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ARBORICULTURAL IMPLICATIONS ASSESSMENT

In accordance with BS5837:2012: Trees in Relation to Design,
Demolition and Construction - Recommendations.

Kennel Lane, Witherley

Landscape Architecture Landscape Planning Urban Regeneration & Design Arboriculture

Project:

Kennel Lane, Witherley

Client:

Cameron Homes

Job No:

25.1991

Report No:

25.1991.R1

DOCUMENT CHECKING**Author:**

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25.1991.010	Tree Constraints Plan
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1 INTRODUCTION

1.1 INSTRUCTION

- 1.1.1 The instruction is to produce a preliminary tree survey that accords to the methodologies and guidance of BS5837:2012 *Trees in Relation to design, demolition and construction: recommendations*, to inform a planning application at the Site.

1.2 BRIEF

- 1.2.1 The purpose of this report is to provide an objective assessment of the above and below ground constraints posed by the existing trees upon any development of the site.
- 1.2.2 To produce suitable tree protection measures and provide guidance on appropriate methods of working.

1.3 DOCUMENTS AND INFORMATION PROVIDED

- 1.3.1 A copy of the topographical survey and proposed site layout was provided by the client.

1.4 TREE SURVEY

- 1.4.1 The provided survey was used to identify and categorise on-site trees, evaluating those which are most suitable for retention.
- 1.4.2 Each tree was given a sequential (T) number. Each tree was recorded with the common and botanical names. Where groups or woodlands formed cohesive assemblage they were recorded as (G) Groups and (H) Hedges, with largest trees recorded to reflect RPA's and crown spreads. Where trees appear exceptional to the existing group or woodland they were recorded as individuals.
- 1.4.3 All trees were measured to assess:
- Stem diameters at 1.5m above ground level with a girthing tape to enable calculation of root protection areas; and

- Heights and crown spreads at 4 cardinal points are measured to enable crown representation on tree protection plans.

1.4.4 Each life stage for each tree was assessed using the criteria in Table 1.

Table 1 Tree Life Stages

Stage	Description
Young	Newly planted or self-set trees
Semi-mature	Large nursery stock or self-set trees in their early life stages.
Early-mature	Trees that are in their third life cycle with significant increases in size.
Mature	Trees in their second third life cycle reaching full size potential and slowing growth rates.
Late-mature	Trees in their final third their life cycle showing signs of decline.
Veteran	Trees showing signs of retrenchment and deadwood habitat irrespective of their age.

1.4.5 General observations will be recorded for physiological and structural condition of the trees, with preliminary management recommendations.

1.4.6 Each individual tree, tree group and woodland will be categorised in accordance with the criteria provided in BS5837:2012, reproduced in 0.

1.4.7 Full details of the results of the tree survey, which informs the quality and value of the trees can be found at the rear of this report.

1.5 SCOPE OF THE REPORT

1.5.1 The report aims to provide initial advice on constraints posed by trees and advice to avoid unnecessary impacts.

1.5.2 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a Tree Preservation Order or by their inclusion within Conservation Area) or not, is material consideration that is taken into account in dealing with planning applications.

- 1.5.3 The nature and level of detail of information required for the LPA to properly consider the impacts and effects of development proposals varies between stages and in relation to what is being proposed. Box 1 (below) contains an extract from BS5837:2012 which provides advice to both developers and LPA's on the level of information required at varying stages of planning and development processes. This is the minimum detail that LPA's are expected to seek.

Box 1 - Extract from BS5837:2012 – Tree Information Detail

Table B.1 Delivery of tree-related information into the planning system		
Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions)	Existing and proposed finished levels
	Tree retention/removal plan (finalized)	Tree protection plan
	Retained trees and RPAs shown on proposed layout	Arboricultural method statement – heads of terms
	Strategic hard and soft landscape design, including species and location of new tree planting	Details for all special engineering within the RPA and other relevant construction details
	Arboricultural impact assessment	
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method	Arboricultural site monitoring schedule
	Dimensioned tree protection plan	Tree and landscape management plan
	Arboricultural method statement – detailed	Post-construction remedial works
	Schedule of works to retained trees, e.g. access facilitation pruning	Landscape maintenance schedule
	Detailed hard and soft landscape design	

1.6 LIMITATION AND COPYRIGHT

- 1.6.1 The report is solely for the purpose of assessment development proposals and not to assess any risk the trees may pose to people and/or property. However, details on the structural and physiological condition of trees will be noted, and should an unacceptable risk be identified then this will be brought to the attention of the client, but the report and its contents is not a tree risk management report and should not be treated as such.
- 1.6.2 The report does not make reference to protected species (e.g. Bats, breeding birds), this being outside the scope of this report, and being covered by separate ecology studies, however, this report should be read in conjunction

with related reports provided by others.

- 1.6.3 No samples of any description were taken from the Site for laboratory analysis or other purpose.
- 1.6.4 The survey did not include soil sampling for the assessment of shrinkable soils types. Analysis of this type should be carried out by a specialist to ensure building foundations are adequate and in accordance with current National House Building Council Guidelines NHBC.
- 1.6.5 Trees are influenced by a variety of biotic and abiotic activities (e.g. construction activities, pathogens or climatic events) which can affect their biomechanical and physiological condition of trees. The author cannot take responsibility for changes in condition once the fieldwork has been completed. The report considered to be valid for 1 year from date of the fieldwork.
- 1.6.6 Trees can be protected by a Tree Preservation Order under the Town and Country Planning Act 1990 (as amended) or located within a Conservation Area Planning listed buildings and Conservation Area Act 1990 (as amended). For the purpose of this report, the Local Planning Authority was contacted to ascertain any restrictions. Where restrictions are identified it is important that no works are completed to protected trees without first gaining written consent from the LPA. Penalties for non-compliance of a TPO and/ or Conservation Area can be unlimited if tried in a County Court and up to £20,000 if tried in a Magistrates Court. **No Tree Preservation Orders are noted on site, but should be verified by client.**
- 1.6.7 It should be noted that felling of trees prior to receiving full planning permission may require a felling license from the Forestry Commission under the Forestry Act 1967. The felling of trees of more 5m³ within any three-month period requires a felling license from the Forestry Commission, unless an exemption applies.
- 1.6.8 Any management recommendations have been made in accordance with *BS3998: 2010 Tree Works – Recommendations* and industry best practice. Where required, works have been recommended in accordance with any statutory obligations on the landowners or occupiers.

- 1.6.9 Should any part of the report be altered or tampered, with in any way, after being issued to the Client then this will invalidate the entire document.

2 TREE CONSTRAINTS

- 2.1.1 Trees impose below-ground constraints represented by their Root Protection Areas (RPAs), and above ground constraints by their current and future size, i.e. height and spread and species characteristics, particularly their foliage density, branch and fruit drop, production of honey dew etc.
- 2.1.2 The RPA is calculated using the tree's diameter (at 1.5 m height) and represents the minimum area which should be protected and left undisturbed around each retained tree, during and following development.
- 2.1.3 The above ground attributes can also have a significant effect on land use and living conditions, particularly the effect of trees on sunlight. Sunlight or shade maybe desirable depending on the particular site, but unreasonable light obstruction should be avoided at the design stages.
- 2.1.4 An assessment should be made at the design stages of development for any incompatibilities between the design and tree retention, the effects on amenity value provided by existing trees, working space required during construction, infrastructure requirements for underground and or above ground apparatus and highway visibility requirements.
- 2.1.5 The morphology and distribution of tree roots is influenced by past land use or existing land use (e.g. the presence of roads, structures and underground services, topography, drainage, soil type and structure). The likely tolerance of a tree, to root disturbance or damage, will depend on factors such as species, age, structural and physiological condition, and past management. Any of these factors may result in non-uniform root growth and therefore result in a RPA represented as a polygon RPA that reflects suitable protection of the root system.
- 2.1.6 Any alterations made within the trees' rooting environment that causes damage often leads to visible progressive abnormalities in the crown of the trees affected, including reduced vigour, or increased deadwood production. Trees may decline acutely or become hazardous within a short period of time.
- 2.1.7 Tree protection fencing should be installed around the RPA of retained trees

or extended to the edge of the crown spread whichever is greatest to ensure no alterations to soil levels or damage occurs to their roots or overhanging branches are damaged by construction activity.

- 2.1.8 No traditional construction methods should be used within the RPA of retained trees, unless overriding circumstances dictate. In such circumstances, appropriate construction methods and materials should be used in accordance with a specification from appropriately qualified and competent person, to prevent damage and ensure tree retention.
- 2.1.9 Where aerial parts of the tree crowns extend beyond the edge of the RPA, it may be appropriate to consider pruning for construction purposes and/or to abate future nuisance, in accordance with a project arboriculturist and the local planning authority.

3 IMPACT OF THE PROPOSED DEVELOPMENT

3.1 The proposed development has been carefully designed to ensure a successful juxtaposition between the suitable existing mature trees and the proposed development.

3.2 The construction of the proposed development will involve the removal of the following trees.

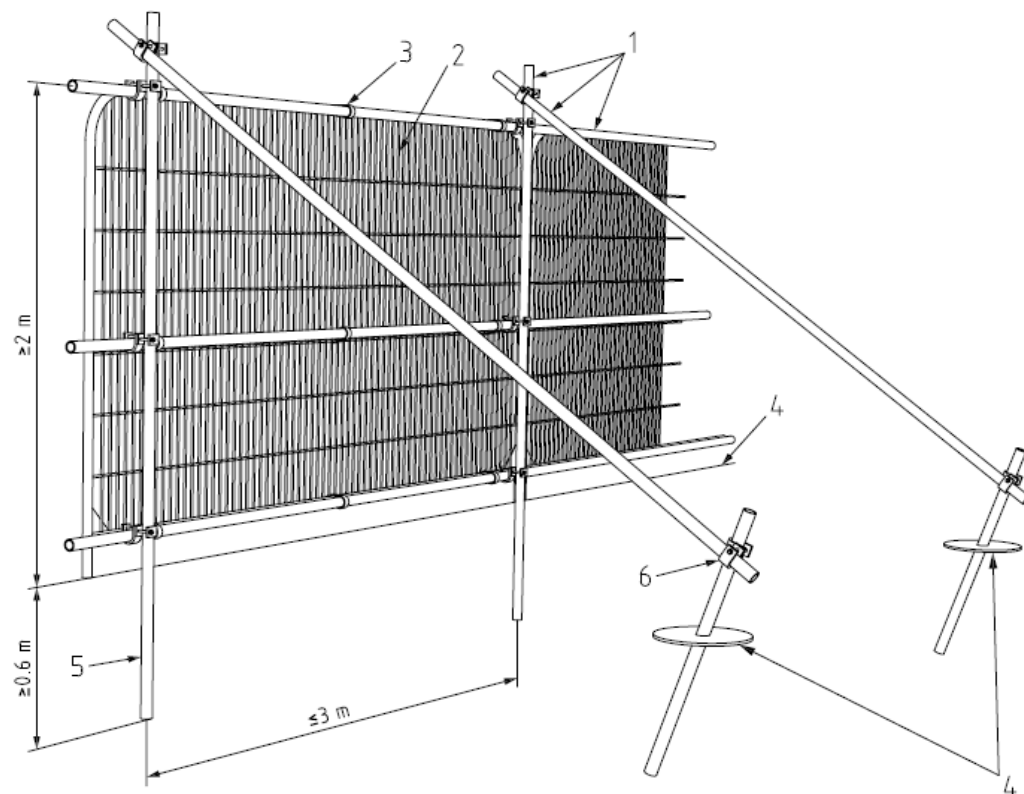
BS 5837 Cat	A	B	C	U
Tree to be removed	none	none	T3, part of H15	none

3.3 The proposed development will fall within the root protection areas of the following retained trees and hedges.

BS 5837 Cat	A	B	C	U
Tree affected	none	none	none	none

4 TREE PROTECTION

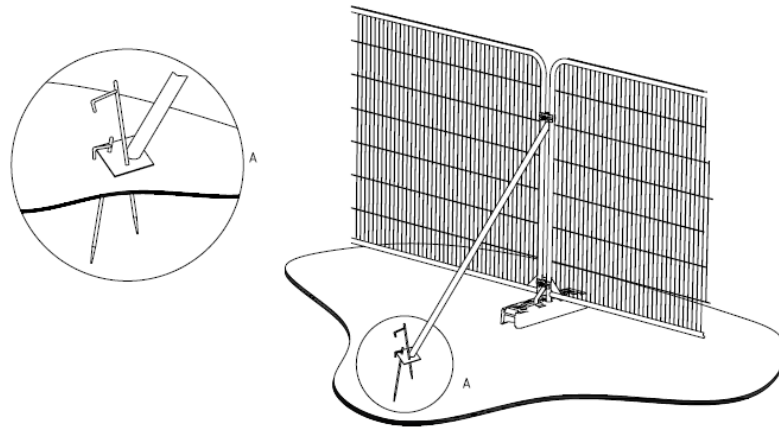
- 4.1 All trees that are to be retained on or in close proximity to the site will be protected by the use of stout fencing erected at specified distances from the base of the trees. This fencing will be constructed with weld mesh on a framework of scaffolding, or similarly sturdy material (Herras type fencing), driven into the ground to a suitable depth to ensure its stability all in line with BS5837:2012 figure 2 (shown below)



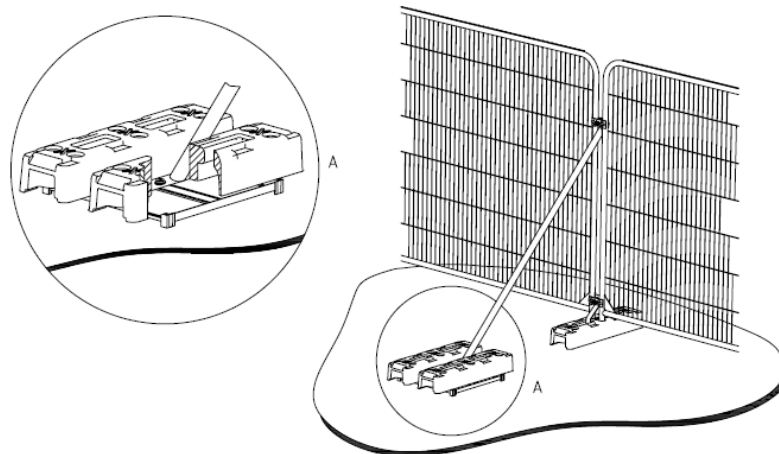
Key

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

Alternatively, the herras fencing may be supported as shown below, and in line with BS5837 :2012 figure 3



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

- 4.2 All tree protection fencing will be erected prior to the commencement of the development so that trees are protected from the outset. This fencing will be regarded as inviolate. Once erected the fencing will remain in situ and will not be removed or altered without the prior consent of the Local Planning Authority Arboricultural Officer in consultation with the named arboriculturalist.
- 4.3 The protective fencing will be erected on the line shown on the Tree Protection Plan drawing. The protective fencing to T1 shall be set at the outer limits of the root protection area as shown on the Tree Protection Plan until final installation of the new parking bays is undertaken, when it shall be moved to the secondary position.

5 ON SITE STORAGE OF SPOIL AND BUILDING MATERIALS

- 5.1 Prior to and during construction works on site no spoil or construction materials will be stored within the crown-spread of any tree on, or adjacent to the site, even if the proposed development is to be within the crown-spread. This is to reduce to a minimum the compaction of tree roots. Any encroachment within this protected area will only be with the prior agreement of the Local Planning Authority Arboricultural Officer.

6 LOCATION OF SITE OFFICE

- 6.1 The location of the site office will not be within the crown spread of the trees on or adjacent to the site. Any re-siting of the office through the various stages of development will be agreed prior to the re-siting with the Local Planning Authority Arboricultural Officer.

7 PROGRAMME OF WORKS

- 7.1 All tree surgery works and felling works approved by the Local Planning Authority Arboricultural Officer will be carried out prior to any other site works. Once completed, the proposed protective fencing will be erected along the lines indicated above.
- 7.2 This work will be carried out prior to commencement of any construction or demolition works on the site.
- 7.3 During the construction works on site the protective fencing will be maintained and every effort will be made to prevent unnecessary damage to the trees. The Arboricultural Officer will be notified immediately of any unforeseen damage. The necessary remedial tree surgery will be carried out at the earliest opportunity to the approval of the Arboricultural Officer. The site should be inspected on a regular basis by a competent and qualified arboriculturalist.
- 7.4 On completion of the development works on site it would be advisable to carry out a further tree survey to identify any remedial tree surgery necessary

as a result of the development works, and suggest details for future management of trees.

8 REMEDIAL TREE SURGERY

- 8.1 Hedge H17 will required pruning to boundary to facilitate development.
- 8.2 Any proposed tree surgery works identified and agreed with the Local Planning Authority will be carried out in accordance with BS3998:2010 (Tree Work - Recommendations). A competent arboricultural contractor will carry out the work. Any alterations to the proposed schedule of works will be agreed with the Arboricultural Officer prior to the commencement of the works.
- 8.3 Accidental damage to trees during the construction phase of the development will be noted and reported as per paragraph 11.2 of this document.

9 LEVELS

- 9.1 Should levels need to be changed in areas adjacent to the trees or within the minimum distance recommended, then appropriate measures will be taken to minimise the detrimental effects to the tree(s) in question. Where necessary, a granular material will be used which will not inhibit gaseous diffusion e.g. no-fines gravel or cobbles, and all hard surfaces will be of suitable specification to allow such gaseous diffusion, such as brick paviors.

10 SERVICES

- 10.1 It is proposed that all service runs will be placed outside the crown spread of the trees on or adjacent to the site. Where it is not possible to achieve this, the section of service run, which passes within the tree protection area around a retained tree, will be hand dug in accordance with 'broken trenches' (NJUG 4). This will ensure that tree roots are not damaged during the installation of the service. All root pruning will be agreed before hand with the named arboriculturalist in consultation with the Local Planning Authority Arboricultural

Officer. All root pruning will be in accordance with BS3998:2010. All routes for overhead services will aim to avoid the trees. Where this is unavoidable any tree work will be agreed prior to commencement with the Arboricultural Officer.

- 10.2 All service runs to be agreed with the Local Planning Authority prior to the commencement of works.

11.0 CONSTRUCTION WITHIN THE TREE PROTECTION AREA

- 11.1 There are no trees affected by the proposals.

12.0 REPORTING PROCEDURE

- 12.1 For the period of the development a qualified arboriculturalist should be named as the contact so that arboricultural issues that arise during the period of the development can be dealt with effectively.
- 12.2 When an inspection occurs, planned or otherwise, a report will be written and provided to the client. If appropriate the report will be copied to the Local authority Arboricultural Officer.
- 12.3 The site and associated development will be monitored/inspected regularly by the named arboriculturalist to ensure that the arboricultural aspects of the planning permission are enforced and to deal with and advise upon any problems that may arise during the development process. Should any problems arise during the development the site manager will contact the named arboriculturalist. The Local Planning Authority will be notified of any arboricultural issues that arise and appropriate action taken with the prior permission of the client.

13.0 TREE PROTECTION PLAN

- 13.1 The Tree Protection Plan drawing indicates both a.) the trees marked for retention and identified with a continuous outline, and b.) the trees marked for removal and identified by a dashed outline.
- 13.2 The drawing also indicates the location for the erection of the tree protection barriers, based upon the calculations of Root Protection Areas (RPA) as part of the Tree Constraints Plan. This drawing shows the actual position of the tree protection barriers.

REFERENCES:

BS5837:2012. Trees In Relation To Design, Demolition, and Construction – Recommendations. British Standards Institute. London, UK.

BS 3998:2010. Tree work. Recommendations. British Standards Institute. London, UK

ABBREVIATIONS:

For the avoidance of confusion, abbreviations used have the meanings given below:

AGL	Above Ground Level	NPPG	National Planning Policy Guidance
AIA	Arboricultural Implications Assessment	OS	Ordnance Survey
AMS	Arboricultural Method Statement	POS	Public Open Space
AOD	Above Ordnance Datum	TCP	Tree Constraints Plan
c.	Circa	TPO	Tree Preservation Order
CA	Conservation Area	TPP	Tree Protection Plan
DEM	Digital Elevation Model	VTA	Visual Tree Assessment
DSM	Digital Surface Model		
DTM	Digital Terrain Model		
GEA	Gross External Area		
GIS	Geographical Information System		
LPA	Local Planning Authority		
NGR	National Grid Reference		
NPPF	National Planning Policy Framework		

GLOSSARY:

For the avoidance of confusion, the terms used in this report follow the definitions given below:

Abscission	The shedding of a leaf or other short lived part of a woody plant.
Abiotic	Pertaining to non-living agents e.g. environmental factors.
Absorptive Roots	Non-woody short lived roots, generally having a diameter less than one millimetre, the primary function of which is the uptake of water and nutrients.
Access facilitation pruning	One off pruning operation to provide access for development operation. Pruning that will not be detrimental to trees health or amenity.
Arboricultural Method Statement	A methodology for the implementation of development where encroachment within the RPA has the potential to cause damage or loss of retained trees.
Arboriculturist	Someone who through relevant training and experience has gained knowledge in the expertise of trees.
Adaptive Growth	The process by where wood formation rates increasing in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium.
Adaptive Roots	The adaptation of existing roots; or a production of new roots in response to damage or decay.
Adventitious buds, roots, shoots	Which grow in other than primary apical control.
Anchorage	The process in which a tree uses its roots system to support itself within the soil structure.
Arisings	Parts of the tree that has been removed for disposal, branches, leaves, roots etc.
Bacteria	Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms
Bark	A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the phellem.
Basidiomycotina (Basidiomycetes).	One of the major taxonomic groups of fungi; their spores are borne on microscopic peg-like structures (basidia), which in many types are in turn borne on or within conspicuous fruit bodies, such as brackets or toadstools. Most of the principal decay fungi in standing trees are basidiomycetes.
Boiling	A term sometimes used to describe pollard heads.
Bottle-butt	A broadening of the stem base and buttresses of a tree, in excess of normal and sometimes denoting a growth response to weakening in that region, especially due to decay involving selective delignification.
Bracing	The use of rods or cables to restrain the movement between parts of a tree.
Branch (Primary)	A first order branch arising from a stem
Branch	A second order branch, subordinate to a primary branch or stem and bearing

(Lateral)	sub-lateral branches.
Branch (Sub-lateral)	A third order branch, subordinate to a lateral or primary branch, or stem and usually bearing only twigs.
Branch bark ridge	The raised arc of bark tissues that forms within the acute angle between a branch and its parent stem.
Branch collar	A visible swelling formed at the base of a branch whose diameter growth has been disproportionately slow compared to that of the parent stem; a term sometimes applied also to the pattern of growth of the cells of the parent stem around the branch base.
Brown-rot	A type of wood decay in which cellulose is degraded, while lignin is only modified
Buckling	An irreversible deformation of a structure subjected to a bending load.
Buttress zone	The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of the junctions
Canker	Area of dead cambium killed by overlying pathogenic tissues.
Cavity	A hole in the woody structure of the tree; often caused through decay.
Cleaning out	The removal of dead, diseased crossing branches, damaged branches and alien structures.
Competent Person	Person with training and experience in accordance with the proposed matter being addressed, having an understanding of a particular matter being approached.
Condition	An indication of the physiological vitality of a tree, but not the stability of a tree.
Construction	A site based operation that has the potential to affect retained trees.
Construction Exclusion Zone	An area based on the RPA from which construction activity is prohibited.
Coppicing	Removal of all aerial parts of the tree leaving a stump for regeneration of new shoot.
Crown/canopy	The parts of the tree that supports the leaves.
Crown lifting	The removal of limbs and small branches to a specified height above ground level.
Crown thinning	The removal of a proportion of secondary branch growth throughout the crown to produce an even density well balanced crown structure.
Crown reduction	Removal in the height to a specified description to maintain a flowing crown structure.
Deadwood	Non – functional branches which no longer support natural growing conditions of the tree, but may be beneficial for the support of habitats.
Decurrent Growth	Tree growth habit with a rounded or spreading growth in the crown (see excurrent).
Defect	Any area of the tree that longer has an optimal mechanical uniformity of stress, making the tree unsuitable for its location.
Dieback	Death of woody parts of the tree starting at distal ends of the tree.
Disease	Damage occurring to living organisms as a result of pathogenic micro-organisms.
Distal	Furthest distance away from the main body of the tree.
Dysfunction	In woody tissues, the loss of physiological function, especially water conduction,

	in sapwood.
Epicormical growth	Growth from dormant or adventitious buds, not developing from the first shoot.
Excurrent Growth	Tree growth habit with a pyramid shaped crown and dominant central leader (see decurrent).
Girdling roots	A circling root which constricts the stem or roots, with the potential to cause death and the restriction of flow within the phloem.
Heartwood	Dysfunctional xylem which no longer has conductive properties, but which has become an integral structural part of the tree.
Heave	The swelling of shrinkable clay soils, often when vegetation has been removed allowing soil rehydration to develop, with the potential to affect supported structures, e.g. walls.
Included bark/acute forks	Face to face contact of bark usually at fork unions, or branch unions.
Lopping/Toppling	A term used to describe the removal of large sized branches.

Monolith	Description of resultant standing dead/decaying tree upon reduction in height and spread, undertaken to make tree safe and provide habitat for species reliant on decaying wood.
Mulch	Material lay down over the rooting area of trees to suppress weed competition, increase moisture retention and increase some cases organic material and nutrients.
Pathogen	A micro-organism that causes disease within another organism.
Phytotoxic	Toxic to plants
Pollarding	The removal of the tree canopy to produce knuckles where new growth develops and is removed cyclically usually performed on young trees.
Pruning	Selective removal of parts of the tree to achieve a desired outcome.
Root protection area	An area around a tree identified by multiplying the stem diameter at 1.5 by 12 to produce a radial area or rooting volume around a tree to be protected. BS 5837 2012.
Service	Any above and below ground structure or apparatus for utility provision.
Size of part	Relating to risk assessments, identifying the size of the hazard, or parts of a tree which may cause harm if failure occurs.
Stem(s)	The main structure from the ground up supporting the crown
Stress	In plants, the physiological depletion as a result of environmental influences.
Structure	A manufactured object, such as building, roads, path, wall or excavated structures.
Structural roots	The primary larger diameter roots which hold and support the aerial parts of the tree.
Subsidence	The shrinkage of soil through the absorption of water via vegetation and the sinking effects on surrounding architectural structures.
Targets	In risk assessment, persons or property at risk of harm as a result of a hazard (falling tree, branch etc.).
Tree Protection Plan	A scaled drawing informed by descriptive text where necessary, based upon finalised site proposals, showing trees for retention and illustrating the tree and landscape protection measures.
Veteran Tree	Tree that, by recognised criteria, shows features of biological, cultural or aesthetic characteristics of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.
Windthrow	The blowing over a tree at its roots.

TREE CATEGORISATION TABLE (EXTRACT FROM 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	- 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 <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>		
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
Trees to be considered for retention			
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

TREE SCHEDULE

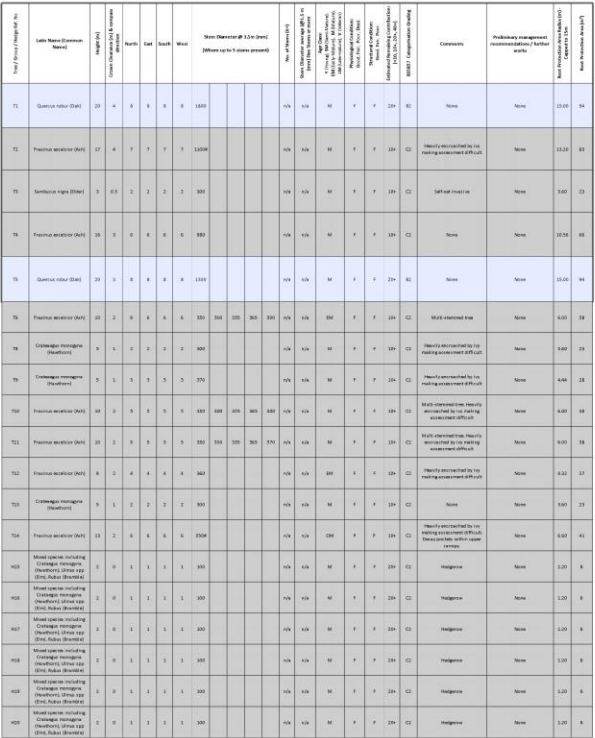
Tree / Group / Hedge Ref. No.	Latin Name (Common Name)	Height (m)	Crown Clearance (m) & compass direction	North	East	South	West	Stem Diameter @ 1.5m (mm) (Where up to 5 stems present)					No. of Stems (6+)	Stem Diameter average (@1.5 m (mm) Five Stems or more	Age Class: Y (Young), SM (Semi-Mature), EM (Early-Mature), M (Mature), LM (Late-mature), V (Veteran)	Physiological Condition: Good, Fair, Poor, Dead.	Structural Condition: Good, Fair, Poor.	Estimated Remaining Contribution: (<10, 10+, 20+, 40+)	BS5837 Categorisation Grading	Comments	Preliminary management recommendations / further works	Root Protection Area Radius (m) - Capped to 15m	Root Protection Area (m²)
T1	Quercus robur (Oak)	20	4	8	8	8	8	1800					n/a	n/a	M	F	F	20+	B2	None	None	15.00	94
T2	Fraxinus excelsior (Ash)	17	4	7	7	7	7	1100#					n/a	n/a	M	F	F	10+	C2	Heavily encroached by ivy making assessment difficult	None	13.20	83
T3	Sambucus nigra (Elder)	3	0.5	2	2	2	2	300					n/a	n/a	M	F	F	10+	C2	Self-set invasive	None	3.60	23
T4	Fraxinus excelsior (Ash)	16	3	6	6	6	6	880					n/a	n/a	M	F	F	10+	C2	None	None	10.56	66
T5	Quercus robur (Oak)	20	3	8	8	8	8	1300					n/a	n/a	M	F	F	20+	B2	None	None	15.00	94
T6	Fraxinus excelsior (Ash)	10	2	6	6	6	6	350	300	355	365	300	n/a	n/a	EM	F	F	10+	C2	Multi-stemmed tree	None	6.00	38
T8	Crateaegus monogyna (Hawthorn)	5	1	2	2	2	2	300					n/a	n/a	M	F	F	10+	C2	Heavily encroached by ivy making assessment difficult	None	3.60	23

T9	Crateaegus monogyna (Hawthorn)	5	1	3	3	3	3	370					n/a	n/a	M	F	F	10+	C2	Heavily encroached by ivy making assessment difficult	None	4.44	28
T10	Fraxinus excelsior (Ash)	10	2	5	5	5	5	350	300	355	365	300	n/a	n/a	M	F	F	10+	C2	Multi-stemmed tree. Heavily encroached by ivy making assessment difficult	None	6.00	38
T11	Fraxinus excelsior (Ash)	10	2	5	5	5	5	350	330	355	365	370	n/a	n/a	M	F	F	10+	C2	Multi-stemmed tree. Heavily encroached by ivy making assessment difficult	None	6.00	38
T12	Fraxinus excelsior (Ash)	8	2	4	4	4	4	360					n/a	n/a	EM	F	F	10+	C2	Heavily encroached by ivy making assessment difficult	None	4.32	27
T13	Crateaegus monogyna (Hawthorn)	5	1	2	2	2	2	300					n/a	n/a	M	F	F	10+	C2	None	None	3.60	23
T14	Fraxinus excelsior (Ash)	13	2	6	6	6	6	550#					n/a	n/a	OM	P	P	10+	C2	Heavily encroached by ivy making assessment difficult. Decay pockets within upper canopy.	None	6.60	41
H15	Mixed species including Crataegus monogyna (Hawthorn), Ulmus spp (Elm), Rubus (Bramble)	2	0	1	1	1	1	100					n/a	n/a	M	F	F	20+	C2	Hedgerow	None	1.20	8
H16	Mixed species including Crataegus monogyna (Hawthorn), Ulmus spp (Elm), Rubus (Bramble)	2	0	1	1	1	1	100					n/a	n/a	M	F	F	20+	C2	Hedgerow	None	1.20	8
H17	Mixed species including Crataegus monogyna (Hawthorn), Ulmus spp (Elm), Rubus (Bramble)	2	0	1	1	1	1	100					n/a	n/a	M	F	F	20+	C2	Hedgerow	None	1.20	8
H18	Mixed species including Crataegus monogyna (Hawthorn), Ulmus spp (Elm), Rubus (Bramble)	2	0	1	1	1	1	100					n/a	n/a	M	F	F	20+	C2	Hedgerow	None	1.20	8
H19	Mixed species including Crataegus monogyna (Hawthorn), Ulmus spp (Elm), Rubus (Bramble)	2	0	1	1	1	1	100					n/a	n/a	M	F	F	20+	C2	Hedgerow	None	1.20	8

H20	Mixed species including Crataegus monogyna (Hawthorn), Ulmus spp (Elm), Rubus (Bramble)	2	0	1	1	1	1	100					n/a	n/a	M	F	F	20+	C2	Hedgerow	None	1.20	8
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DRAWINGS

ISL Associates
Landscape Architects

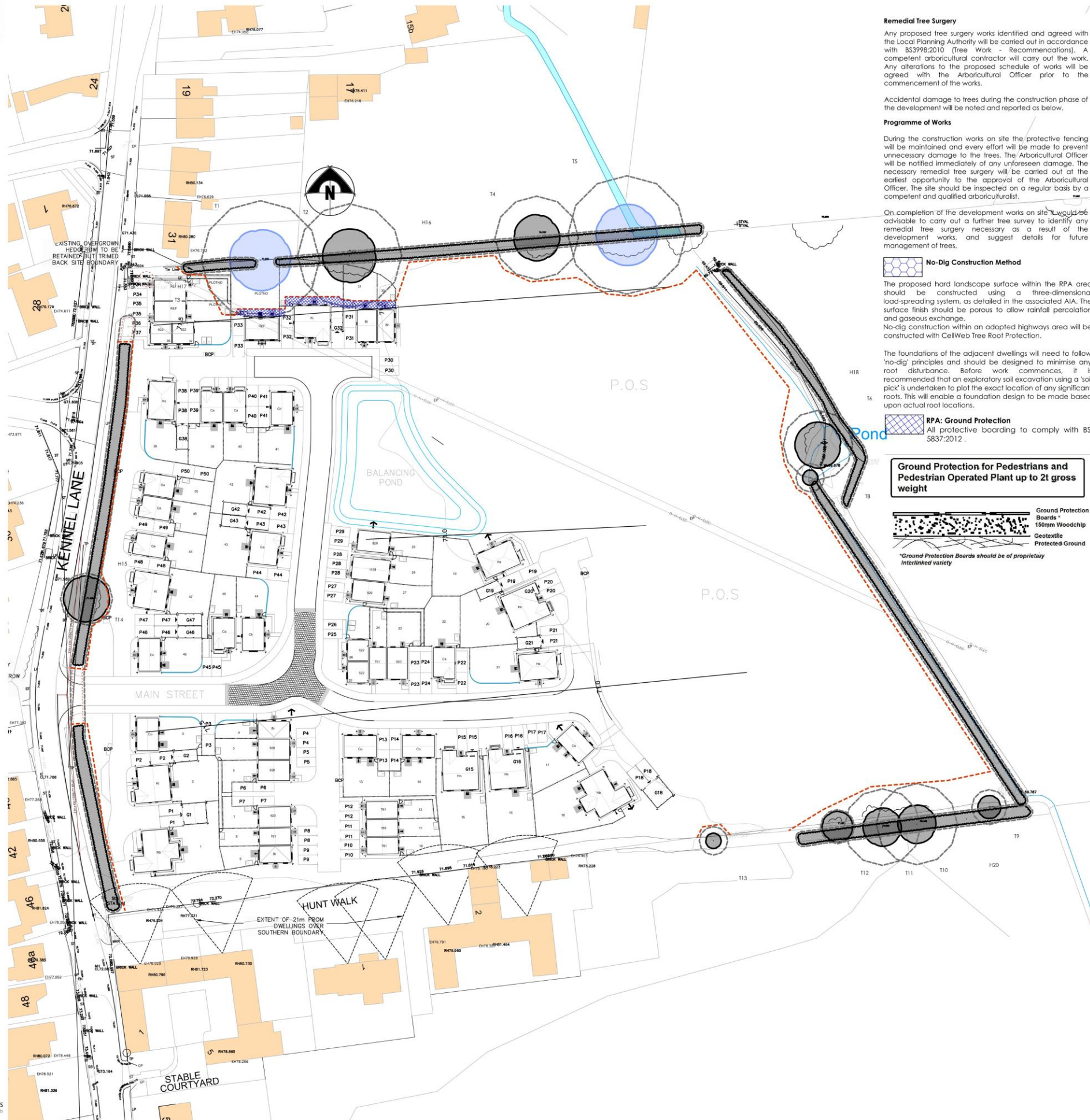


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ISL Associates
Landscape Architects

Kennel Lane, Witherley | Tree Protection Plan



Remedial Tree Surgery

Any proposed tree surgery works identified and agreed with the Local Planning Authority will be carried out in accordance with BS3998:2010 (Tree Work - Recommendations). A competent arboricultural contractor will carry out the work. Any alterations to the proposed schedule of works will be agreed with the Arboricultural Officer prior to the commencement of the works.

Accidental damage to trees during the construction phase of the development will be noted and reported as below.

Programme of Works

During the construction works on site the protective fencing will be maintained and every effort will be made to prevent unnecessary damage to the trees. The Arboricultural Officer will be notified immediately of any unforeseen damage. The necessary remedial tree surgery will be carried out at the earliest opportunity to the approval of the Arboricultural Officer. The site should be inspected on a regular basis by a competent and qualified arboriculturalist.

On completion of the development works on site it would be advisable to carry out a further tree survey to identify any remedial tree surgery necessary as a result of the development works, and suggest details for future management of trees.

No-Dig Construction Method

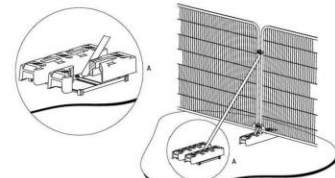
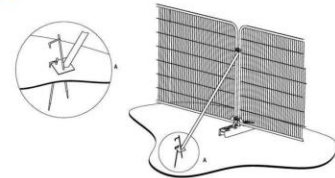
The proposed hard landscape surface within the RPA area should be constructed using a three-dimensional load-spreading system, as detailed in the associated AIA. The surface finish should be porous to allow rainfall percolation and gaseous exchange. No-dig construction within an adopted highways area will be constructed with CellWeb Tree Root Protection.

The foundations of the adjacent dwellings will need to follow 'no-dig' principles and should be designed to minimise any root disturbance. Before work commences, it is recommended that an exploratory soil excavation using a 'soil pick' is undertaken to plot the exact location of any significant roots. This will enable a foundation design to be made based upon actual root locations.

RPA: Ground Protection
All protective boarding to comply with BS 5837:2012.

Ground Protection for Pedestrians and Pedestrian Operated Plant up to 2t gross weight

Ground Protection Boards
150mm Woodchip
Geotextile
Protective Ground
*Ground Protection Boards should be of proprietary interlinked variety



All tree protection must be in place prior to any site activities. It is recommended that this fencing is installed at the time site hoarding is erected. To be effective Tree Protection must remain in place for the duration of the development. The warning signs (as detailed below) should be fixed at 6m intervals to raise awareness of the fencing and its desired function.



IF YOU REQUIRE ACCESS INTO THIS AREA PLEASE CONTACT:
Name: _____
Tel: _____

This fencing will be regarded as inviolate. Once erected the fencing will remain in situ and will not be removed or altered without the prior consent of the Local Planning Authority Arboricultural Officer in consultation with the named arboriculturalist. The RPA protective fencing will be monitored throughout the construction programme until it is removed and periodic inspections may take place to ensure compliance. Once the protective fencing is erected, all weather notices should be erected on the barrier fencing with the words 'Construction Exclusion Zone - Keep Out'. Materials that will contaminate soil such as concrete and mortar mixings, diesel oil & vehicle washings should not be discharged within 10 m of any tree stem. No leaching from any construction materials and activities shall be permitted which could potentially influence tree root zones and soil pH values. No fires will be permitted on this site. No notice boards, telephone cables or other services shall be attached to any part of the trees.

Services

It is proposed that all service runs will be placed outside the crown spread of the trees on or adjacent to the site. Where it is not possible to achieve this, the section of service run, which passes within the tree protection area around a retained tree, will be hand dug in accordance with 'broken trenches' (NUG 4). This will ensure that tree roots are not damaged during the installation of the service. All root pruning will be agreed before hand with the named arboriculturalist in consultation with the Local Planning Authority Arboricultural Officer. All root pruning will be in accordance with BS3998:2010. All routes for overhead services will aim to avoid the trees. Where this is unavoidable any tree work will be agreed prior to commencement with the Arboricultural Officer.

On Site Storage of Spoil and Building Materials

Prior to and during construction works on site no spoil or construction materials will be stored within the crown-spread of any tree on, or adjacent to the site, even if the proposed development is to be within the crown-spread. This is to reduce to a minimum the compaction of tree roots. Any encroachment within this protected area will only be with the prior agreement of the Local Planning Authority Arboricultural Officer.

Location of Site Office

The location of the site office will not be within the crown spread of the trees on or adjacent to the site. Any re-siting of the office through the various stages of development will be agreed prior to the re-siting with the Local Planning Authority Arboricultural Officer.

Levels

Should levels need to be changed in areas adjacent to the trees or within the minimum distance recommended, then appropriate measures will be taken to minimise the detrimental effects to the tree(s) in question. Where necessary, a granular material will be used which will not inhibit gaseous diffusion e.g. no-fines gravel or cobbles, and all hard surfaces will be of suitable specification to allow such gaseous diffusion, such as brick paviors.

Where a minor level change is required to hide a ground beam or edge of built up surface where no dig principles have been used in order to avoid root loss, the extent of level increase will be shown as a section on the appropriate engineering drawing. In all cases a gentle taper will be used so that the change in level runs out before it reaches the tree affected.

If excavations have to be so close to the tree(s) that roots greater than 25mm diameter are likely to be encountered, particular care will be taken to avoid damage. Excavation in these areas will be undertaken by hand, avoiding any damage to the bark. The roots will be surrounded with sharp sand prior to the replacement of any soil or other material in the vicinity.

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Legend

Plot Boundary



Existing Trees



Schedule of Tree Categories

Category A

Those of high quality & value in such a condition as to be able to make a substantial contribution (min 40yrs)



Category B

Those of moderate quality & value; in such a condition as to be able to make a significant contribution (min 20yrs)



Category C

Those of low quality & value; currently in adequate condition, to remain until new planting established (min 10yrs), or young trees currently with a stem Ø below 150mm.



Category U

Those in such a condition that any existing value would be lost within 10years, and which should in the current context be removed for reasons of sound arboricultural management.



Root Protection Areas.

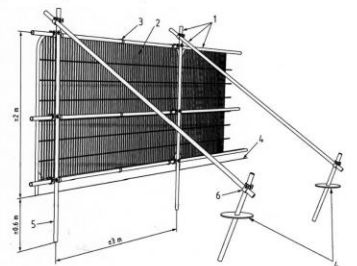


Trees to be removed



Protective Fencing

This fencing will be constructed with weld mesh, or similarly sturdy material (Hercas type fencing), driven into the ground to a suitable depth to ensure its stability all in line with BS5837:2012 figures 2 or 3 (shown below)



- Key
- Standard scaffold poles
 - Heavy gauge 2 in self galvanised tube and welded mesh infill panels
 - Panel secured to uprights and cross-members with wire ties
 - Ground level
 - Uprights driven into the ground until secure (minimum depth 0.6 m)
 - Standard scaffold clamps

Revisions	Dwn.	Date

Scale: 1:500 @ A1



Project
Kennel Lane, Witherley

Drawing
Tree Protection Plan

Status
For Planning, Tender & Construction

Date

19.01.2026

Drawn No.

25.1991.020

Revision

-

Drawn

cjn

Checked

cjn

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