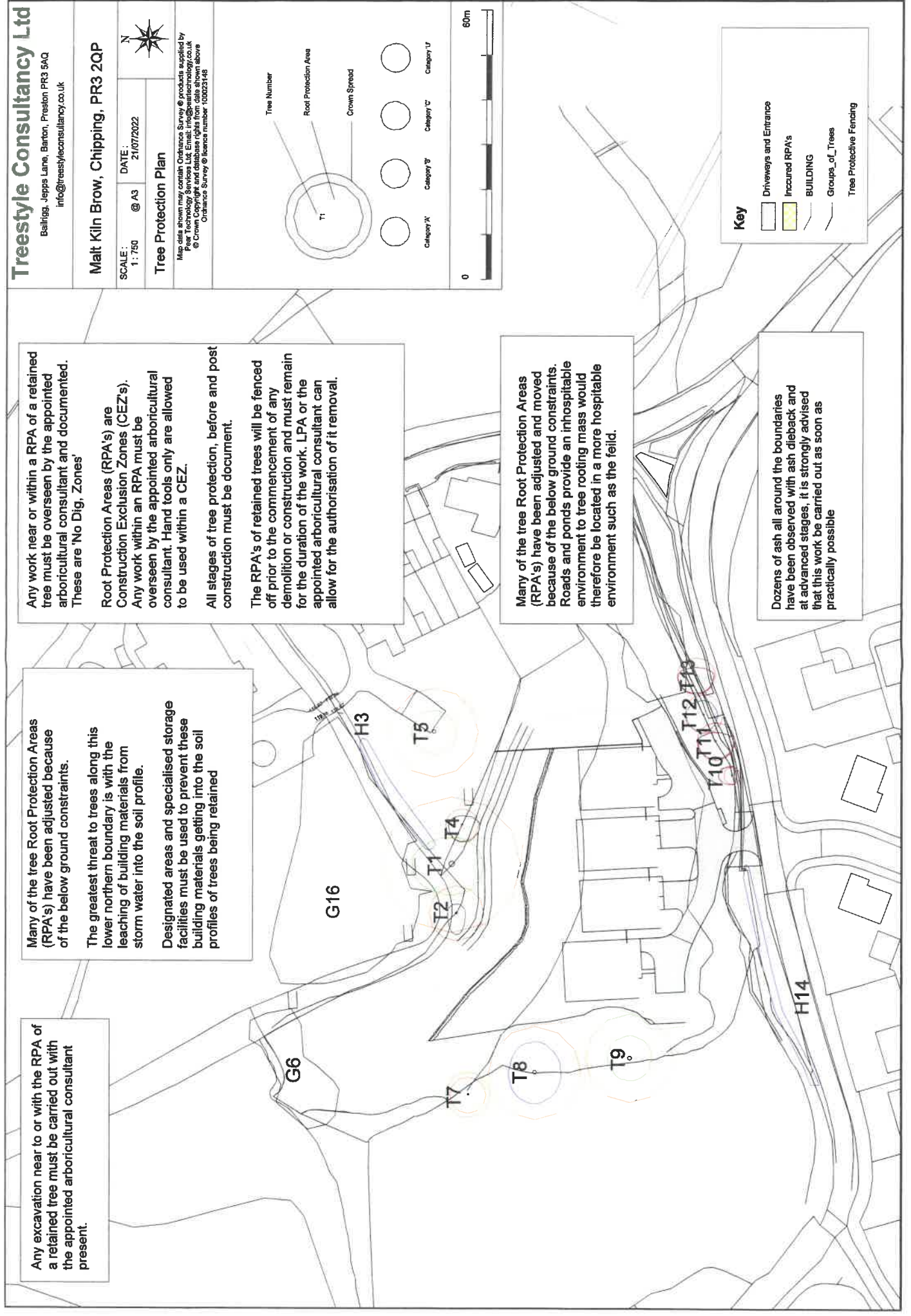
Dozens of ash all around the boundaries have been observed with ash dieback and at advanced stages, it is strongly advised that this work be carried out as soon as practically possible

Many of the tree Root Protection Areas (RPA's) have been adjusted because of the below ground constraints.

The greatest threat to trees along this lower northern boundary is with the leaching of building materials from storm water into the soil profile.

Designated areas and specialised storage facilities must be used to prevent these building materials getting into the soil profiles of trees being retained

Any excavation near to or with the RPA of a retained tree must be carried out with the appointed arboricultural consultant present.



**Key**

- Driveways and Entrance
- Incurred RPA's
- BUILDING
- Groups\_of\_Trees
- Tree Protective Fencing

Malt Kiln Brow, Chipping, PR3 2QP

SCALE: 1:750 @ A3 DATE: 21/07/2022

**Tree Constraints Plan**

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