

Arboricultural Impact Assessment & Method Statement in accordance with BS5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’

Project name:	Land at: Highfield Road, Minster.		
Project Ref:	1963 Rev-01	Date of report:	2 December 2020
Written by:	<p>Owen Allpress <i>Bsc (Hons) Arb</i></p> <p>Working in the Arboricultural sector for over a decade I have achieved both an FdSc and a BSc (Hons) in arboriculture, am a LANTRA certified Professional Tree Inspector and a professional member of the Arboricultural Association. Starting out working as an arborist, I progressed into a management role running a large and successful tree surgery. I later took a consultant position within a large and established consultancy in the south east before becoming an independent consultant.</p>		
Record of amendments:	<ul style="list-style-type: none"> - Initial version issued 25/11/2020 - Final layout issued, drawing and reports updated. 02/12/2020 		



Local Authority Validation Summary

This arboricultural report contains supporting information and details regarding potential impact to retained trees as part of the proposed development.

To assist local authority (LA) verification this survey contains the following information:

- A complete Initial Tree Survey in compliance with *BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations*, carried out by a qualified arboricultural consultant.
- Scale plans with north indicated, detailing tree positions and tree categorisation.
- Implications for trees from the proposed development have been explored including trees retained and/or removed to facilitate the proposal.
- Arboricultural method statement for use on site. Describing a feasible means of executing the proposal including methods implemented to reduce the impact to retained trees.



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1.0 Introduction

1.1 Instruction: I have been instructed by S. Attwood to provide an Arboricultural Impact Assessment and Method Statement as part of the proposed development at the site. The proposal is to develop the site for residential use with the creation of a number of dwellings, new access routes, parking and pedestrian links.

1.2 The purpose of this report is as an Arboricultural Survey, Impact Assessment and Method Statement describing existing trees, their value and any constraint they pose to the presented development proposals. This report is compiled in accordance with guidance set out within BS5837: 2012 '*Trees in relation to design, demolition and construction – Recommendations*'

1.3 Report contents: The following contents are included to provide a comprehensive assessment of the trees, their value and the constraint they may present to the proposed development.

- **A Tree Constraints Plan** – A location plan detailing the trees recorded at the site as it is at the time of survey.
- **A Tree Retention & Protection Plan** – A plan detailing retained trees and any protection measures required to allow the proposal to be completed with reduced risk of impact to trees at the site.
- **An Initial Tree Survey** – a written summary of the initial survey, site description and methodologies employed.
- **An Arboricultural Impact Assessment** – an assessment of the impact presented by the proposed development activities on trees.
- **Arboricultural Method Statement:** A method statement outlining working methodologies to achieve the proposed construction whilst minimising impact to trees at or adjacent to the site.
- A series of appendices including supporting documents.

1.4 Supporting documentation: The following documents were supplied prior to and in support of this assessment.

- Existing site layout
- Proposed site layout



2.0 Initial Tree Survey

2.1 Site survey: A site survey was conducted on 26th June 2020. The weather conditions at the time of the survey were dry and bright. Visibility was not impeded by weather conditions and a full visual assessment of each tree, recording the required information, was carried out.

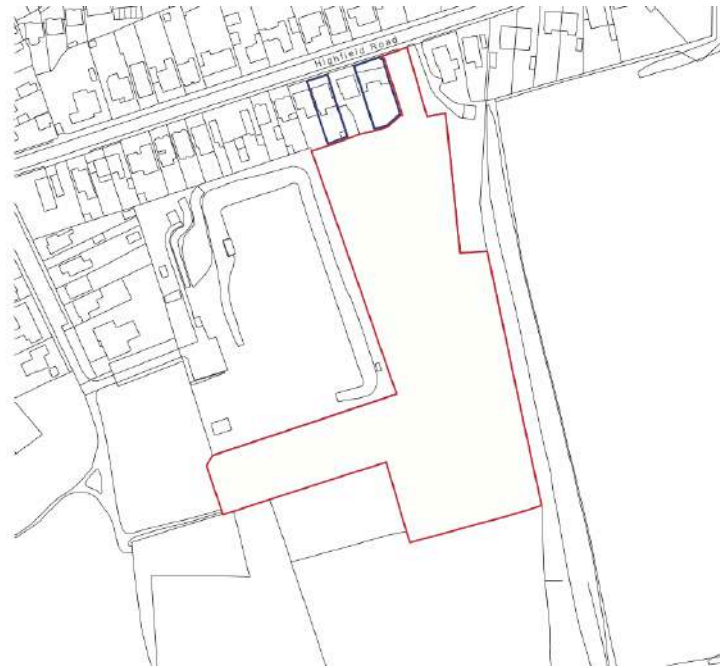


Image 1: Existing site layout image and survey boundary marked in red.

2.2 Site description and layout: The site consists, in its entirety, of a number of small conjoined paddocks used for grazing. Few large or high value trees are present at the site. Larger trees that are present are those that have been planted historically at the site, many of which are either in a poor physical condition or of a generally low quality. Further information regarding trees recorded at the site can be found in the survey sheets located in appendix 2.

2.3 Statutory protection: No information was available from Swale Borough Council's website regarding Tree Preservation Orders or Conservation area status of the site. The status of the site in this regard will be checked by the LPA as part of the application and the information.



2.4 Tree categorisation summary: Table 1, (below), illustrates the classification of trees recorded at the site. Further information regarding trees at the site can be obtained from the tree survey schedule in appendix 2.

Tree Category	Tree	Group	Hedgerow
A	-	-	-
B	5	5	-
C	10	6	1
U	2	-	-
Totals	17	11	1

Table 1: Tree categorisation table illustrating the distribution of trees surveyed as part of the site assessment.

2.5 Tree survey methodology: The initial survey recorded information about trees at and adjacent to the site that were deemed to be relevant to the scope of the report. Third party trees are recorded where they are in such proximity that their root structure or canopy above ground may be impacted by development proposals.

2.6 Limitations: The survey was restricted to a visual assessment carried out from ground level. No aerial inspection, ground disturbance or invasive methods were implemented.



2.7 Data recorded: Trees at the site have been assessed and data recorded in accordance with tree requirements set out within BS5837: 2012. The following data was collected from each tree while at the site.

- REF: This is a sequential tree reference number beginning with a letter to define individual trees (T), tree groups (G), hedges (H) and woodlands (W). It is used to locate and refer to trees throughout the remainder of this report including subsequent reports at the same site.
- SPECIES: Tree species are recorded in the following format, "Common name, (*Scientific name*)". Scientific names are italicised and placed within parenthesis.
- HEIGHT: Tree height recorded to the nearest meter.
- DBH: Diameter at Breast Height, recorded at the appropriate location along the stem dependent on tree form, (usually 1.5m from ground level however this will vary depending on the form of the tree).
- CROWN SPREAD: Crown spread of the tree recorded to the nearest meter using four cardinal points as a reference.
- CLEARANCE: Clearance of the crown foliage and first significant limb including orientation using one of the four cardinal points as a reference.
- AGE CLASS: Age classification. This is a broad description used to detail approximate age. Age class is specific to tree species and their individual growth habit ranging from juvenile, semi-mature, mature and over-mature. The classifications 'veteran' and 'dead' are also used where relevant.
- CONDITION SUMMARY: Details of the trees overall condition in order to qualify its classification.
- PRELIMINARY MANAGEMENT ACTION: Management recommendations that are recommended to be carried out regardless of the development proposal. These are based on current site use and setting and may include trees with obvious defects that should be addressed regardless of the future of the site.
- CATEGORY GRADING: Category grading according BS5837: 2012 (see appendix 4).
- ROOT PROTECTION AREA (RPA): This measurement may be useful for designers to plot RPAs during early stages of the proposal's design or at a later stage to ascertain the dimensions of the root protection area for each tree prior to construction, (see appendix 5).



2.8 A root protection area in the context of this report is, as defined in BS5837:2012, the area calculated to be the optimum minimum rooting area required by the tree in order to remain viable. This area does not necessarily contain roots however should be thought of as an allotment of space to permit future growth to sustain the tree beyond any construction works. Each trees diameter is measured and applied to the formula found in appendix 4.

2.9 Root protection areas, (RPA) for each tree are recorded and illustrated, (colour coded for tree categorisation) within the Tree Protection Plan within appendix 1.

2.10 Following the Initial Tree Survey, an Arboricultural Impact Assessment has been carried out and is included in latter sections of this report. This is done in order to assess the physical impact of construction along with recommending the necessary protective measures to be applied to trees during construction.



3.0 Arboricultural Impact Assessment

3.1 The proposal: The proposal is to develop the site for residential use with the creation of a number of dwellings, new access routes, parking and pedestrian links.

3.2 Trees to be removed: The majority of trees present at the site are of a low quality and do not present a high level of individual arboricultural value. Lower quality trees when grouped present a level of level of screening however given the location and orientation of properties at Highfield road screening potential of existing vegetation is limited. It is not thought that the removals identified in plans in appendix 1 of this report are such that a significant loss of screening of the site will occur that cannot be reasonably mitigated as part of a landscaping plan. The updated final layout assessed in this version of report incorporates screening vegetation G14 and G15 into rear gardens of proposed new property at the upper western boundary.

3.3 Access facilitation pruning: Based on the level of tree cover at the site and the proposed tree retention in the wider area, post tree works no access facilitation pruning is anticipated to be required.

3.4 Tree protection measures: Tree protection fencing will be deployed to delineate the construction exclusion zone. Specification for tree protection fencing is included in appendix 6 and consists of the light duty spec made up of HERAS panels with angled supports secured in place with driven stakes. Tree protection fencing must be installed such that its movement or adaption is purposely difficult, even impossible without the proper tools or access. To be fit for purpose it must be immovable and remain in place for the duration of construction unless otherwise discussed within the method statement in this or subsequent reports. Contravention of this amounts to a breach of planning permission where this report forms part of said permission.

3.5 The above assessment of impact of the proposed development reveals low overall impact to retain trees at the site with no significant works set to occur within root protection areas. Trees that are removed can be suitably mitigated via the provision of an appropriately scaled landscape planting design that seeks to replace trees with good quality long lived specie of tree that complement the develop by softening and complimenting the finished design. Any detailed information regarding mitigation planting can be assessed by the Local Planning authority as a pre-commencement condition.



3.6 The arboricultural method statement included in the final section of this report provides working methodologies as a follow on from the assessments made in the impact assessment.

3.7 The arboricultural impact assessment is based on the current layout at the time of this report. If the layout changes the associated impact on trees may also be affected and may need to be re-considered. It remains the clients' duty to inform the project arboriculturalist of significant changes to the scheme which may affect the usefulness of this report.



4.0 Arboricultural Method Statement

This section of the report is the Arboricultural Method Statement for the specified construction activities and tree protection measures at the site. This document describes how trees will be protected and managed during the demolition & construction phase. This method statement is based on information available at the time of this report and may need to be updated as necessary as new information or changes in the site arise. It is the client's responsibility to communicate these changes to ensure the effectiveness of this document as it is intended to be used as briefing material and referred to throughout the development of the site.

A copy of this method statement must remain on site for the duration of the construction phase. This document may need to be circulated at key stages prior to commencement such as:

- At tendering of works to allow the effective identification and quantification of protective measures required to be carried out by the contractor.
- Plan the timing of key operations to minimise the impact of trees
- Referred to on site by contractors for practical guidance on how to protect trees at the site.

Activity	Timing	Notes
Tree works	Prior to construction phase	Carry out tree works listed in tree survey schedule appendix 2.
Install tree protection fencing	Prior to construction phase	Tree protection fencing to be installed at locations illustrated within tree protection plan appendix 1.

Table 2: Schedule of tree protection measures and tree related actions.



4.1 Requirements: A copy of this Arboricultural Method Statement must remain on site throughout the duration of construction and be available for use both as a reference and as briefing material for any operation that may affect retained trees at the site.

4.2 Protection of Construction Exclusion Zone (CEZ): Fencing of the CEZ highlighted on the Tree Protection Plan within appendix 1 is to be carried out prior to any construction traffic or deliveries of material occurring at the site. Refer to paragraph 4.3 for CEZ prohibited activities. Tree protection fencing is to be installed at the location shown within the Tree Protection Plan and must remain in place for the duration of the construction works. Adjustments in position or physical breach of the CEZ is not permitted unless listed specifically within this method statement.

4.3 The areas protected by fencing or ground protection shall be referred to as the construction exclusion zones. The following actions shall be prohibited within the construction exclusion zones:

- Vehicular access (unless on suitable ground protection specified within this report).
- Regular pedestrian access unless on suitable ground protection.
- Storage of construction materials.
- Storage or handling of harmful chemicals.
- Any change in ground level unless otherwise stated in this report or under supervision of an arboriculturalist.
- Construction activities including hard surfacing.

4.4 Temporary ground protection is specified for this proposal for pedestrians or lightweight plant up to 2 tons gross weight. Below are some example specifications that provide required support:

- Scaffold boards positioned on a compressible layer of wood chip or sharp sand (100mm for pedestrians or 150mm for small plant), spread across a Teram style, geotextile membrane.
- A single thickness of scaffold boards supported upon a scaffold frame driven into the ground.
- Purpose made trackway or similar modular surface covering for ground protection. Various modular surface options are available. If employing this method details of the trackway must be confirmed with the project arboriculturalist prior to its deployment.



4.5 Services: No information relating to existing or proposed underground services was provided for assessment as part of this report. Any new service routes or adjustments to existing services should not occur without first consulting the project arboriculturalist.

4.6 Arboricultural supervision: No significant works are set to occur and no direct supervision of construction activities is recommended however in order to accurately highlight tree protection measures and allow contractors to discuss works phasing relevant to tree protection, it is advisable to carry out a pre-commencement site meeting. A summary of the activities that require arboricultural supervision is included below:

- Site meeting, pre-commencement with appointed contractors to discuss tree protection measure and phasing of works. The local authority arboricultural officer shall be given reasonable notice of such a meeting in order that they make attendance.
- Confirmation of correct tree protection fencing installation and delineation of the CEZ.

4.7 If significant root growth is disturbed during construction activity outside of that explored within this report, work shall cease until the project arboriculturalist has been consulted. Significant roots are defined as roots over 25mm in diameter or dense fibrous matter areas of root growth.

4.8 Root protection area calculation and interpretation is part of industry guidelines however, it should be noted that below ground root morphology is affected by a number of factors. The potential remains for discovering roots outside of root protection areas including roads as tree root growth conforms to no constant ideal.

4.9 If damage is inadvertently caused to trees at the site during construction, work shall cease until the project arboriculturalist has been consulted to assess the likely implications along with recommending any necessary remedial measures. This includes environmental accidents such as fuel spillage, fire or chemical damage.

4.10 The supervising arboriculturalist shall be appointed by the contractor, in this capacity, reporting to the local authority arboricultural officer may be required regarding changes and any unforeseen tree related matters.



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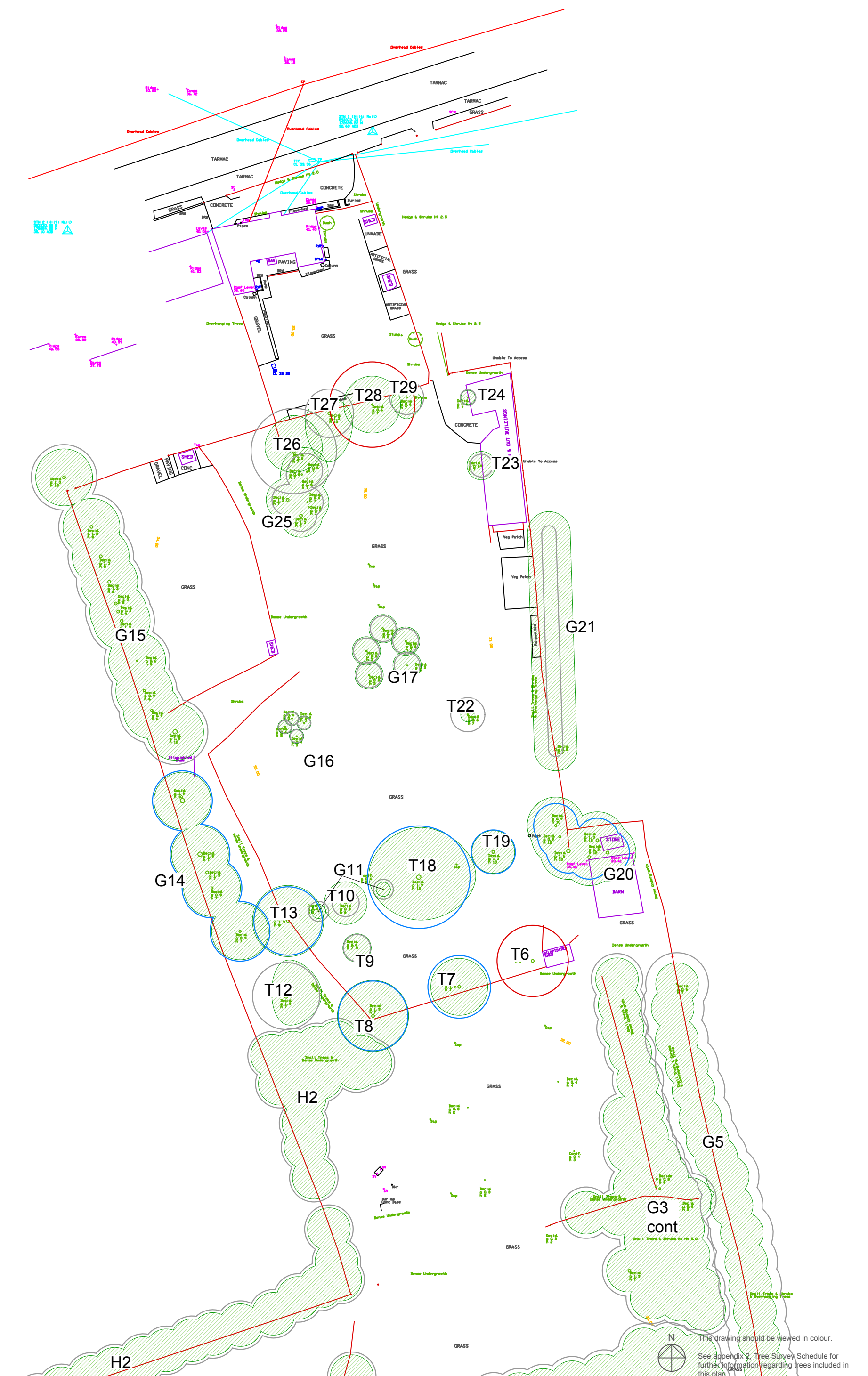
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Project Ref:	1963 Rev-01	Date:	2 December 2020
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Appendix 1 - Tree Constraints Plan & Tree Retention & Protection Plan



The drawing should be viewed in colour.
 See appendix 2, Tree Survey Schedule for further information regarding trees included in this plan.

Key:	<ul style="list-style-type: none"> ● Tree Canopy ○ Category U RPA ○ Category B RPA ○ Category C RPA
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CLIENT:	New Homes & Land Ltd
DRAWING TITLE:	Tree Constraints Plan

Site address:	Highfield Road, Minster.
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DATE DRAWN:	02/07/2020	DRAWING NUMBER:	1963-01-P1
SCALE:	1:500 @ A3		
DRAWN BY:	OA		





This drawing should be viewed in colour.

See appendix 2, Tree Survey Schedule for further information regarding trees included in this plan.





This drawing should be viewed in colour.
 See appendix 2, Tree Survey Schedule for further information regarding trees included in this plan.







No construction access or materials storage in lower portion of site.


N
This drawing should be viewed in colour.
See appendix 2 Tree Survey Schedule for further information regarding trees included in this plan.




Appendix 2 - Tree Survey Schedule

Client:	New Homes & Land Ltd				Tree Survey Schedule						
Site address:	Land at: Highfield Rd Minster										
Survey Date:	26th June 2020										
Surveyor:	O.Allpress										
Ref	Species	Est height (m)	DBH (mm)	Crown spread (m)	Est clearance (m)	Age class	Condition summary	Preliminary management action	Category grading	Root Protection Radius (m)	
G1	Common ash, <i>(Fraxinus excelsior)</i>	15	420	N E S W	Foliage	Mature	Third party tree located inside water site adjacent transmitter site.	None at time of survey	B2	5.0	
					3						
			avg est	7 Avg	Significant branch						4
H2	Mixed native	<5	280	N E S W	Foliage	Mature	Mature unmanaged hedgerows bordering various segments of site.	Remove sections indicated to facilitate development.	C2	3.4	
					1						
			avg est	3 Avg	Significant branch						2
G3	Mixed native	<6	300	N E S W	Foliage	Mature	Primarily hawthorn, low woody growth in grazing land as shade.	Remove sections indicated to facilitate development.	C2	3.6	
					2						
			max est	3 Avg	Significant branch						2
T4	Blackthorn, <i>(Prunus spinosa)</i>	6	390	N E S W	Foliage	Mature	Multi-stem blackthorn on southern boundary.	None at time of survey	C1	4.7	
					3						
			ms est	7 5 1 5	Significant branch						1
G5	Mixed native	<7	350	N E S W	Foliage	Mature	Predominantly elm and ash, all third party trees. Some screening value though individual tree quality is low.	Remove sections indicated to facilitate development.	B2	4.2	
					2						
			avg est	3 Avg	Significant branch						3
T6	Dead tree	4	420	N E S W	Foliage	Dead	Some habitat value with artificial habitat attached to remaining limbs.	Remove due to condition.	U	5.0	
					N/a						
			est	Na	Significant branch						N/a
T7	Horse chestnut, <i>(Aesculus hippocastanum)</i>	5	370	N E S W	Foliage	Semi-mature	Large basal wound significantly reduces potential for retention.	Remove to facilitate development.	C1	4.4	
					2						
				4 Avg	Significant branch						3
T8	Horse chestnut, <i>(Aesculus hippocastanum)</i>	7	410	N E S W	Foliage	Semi-mature	Mature tree set against scrub and low hedging.	Remove to facilitate development.	B1	4.9	
					2						
				5 Avg	Significant branch						3

Client:	New Homes & Land Ltd				Tree Survey Schedule						
Site address:	Land at: Highfield Rd Minster										
Survey Date:	26th June 2020										
Surveyor:	O.Allpress										
Ref	Species	Est height (m)	DBH (mm)	Crown spread (m)	Est clearance (m)	Age class	Condition summary	Preliminary management action	Category grading	Root Protection Radius (m)	
T9	Pedunculate oak, (<i>Quercus robur</i>)	5	160	N E S W	Foliage	Semi-mature	Browsing damage to lower canopy.	Remove to facilitate development.	B1	1.9	
				2 Avg							3
											Significant branch
T10	Horse chestnut, (<i>Aesculus hippocastanum</i>)	5	160	N E S W	Foliage	Semi-mature	No comment at time of survey.	Remove to facilitate development.	C1	1.9	
				3 Avg							2
											Significant branch
G11	Lawson cypress, (<i>Chamaecyparis Lawsoniana</i>)	4	120	N E S W	Foliage	Juvenile	Group of trees amongst other planted species centrally to site.	Remove to facilitate development.	C2	1.4	
				1 Avg							1
				est							Significant branch
T12	Apple, (<i>Malus spp</i>)	5	390	N E S W	Foliage	Semi-mature	Amongst undergrowth. Reduced crown vitality.	Remove to facilitate development.	C1	4.7	
				5 5 4 2							2
				est							Significant branch
T13	Leyland cypress, (<i>X Cupressocyparis Leylandii</i>)	5	400	N E S W	Foliage	Mature	Mature Leyland cypress. Some screening value.	Remove to facilitate development.	B1	4.8	
				5 Avg							2
											Significant branch
G14	Hawthorn & Blackthorn	<5	350	N E S W	Foliage	Mature	Mature unmanaged field boundary hedge. Screening value.	None at time of survey	B2	4.2	
				4 Avg							2
				avg est							Significant branch
G15	Hawthorn & Blackthorn	<5	380	N E S W	Foliage	Mature	Mature unmanaged field boundary hedge. Screening value.	None at time of survey	B2	4.6	
				4 Avg							2
				est							Significant branch
G16	Jaquontii birch, (<i>Betula utilis</i>)	<5	75	N E S W	Foliage	Juvenile	Group of planted trees centrally to site. Low screening value given position and size.	Remove to facilitate development.	C2	0.9	
				1 Avg							1
											Significant branch

Client:	New Homes & Land Ltd				Tree Survey Schedule			 Owen Allpress BSc (Hons) Arb Independent Arboricultural Consultant			
Site address:	Land at: Highfield Rd Minster										
Survey Date:	26th June 2020										
Surveyor:	O.Allpress										
Ref	Species	Est height (m)	DBH (mm)	Crown spread (m)	Est clearance (m)	Age class	Condition summary	Preliminary management action	Category grading	Root Protection Radius (m)	
G17	Oak and birch	<10	150	N E S W	Foliage	Semi-mature	Group of planted trees centrally to site. Low screening value given position and size.	Remove to facilitate development.	C2	1.8	
				2 Avg							2
				max est	Significant branch						3
T18	Eucalypt, (<i>Eucalyptus spp</i>)	<15	600	N E S W	Foliage	Mature	Mature eucalypt central to site.	Remove to facilitate development.	B1	7.2	
				7 8 6 7	1						
				3 Avg							Significant branch
T19	Horse chestnut, (<i>Aesculus hippocastanum</i>)	7	260	N E S W	Foliage	Semi-mature	Shaded by adjacent tree groups.	Remove to facilitate development.	B1	3.1	
				3 Avg							2
				3 Avg							Significant branch
G20	Sycamore, (<i>Acer pseudoplatanus</i>)	8	260	N E S W	Foliage	Mature	Ownership unclear. Screening value.	Remove to facilitate development.	B2	3.1	
				4 Avg							3
				4 Avg							Significant branch
G21	Mixed native	5	85	N E S W	Foliage	Semi-mature	Primarily hawthorn located on boundary, presumed third party, some screening value.	None at time of survey	C2	1.0	
				3 Avg							1
				avg est	Significant branch						2
T22	Eucalypt, (<i>Eucalyptus spp</i>)	4	200	N E S W	Foliage	Juvenile	Young tree, poor quality nursery stock.	Remove to facilitate development.	C1	2.4	
				1 Avg							2
				ms est	Significant branch						3
T23	Common ash, (<i>Fraxinus excelsior</i>)	5	130	N E S W	Foliage	Semi-mature	Self set tree adjacent covered animal shelter.	Remove to facilitate development.	C1	1.6	
				2 Avg							1
				2 Avg							Significant branch
T24	Common ash, (<i>Fraxinus excelsior</i>)	3	90	N E S W	Foliage	Juvenile	Self set tree adjacent covered animal shelter.	Remove to facilitate development.	C1	1.1	
				1 Avg							2
				1 Avg							Significant branch

Client:	New Homes & Land Ltd				Tree Survey Schedule						
Site address:	Land at: Highfield Rd Minster										
Survey Date:	26th June 2020										
Surveyor:	O.Allpress										
Ref	Species	Est height (m)	DBH (mm)	Crown spread (m)	Est clearance (m)	Age class	Condition summary	Preliminary management action	Category grading	Root Protection Radius (m)	
G25	Hawthorn, (<i>Crataegus monogyna</i>)	<6	180	N E S W	Foliage	Mature	Group of similar sized and aged trees. Screening value.	Remove to facilitate development.	C2	2.2	
				3 Avg							2
			max est	3							Significant branch
T26	Blackthorn, (<i>Prunus spinosa</i>)	<10	500	N E S W	Foliage	Mature	Larger tree amongst group. Screening value however possesses Ganoderma bracket fungus.	Remove to facilitate development.	C2	6.0	
				5 4 3 4							2
			ms est	3							Significant branch
T27	Sycamore, (<i>Acer pseudoplatanus</i>)	11	280	N E S W	Foliage	Mature	Asymmetric crown.	Remove to facilitate development.	C1	3.4	
				2 3 7 3							3
					4						Significant branch
T28	Blackthorn, (<i>Prunus spinosa</i>)	5	500	N E S W	Foliage	Mature	Poor structural condition.	Remove to facilitate development.	U	6.0	
				4 Avg							2
					2						Significant branch
T29	Blackthorn, (<i>Prunus spinosa</i>)	4	200	N E S W	Foliage	Semi-mature	Young tree amongst stored materials. Limited access to survey.	Remove to facilitate development.	C1	2.4	
				1 2 3 2							2
			Est	2							Significant branch



Appendix 3 – Cascade chart for tree categorisation

BS5837:2012 Table 1 – Cascade chart for tree quality assessment

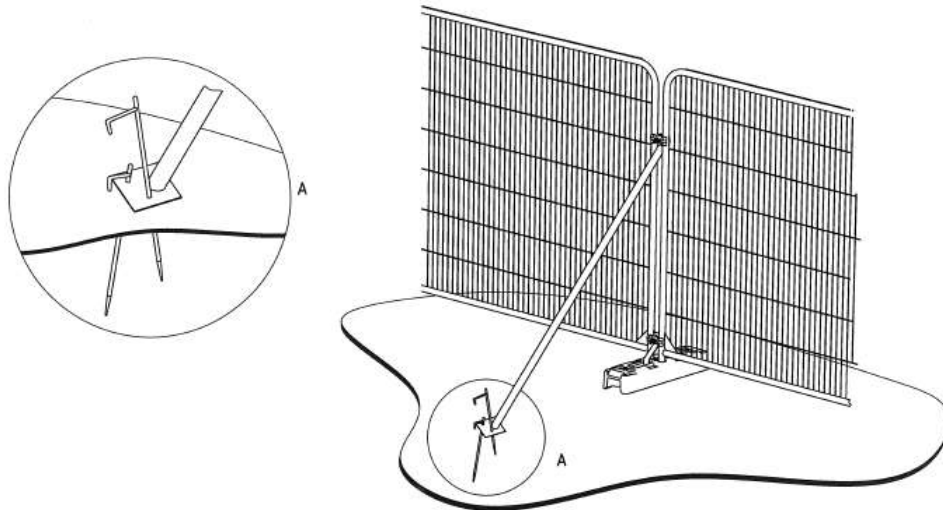
Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> • Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012] 4.5.7.</i></p>		
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
Trees to be considered for retention			
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)		
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		
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories		
	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
		Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
			Trees with no material conservation or other cultural value



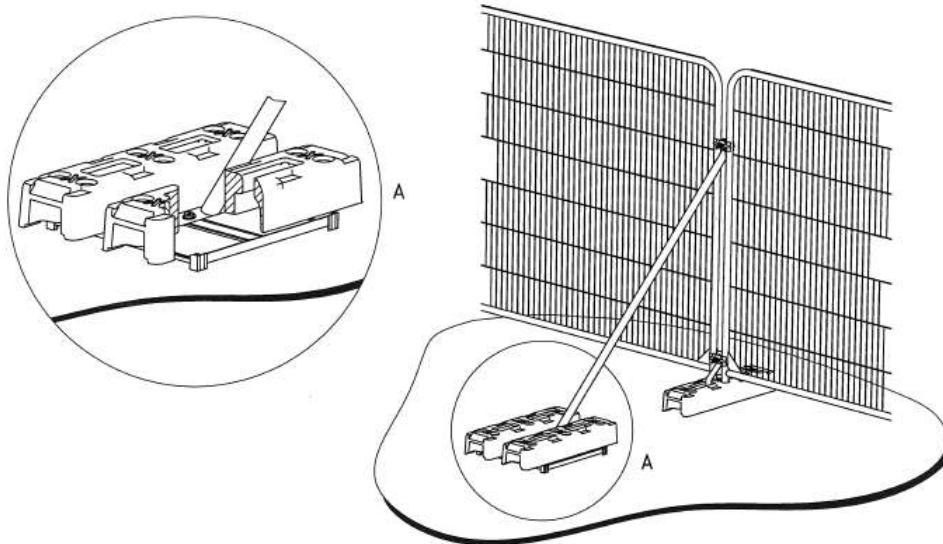
Appendix 4 – Root Protection Area Formulas

Tree type	Formula used. (Taken form BS5837: 2012)
Single Stem	$\text{RPA(m}^2\text{)} = \frac{(\text{stem diameter (mm)} @ 1.5 \text{ m} \times 12)^2 \times 3.142}{1000}$
Up to five stems	$\sqrt{(\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2}$
Trees with more than five stems	$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$

Appendix 5 – Tree Protection Fencing Specification



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray



Appendix 6 – Tree Protection Fencing Signage



TREE PROTECTION AREA

**Trees enclosed in this area are subject to planning conditions and/or tree preservation orders (TPO).
Contravention of TPOs can result in criminal prosecution**

No access beyond this point is permitted unless part of planned operations described within arboricultural method statement.

