TPS

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Arboricultural Impact Assessment
and
Method Statements

For

Land at Selbourne, Clacton Road, Weeley, Essex

Date	1st May 2023
Client	Adam Edwards Architects
Report by	Mr James Choat BSc, M Arbor A
Site	Selbourne
Reference No.	TPSQU0050
Issue No	2
Revisions	1, Revised driveway layout to allow retention of T3 and T5.

Arboricultural Association
Professional Member
PR00530

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1. Summary

1.1.1 Tree Planning Solutions received instruction from Adam Edwards Architects to complete a suitable arboricultural site survey and produce this subsequent arboricultural impact assessment (AIA) for an area of land at Selbourne, Clacton Road, Weeley, Essex.

1.1.2 Trees are a material consideration during the planning application process and require specialist input at the design stage to ensure the success for the end use of the proposed development whilst retaining the best tree specimens. Generally, local authorities provide local plan policies for planning applicants with regards to the suitable retention and protection criteria for trees during the application process and subsequent construction phase, and the level of detail that will be required to determine the application - details can be found on the local authority web site. Central government provide 'The National Planning Policy Framework' (NPPF 2021), which provides specific details of application acceptability; paragraphs 131 and 179 specifically relates to tree retention, biodiversity, habitat including trees and woodlands. Consultants providing arboricultural impact assessment (AIA) apply British Standard 5837 2012 criteria to demonstrate the suitable retention, design and protection of trees during the application / design process. The completed assessment forms part of the application detail and will aid the Planning Authorities decision with regard to the impact of the proposed development on the existing tree stock and local landscape character.

1.1.3 The survey and this report are provided in support of a planning application for the construction of an outbuilding / garage, extension to the dwelling and new driveway.

1.1.4 The site was surveyed on the 27th April 2023, the weather was dry, sunny with a light wind, conditions for surveying trees were good. 9 individual trees and 4 tree groups were surveyed as part of the assessment for trees that could be affected either directly or indirectly by the construction of the proposed development.

1.1.5 The report provides the following information and data in accordance with the criteria provided within BS 5837 2012 '*Trees in relation to design, demolition and construction Recommendations'*

- Tree survey and schedule
- Tree constraints data and plan
- Arboricultural Impact Assessment
- Arboricultural Method Statement and Tree Protection Plan

1.1.6 This report pays particular reference to:

▪ British Standard 5837 2012	Trees in relation to design, demolition and construction Recommendations
▪ British Standard 3998 2010	Recommendations for tree work
▪ NHBC CH 4.2	Building near trees
▪ NJUG 4	National Joint Utilities Group 'Working Near Trees'
▪ NPPF 2021	National Planning Policy Framework

1.2 Statutory protection

1.2.1 It is not known at the time of preparing this report whether the site is subject to a tree preservation order or situated within a conservation area . The hedgerows at the site are not subject to the hedgerow regulations as they are not situated on land used / registered for agriculture, keeping of livestock or horses, common land or land designated as a site of special scientific interest (SSSI), special are of protection (SPA) or special area of conservation (SAC). It is recommended the applicant obtain written consent from Tendring District Council and where applicable the Forestry Commission, before carrying out recommendations contained within this report. Furthermore, no works should be carried out to any 3rd party tree(s) without first obtaining consent from the owner(s) of the tree(s).

1.2.2 Multi agency nature on the map GIS data (MAGIC) was checked 29/04/23, specifically data sets for land designations and habitats (woodlands). The site is subject to site of special scientific interest (SSSI) impact zones – Weeley Hall Wood SSSI and Riddles Wood SSSI

1.3 Limitations

1.3.1 The applicant has supplied a plan of the existing and proposed (desired) site, no further information has been provided.

The following plans have been provided with the instruction for this report:

- Existing layout drawing provided by Adam Edwards Architects
- Proposed layout/concept drawing provided by Adam Edwards Architects

1.3.2 This survey is for the purpose of determining the impact of the development upon existing trees; it is not a detailed tree condition survey and should not be used as such. All trees have been assessed from ground level; no aerial or below ground parts have been inspected in detail.

1.3.3 The survey remains valid for 12 months. If during 12 months following the tree survey adverse weather conditions have occurred, or the site environment changed in any form, it is recommended the trees be reassessed.

1.3.4 The content of this report remains the property of Tree Planning Solutions unless otherwise stated. This report is not to be copied without written consent from Tree Planning Solutions.

1.3.5 The consultant is a qualified arboriculturist, occasionally opinions and views are provided regarding buildings and structures, the consultant is not a qualified buildings surveyor or structural engineer and therefore all opinions and views should be supported by a qualified structural/building engineer.

1.4 Qualifications

1.4.1 The consultant has been working within the Arboricultural industry for 24 years as a tree surgeon, tree officer and consultant. Knowledge and experience are regularly updated by attending industry related seminars and courses. Continued professional development is

verified by professional membership to the Arboricultural Association (membership No. PR00530), CPD is updated on-line, a record can be provided upon request.

1.4.2 The consultant holds a Bachelor of Science (BSc) degree in Rural Resource Development, a Higher National Diploma (HND) in Rural Resource Management, the Lantra Professional Tree Inspection Award, the RFS Level 2 Certificate in Arboriculture, level 3 certificate in Ecology and is a registered user of Quantified Tree Risk Assessment (QTRA).

2.1 The site

2.2 Site description

2.2.1 The site is located south of the village of Weeley and accessed from Clacton Road via a crossover. The site is situated within an urbanised position with a good number of varying aged and sized tree features within the immediate vicinity. The trees subject of this report are situated to and beyond the boundaries of the site with occasional internal trees. The application site contains a detached dwelling and hard stand access. The application site consists of the following habitat / green features – improved grass, ruderals, amenity trees / hedges and bare soil.

2.3 Topographical survey

2.3.1 A topographical survey was provided with the instruction for this project. OD recording ranging from 25.90 to the east and 25.50 to the west. All site features plotted to the topographical survey were present during the tree survey site visit. The site is generally flat with no significant changes in the ground levels that would influence root orientation or morphology, it is therefore reasonable to assume all root protection areas (RPA's) are normal in terms of size and shape. Various inspection chambers were recorded during the survey, the date of construction/servicing is not known, it is not known therefore whether the below ground services are affecting / have previously affected the rooting zone of the trees. Overhead services were not recorded during the tree survey.

2.4 Soils

2.4.1 British Soil Geology Maps scaled at 1:50,000 show the site to be situated on bedrock of Thames Group - clay, silt and sand, superficial deposits data is not provided. Sand and gravel soil texture is likely to offer a deeper rooting environment than that of clay as the roots can easily penetrate and explore sandy soils with little resistance, clay like soils tend to restrict root exploration. Clay soils can be modified by moisture, either reduced or increased in volume by fluctuations in moisture content, such fluctuations can influence how structures perform and therefore may require additional, engineered support to improve the stability or the structure. Local variations and differing soil seams of superficial and bedrock deposits do occur, differing bedrock and superficial deposits will have a different soil texture and

structure to those described above and will perform differently. It is recommended core samples be obtained to determine the exact soil texture at the site.

Part 1 Tree Survey, Constraints and Impact Assessment

3.1 Tree survey and schedule

3.1.1 The tree schedule provides an account of all the trees at or adjacent to the site and is written on to a tabular form. Each tree is given a reference number (T1, T2, T3, G1 etc) that is plotted on to a tree survey plan to be cross-referenced with the tabular form. Contained within the schedule are the dimensions of each individual tree and any notable physiological or mechanical defects. An estimated life expectancy is derived from the condition and context of the tree and then graded for the retention suitability. The tabular form can be found in appendix 1 with explanatory notes for each column heading. The tree survey plan can be found in appendix 2. Provided below is a table of the existing trees, their current condition and British Standard 5837 category grading. The categories for retention are; A - high value, B - moderate value, C - low value and U - unable to be retained as a living tree, each category is given a colour code for use with the tree survey plan (appendix 2), A - Green, B- Blue, C - Grey and U- Red. There are further sub-categories used alongside the categorisation; 1 arboricultural, 2 landscape and 3 wildlife or historical values. A tree with more than 1 subcategory is considered more valuable than 1 with just 1, i.e. a tree categorised as B1/2/3 is more valuable than B1. British Standard 5837 recommends trees with a stem diameter of less than 150mm are categorised as C regardless of condition, form etc. it is assumed that a tree of this size can either be transplanted or replaced without any negative impact upon tree-based visual amenity. Veteran trees are automatically graded as category A due to their age and wildlife associations although they will likely contain significant defects, generally the defects are the microhabitats that increase their value.

Table 1 Tree condition table

Tree ref	Species Common and Scientific	Age class	Observations	Category grading
T1	Hawthorn Crataegus monogyna	M	Multi stem tree. ivy clad.	C1
H1	Leyland cypress Cupressus x leylandii	EM	Maintained at current height and spread.	C1
T2	Apple Sp Malus Sp	EM	Angle iron embedded into the stem at base,	C1
T3	Honey locust Gleditsia sp.	EM	Good condition.	B1
G1	Lawson's Cypress Chamaecyparis lawsoniana	EM	Occasional tree with leaning stem.	C1
T4	Lawson's Cypress Chamaecyparis lawsoniana	M	Multi stem tree.	C1

Tree ref	Species Common and Scientific	Age class	Observations	Category grading
T5	Oak Quercus robur	EM	Debris piled around base, unable to fully assess. Ivy clad stem.	B1
T6	Leyland cypress Cupressus x leylandii	M	Compression fork at 3m.	C1
G2	Lawson's Cypress Chamaecyparis lawsoniana	EM	Poor crown shape. Leaning stem.	C1
T7	Weeping willow Salix Sp.	M	Maintained as high pollard,	C1
T8	Lombardy poplar Populus Sp.	M	Twin stem. Ivy clad. Leaning stem bias westerly direction. Topped at 10m.	C1
T9	Cherry Plum Prunus cerasifera	M	Included union at base. Dense crown.	C1
G3	Leyland cypress Cupressus x leylandii	EM	Maintained at current height and spread.	C1
G4	Leyland cypress Cupressus x leylandii	EM	Maintained at current height and spread.	C1

3.2 Further discussion

3.2.1 Visual amenity value.

Visual tree amenity value of the surveyed tree features to the front of the site is reasonable, the trees can be seen from the publicly maintained highway and footway. The trees are however densely planted and surrounded by a thick boundary of shrub masses, this slightly reduces the visual amenity that would otherwise be provided with individual specimens. The trees to the rear offer no visual amenity to the surrounding area as they are obscured from view by the existing built form.

3.2.1 Landscape value

The trees provide reasonable screening landscape value, the trees help screen and reduce the perceptual load of the built form at and beyond the site boundaries reducing the visual impact of the hard landscape and roof line within the immediate area. The trees are not however aged or veteran specimens and do not form part of the historical landscape (hedgerow, pollards, coppice) or landform (ditches, ponds, woodland edge remnant etc), the trees are considered recent landscape additions and most are non-native specimens, further reducing the landscape value.

3.2.2 Wildlife value

The wildlife value is considered reasonable, the structural diversity and connectivity is good, with good ground, sub and higher canopy layers which increases foraging, breeding,

migratory and navigational opportunity for less mobile fauna. The trees are mostly non-native specimens, non -native trees tend to have limited numbers of associated native insects. The trees are mostly young to early mature specimens, likely to have a limited number of microhabitats as these tend to favour older specimens.

3.2.3 Condition

The trees are generally in poor condition, previous management and dense planting centres have reduced the longer-term viability of the stock as a unit.

3.2.4 Provided below is the British Standard 5837 categorisations with total number of surveyed trees for each corresponding categorisation:

A = 0

B = 2

C = 12

U = 0

3.2.5 The majority of category B trees should be retained where their long-term retention is achievable. A mixture of tree works, design modification and special construction techniques should be employed to accommodate category B trees. Generally, category B trees have a life expectancy over 20 years and offer a medium to long-term contribution to the amenity/character of the area. Category B trees contain occasional defects that can be remedied with suitable tree works.

3.2.6 The category C trees are desirable for retention in the short term. Generally, category C trees have a life expectancy of less than 10 years and would be acceptable to remove once new planting is established. Category C trees contain many defects that are likely to reduce the long-term life expectancy of the tree. Category C trees do not add to the character or visual amenity of the area.

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Photo 1 T2, T3, G1 and T4

Photo 2 T7

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Photo 3 G3

4.1 Tree constraints

4.1.1 The above and below ground tree constraints are represented by the present crown spread and root protection areas (RPA) of each retained tree. British Standard 5837 provides a calculation for root protection areas for both single and multi-stem trees. The constraints are plotted to a site plan around each individual tree; the constraints plan is used to influence site layout and further clarifies tree retention or removal. The constraints plan can be found in appendix 2. Further consideration should be given to the future growth potential for each retained tree; the table below provides estimated growth rates that should be considered when achieving a suitable design layout.

4.1.2 Provided below is a constraints table that provides data for the radial distance required for the RPA, the present height and spread of the tree, the future increase in height and spread of the tree in 10 years and tree management considerations.

Table 2 Tree constraints table

					Branch spread							
Tree ref	**Species Common and Scientific**	**Height in m**	**Stem diameter in mm**	**Radial distance required for RPA**	**N**	**E**	**S**	**W**	**Height of crown clearance in m**	**Estimated increase in M in crown height in 10 years**	**Estimated increase in M in crown spread in 10 years**	**Management Considerations**
T1	Hawthorn Crataegus monogyna	6	350	4.2	2	2	2	2	1	0	0	Managed at current height and spread.
H1	Leyland cypress Cupressus x leylandii	6	100	1.2	1	1	1	1	0	0	0	Managed at current height and spread.
T2	Apple Sp Malus Sp	5	189	2.268	2	2	2	2	1	1	1	None
T3	Honey locust Gleditsia sp.	10	250	3	3	3	3	3	4	1	1	None
G1	Lawson's Cypress Chamaecyparis lawsoniana	4	200	2.4	1	1	1	1	0	1	0.5	None
T4	Lawson's Cypress Chamaecyparis lawsoniana	15	400	4.8	2	2	2	2	0	1	0.5	None
T5	Oak Quercus robur	15	410	4.92	4	4	4	4	3	2	2	None
T6	Leyland cypress Cupressus x leylandii	15	500	6	2	2	2	2	2	2	0.5	None
G2	Lawson's Cypress Chamaecyparis lawsoniana	4	220	2.64	1	2	2	2	1	1	0.5	None

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					Branch spread							
Tree ref	**Species Common and Scientific**	**Height in m**	**Stem diameter in mm**	**Radial distance required for RPA**	**N**	**E**	**S**	**W**	**Height of crown clearance in m**	**Estimated increase in M in crown height in 10 years**	**Estimated increase in M in crown spread in 10 years**	**Management Considerations**
T7	Weeping willow Salix Sp.	5	680	8.16	3	3	3	3	3	0	0	Managed as a pollard.
T8	Lombardy poplar Populus Sp.	17	500	6	3	3	3	3	4	0	0	Managed as a pollard.
T9	Cherry Plum Prunus cerasifera	6	300	3.6	3	3	3	3	2	1	1	None
G3	Leyland cypress Cupressus x leylandii	5	200	2.4	2	2	2	2	0	0	0	Managed as a pollard.
G4	Leyland cypress Cupressus x leylandii	5	200	2.4	1	1	1	1	0	0	0	Managed as a pollard.

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5.1 Arboricultural impact assessment

5.1.1 Provided below is an assessment of the impact of the development on each individual tree and any design requirements for the site. Such factors include tree preservation orders, tree amenity, tree retention, removal of structures within RPA, infrastructure requirements, construction of infrastructure, end use of space, tree loss / new planting, veteran/aged tree assessment, light issues, proximity to structures, relationship with new homeowners and tree nuisance.

Table 3 Arboricultural Impact Assessment

Tree Ref	TPO/CA/other statutory protection. Amenity assessment. Retention recommendation.	Removal of existing structures and hard surfacing within RPA	Proposed Infrastructure within RPA	Construction methods for proposed infrastructure	End use of space	Tree loss and new planting	Shading and light	Proximity to structures	Future pressure for tree removal/works	Seasonal tree nuisance
T1, T2, T4, T6, T8, G1, G2 and G3	• TPO or CA status not checked with local authority. • MAGIC GIS checked 29/04/23 – site listed within SSSI Impact Zones. • Reasonable amenity, wildlife and landscape value. Value limited due to planting density and previous management of occasional trees. • Trees recommended for removal.	N/a	N/a	N/a		• Fell trees • Replacement planting to front east and southern boundaries using native species to form a formal boundary hedge.				

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Tree Ref	TPO/CA/other statutory protection. Amenity assessment. Retention recommendation.	Removal of existing structures and hard surfacing within RPA	Proposed Infrastructure within RPA	Construction methods for proposed infrastructure	End use of space	Tree loss and new planting	Shading and light	Proximity to structures	Future pressure for tree removal/works	Seasonal tree nuisance
T3, T5, T7, T9 and G4	• TPO or CA status not checked with local authority. • MAGIC GIS checked 29/04/23 – site listed within SSSI Impact Zones. • Reasonable amenity, wildlife and landscape value. Value limited due to planting density and previous management of occasional trees. Trees recommended for retention.	N/a	• Section of proposed driveway within RPA of T5 and T7. • T7- Existing driveway within RPA to be lifted by hand to the original construction depth. New surface added above with no further excavation within the RPA.	• Hand removal of existing hard surface and minor level preparation excavation and root pruning to a depth of 150-200mm. • See method statement provided in section 9 and appendix 5 tree protection plan.	• End use of amenity spaces not affected by trees. • Target pruning will be required in the future to maintain suitable crown clearance to reduce the future nuisance of branch encroachment.	N/a	• Trees will not cast shade to the proposed amenity spaces and dwelling during the midsummer months.	• The trees are at a sufficient distance from the proposed dwelling so as not to cause future general nuisance. T7 and G4 are managed on a cyclical basis.	• Low. Trees not likely to cause a nuisance or limit the enjoyment of the proposal.	• Leaf and fruit dispersal • Nuisance of blocked drains, gutters etc. • Recommend use of guards as appropriate to prevent blockages occurring. • Use surfaces that do not tarnish from tree deposits (shingle, loose stone, grass, etc.).

5.2 Further discussion

5.2.1 Below ground services for drainage, electricity, gas, water, telecoms, are to be located outside the RPA of the retained trees or connected to existing services within the site. If however, this is not viable then trenchless methods of working will be adopted, shallow trenching may be permitted although a trial trench should be prepared to determine the presence of roots to be affected and the impact upon the health of the tree affected. Overhead services such as lighting columns, electricity, telecoms, etc. are to be outside the present and future canopy spread, use of Table 2 'Tree Constraints' will aid design.

5.2.2 Guttering and drains will have guards to prevent leaf/fruit drain blockages. Where a significant loss of rainwater water is likely due to loss of natural soft surfaces, the rainwater drainage will be redirected into the soil area of the retained trees. The drainage will result in an even and slow distribution toward the rooting area, it will not cause waterlogged conditions or damage to the soil structure, structural engineer to advise further.

5.2.3 The information provided in the impact assessment and constraints advice has provided a basis for tree retention, works specification and construction techniques required. Further details for this can be found in the following sections of this report.

6.1 Tree removals and impact assessment

6.1.1 Provided below is a table of the trees to be removed. This is to be cross-referenced with the tree survey plan provided in appendix 2.

Table 4 Trees to be removed

Trees to be removed	Reason for removal	Impact upon visual amenity
T1, T2, T4, T6, T8, G1, G2 and G3	Facilitate construction of the proposed driveway, cart lodge garage and extension.	Low. The trees to be removed are obscured from view by the existing dense shrub and coniferous vegetation that surround the site, replacement planting to the south and eastern boundaries using suitable native species is provided to mitigate loss.

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Part 2 Arboricultural Method Statement

7.1 Tree works specification

7.1.1 All tree works are to be completed as a starting phase of development unless otherwise stated.

7.1.2 All works are to be completed to BS3998 2010 'Recommendations for tree works'

7.1.3 Research suggests that tree works are better completed when the trees are using the least amount of energy and when conditions do not favour pathogens. It is recommended that the works specified below be carried out in midsummer July/early August or the dormant period Jan/Feb. Specifically, times of bud break and leaf abscission should be avoided. This may need further assessment for different species or for aged/veteran trees whose energy reserve and potential to kinetic ratio is susceptible to change from minor tree works. Where this is likely to occur, a separate management plan for that individual tree may be required.

7.1.4 Provided below is a table showing tree works specification. The key for works urgency can be found in Appendix 1 Explanatory notes.

Table 5 Tree works specification

Tree ref	Species Common and Scientific	Age class	Tree works to facilitate construction of the proposal and / or access to the site	Preliminary management recommendations	Works urgency (Preliminary works only)	Category grading
T1	Hawthorn Crataegus monogyna	M	Fell and grind stump following below ground service assessment.	None	0	C1
H1	Leyland cypress Cupressus x leylandii	EM	Fell and grind stump following below ground service assessment.	Maintain at current height and spread.	3	C1
T2	Apple Sp Malus Sp	EM	Fell and grind stump following below ground service assessment.	None	0	C1
T3	Honey locust Gleditsia sp.	EM	None	None	0	B1
G1	Lawson's Cypress Chamaecyparis lawsoniana	EM	Fell and grind stumps following below ground service assessment.	None	0	C1

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Tree ref	Species Common and Scientific	Age class	Tree works to facilitate construction of the proposal and / or access to the site	Preliminary management recommendations	Works urgency (Preliminary works only)	Category grading
T4	Lawson's Cypress Chamaecyparis lawsoniana	M	Fell and grind stump following below ground service assessment.	None	0	C1
T5	Oak Quercus robur	EM	Hand excavation and root pruning within RPA. See method statement provided in section 9 and appendix 5 tree protection plan.	None	0	B1
T6	Leyland cypress Cupressus x leylandii	M	Fell and grind stump following below ground service assessment.	None	0	C1
G2	Lawson's Cypress Chamaecyparis lawsoniana	EM	Fell and grind stumps following below ground service assessment.	None	0	C1
T7	Weeping willow Salix Sp.	M	Hand excavation and root pruning within RPA. See method statement provided in section 9 and appendix 5 tree protection plan.	None	0	C1
T8	Lombardy poplar Populus Sp.	M	Fell and grind stump following below ground service assessment.	Pollard to 10m.	3	C1
T9	Cherry Plum Prunus cerasifera	M	None	None	0	C1
G3	Leyland cypress Cupressus x leylandii	EM	Fell and grind stumps following below ground service assessment.	Maintain at current height and spread.	3	C1
G4	Leyland cypress Cupressus x leylandii	EM	None	Maintain at current height and spread.	3	C1

8.1 Tree protection method statement

8.1.2 Tree protection is required to prevent physical damage to the stem, branch and crown structure. Tree protection is used also to prevent indirect damage caused by loads passing over the root protection area that would otherwise cause compaction of the soil. Soil compaction reduces soil pore space, which in turn reduces; soil air, available water and nutrients, the anaerobic environment will prevent healthy and strong root growth (elongation, thickening, mycorrhizal association, etc.). Prolonged anaerobic soil conditions will lead to longer term poor tree health with symptoms (crown die back, sparse crown, poor extension growth, etc.) not evident until well after the occurrence. The simplest and most effective way to prevent damage to any retained tree on the development site is the provision of a construction exclusion zone around the tree and its calculated rooting area.

8.1.2 The areas for protection will see the RPA confirmed on the ground with the erection of a scaffold frame with wire mesh attached (Please see appendix 3 Barrier protection construction profile, diagram 2). Where site personnel require access across the RPA, ground protection will be installed utilising scaffold boards laid on a compressible layer (100mm of woodchip) with geotextile membrane beneath, as per British Standard 5837 section 6.2.3.3 (see appendix 5 tree protection plan). Where plant less than 2 tonnes requires access across an RPA, the compressible layer as described above should be increased to 200-300mm and the scaffold boards substituted for composite boards fit for the applied load, plant above 2 tonnes should utilise reinforced concrete slabs or specialised track mats fit for the applied load.

8.1.3 The barrier protection will contain and display information highlighting the protected tree and consequences of any breach of tree protection. Please see appendix 4, example of informative to be placed on barrier protection.

8.1.4 The tree protection plan is shown in appendix 5. This shows; the RPA for each retained tree, the location of protective barriers/ground protection and areas for site storage and contractors parking.

9.1 Construction method statements

9.1.2 Provided in this section are arboricultural method statements primarily concerned with working within the RPA of the retained trees. The method statements are designed to minimise/remove any impact or damage/disturbance that may otherwise occur. The method statements provided should be distributed to all key staff involved with the development.

9.2 **Excavation within the RPA**

9.2.1 Excavation will be required within the RPA of T5 and T7 as identified in the impact assessment section 5 and tree protection plan appendix 5 for the construction of the proposed driveway. The method statement provided below is in accordance with British Standard 5837 section 7.2.

Sequential method statement for hand excavation and root pruning.

1. Break out any existing hard surface within the RPA working backwards away from the tree using the existing hard surface as ground protection. Handheld concrete breakers to be used breaking to the existing construction depth, assumed to be 150-200mm.

2. Underlying soils and / or existing grassed surfaces - Remove turf layer with turf remover set to 50mm, use an air spade or rake to soften the underlying soils. Carefully remove topsoil / upper soil horizon using handheld tools only (spade, shovel, soft brush, trowel) to achieve excavation depth assumed to be 150-200mm.

3. Where roots are pliable and will not damage from movement, push to side of pit or downwards.

4. Any exposed roots should immediately be wrapped or covered in damp hessian to prevent desiccation and to protect them from rapid temperature changes.

5. If required, sever any roots with a diameter less than 25mm (use a sharp tool to provide a clean cut across the cross section near to a root junction/ growth point).

6. Avoid severing roots greater than 25mm or clumps of roots (root mats). If this is necessary, then request an arboriculturist to attend the site to assess likely impact upon tree health and future stability.

7. Prior to backfilling any roots should be removed from the protective wrapping and surrounded by sharp sand, or other loose granular fill, before soil or other material is replaced. The backfill is to be free from any contaminants or foreign objects.

8. Monitor tree health during next 2 growth seasons. Check leaf colour, size, density and extension growth.

9.3 Soft surfaces within RPA

9.3.1 Provided below is a method statement to avoid damaging/disturbance to the roots of the retained trees during soft landscape operations.

- No tractor mounted or heavy plant rotavating machinery is to be used unless working on surface fit for purpose to reduce/spread load and prevent soil compaction.

- Cultivation is to be completed using manual hand tools only.

- Existing soil is to be used, where additional soil is required it should be contaminant free, well drained and suitable PH, texture and structure for the site and planting/existing trees/shrubs.

- Damage to roots is to be avoided, large structural roots may be seen at or near the surface and where they radiate from the stem of the tree from large buttresses. After around 4m radial distance structural roots tend to taper to around 3cm in diameter.

- Changes in ground levels are to be avoided, any lowering or raising of levels should be carried out using a suitable method statement that provides continued soil conditions of gas exchange and water percolation.

- Planting is to be done with care and to avoid severing tree roots; generally, planting should be completed outside the RPA.

10.1 General arboricultural considerations

10.1.1 Provided in this section are wider arboricultural considerations to be used either at the later design stage or when on-site with the contracting team. Further information contained within this section provides details on tree and associated wildlife legislation. The method statements provided should be distributed to all key staff involved with the development.

10.2 Storage

10.2.1 There is to be no storage within the RPA of any retained trees. An outline area can be designated at pre-commencement construction site meeting.

10.3 Contractors parking

10.3.1 There is to be no parking within the RPA of any retained trees. An outline area can be designated at pre-commencement construction site meeting.

10.4 Slope

10.4.1 All mixing and storage of materials/chemicals to be done on a pre-prepared flat/level surface with sealed sides to prevent any runoff. Storage of all chemicals/materials likely to cause harm to the trees should be in a sealed container or area with a bund to prevent run off if spillages occur. Site personnel are to have access to spillage treatment equipment.

10.5 Services

10.5.1 Methods for service run construction within the RPA are micro tunnelling, Surface launched directional drilling, pipe ramming and impact moling, method statements for these should be provided by the relevant utility companies. Shallow trenching may be

acceptable for minor services; if shallow trenching is required then hand excavation should be adopted using an approved method statement.

10.5.2 All overhead services to be located outside the present and future crown spread of the retained trees, use tree constraints table provided in section 4 to aid design.

10.6 Levels

10.6.1 No stripping or raising of levels within the RPA without consent from the local authority. If site levels need to be reduced the use of hand excavation or an air spade should be adopted using an approved method statement. If site levels are to be raised the material added should allow for water infiltration and gaseous exchange allowing the roots to carry out their normal biological function, the use of structural soil and below ground aeration system may be required depending on area and depth.

10.7 Development phasing

10.7.1 All contracting staff working at the site should be briefed on approved working practices and protection requirements for the retained trees.

10.7.2 The tree works specification should be completed following approval from the local authority.

10.7.3 Prior to the commencing of development the chosen arboriculturist should re- assess all retained trees and provide further assessment.

10.7.4 All barrier/ground protection should be erected/laid and confirmed as correct by the arboriculturist. All signs should be placed on the barriers at a height of 2m at 3m intervals.

10.7.5 Hand excavation as detailed within section 9 and tree protection plan appendix 5

10.7.6 Barrier/ground protection altered after intensive phase of development.

10.7.7 Soft landscaping as final phase of development.

10.7.8 Barrier / ground protection removed following landscaping phase.

10.8 Monitoring

10.8.1 Site key personnel

Architect and Contractors

Name	Position	Contact details
Builder TBC		
Adam Edwards Architects	Lead consultant	adam@adamedwardsarchitects.co.uk

Planning Authority

Name	Position	Contact details
Clive Dawson	Tree and Landscape Officer	cdawson@tendringdc.gov.uk

Arboriculturist

Name	Position	Contact details
James Choat	Arboricultural Consultant	07813204621
		james@treeplanningsoutions.co.uk

10.8.2 It is recommended that all trees and protection methods be monitored for the duration of development. A qualified arboriculturist will make a regular visit; the project arboriculturist is to carry out an assessment of tree health and protection condition and make recommendations when required.

10.8.3 Site specific monitoring

Item	Number of visits required	Timing of visit
Pre-commencement site meeting with key personnel. (Contractor, site manager, architect). Tree works Tree protection installation (ground/barrier) as per tree protection plan and method statements within supplied arboricultural report. Identify area for contractors parking, site storage and access. Place 'exclusion zone' signs at 2m height, 3m intervals facing outwards on temporary fencing.	1 – 2 depending on whether items can be completed on same day.	Meeting to be arranged between architect and site manager before construction phase.
Site visit during construction phase to monitor tree health and tree protection condition.	2– 1 specifically during hand excavation within the RPA of T5 and T7 for the construction of the driveway.	During construction phase
Removal of tree protection.	1	After intensive construction phase

10.8.4 The above is subject to the client/site manager informing the project staff of the proposed date for each development activity. Following each site visit a brief report (see appendix 6 arboricultural monitoring form) to be sent to the client and local authority within 24 hrs following the visit. Any incidents will be dealt with within 2 hours and to be reported to the project arboriculturist, photos to be provided via email and recommendations provided verbally, if required a site visit should be undertaken to provide further advice/ recommendations.

10.9 Incidents/variations

10.9.1 Planned

- Site manager to contact arboriculturist for any anticipated/planned variations
- Arboriculturist to assess impact upon trees and offer advice regarding alternative methods
- Arboriculturist to update tree officer providing details of variations

10.9.2 Non-planned

- Site manager to inform arboriculturist of incident
- Site manager to photograph incident and send to arboriculturist
- Arboriculturist to provide initial advice via telephone or email

- Arboriculturist to make site visit within 1 day to assess impact upon trees and offer advice to reduce/remove impact
- Arboriculturist to update the local authority tree officer providing details of incident and measure taken to reduce/remove impact.

10.10 Wildlife legislation

10.10.1 The Wildlife and Countryside Act 1981, The Habitats Directive 1994 (consolidated under Conservation of Habitats and Species Regulations 2017) and The Countryside and Rights of Way Act 2000. These acts protect certain species of flora and fauna; it is an offence to intentionally or recklessly destroy species or habitats contained within these acts. Trees, especially veteran or ancient, can support associated flora and fauna that is protected via the above legislation. It is recommended the applicant employ a suitably qualified ecologist to carry out a survey of the area to ensure no offence is committed. See the following link for further details. https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications

10.11 Tree legislation

10.11.1 The Town and Country Planning Act 1990. It is an offence to cut down, uproot, lop, top, or cause wilful damage or destruction to a tree subject of a tree preservation order or conservation area. Such acts will lead to prosecution and if convicted a fine not exceeding £20,000 in the magistrate's court; if the case is referred to the crown court the fine may be unlimited. See the following link for further details. https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas

10.11.2 Hedgerow regulations 1997 protect certain hedgerows from being removed, certain exemptions apply. A removal notice is required to be sent to the local authority for consideration to determine whether the hedgerow is important before the authority can permit removal of a hedgerow subject of the above regulations. See the following link for further details. http://www.legislation.gov.uk/uksi/1997/1160/contents/made

10.11.3 Forestry Act 1967 as amended - Felling licences are issued by the forestry commission, certain exemptions apply. Before felling trees a check with the Forestry Commission should be made to ensure a felling licence is not required. See the following link for further details. http://www.legislation.gov.uk/ukpga/1967/10/contents

11.1 Conclusion

11.1.1 All surveyed trees have been categorised in accordance with British Standard 5837 2012. Visual tree amenity value of the surveyed tree features to the front of the site is reasonable, the trees can be seen from the publicly maintained highway and footway. The trees are however densely planted and surrounded by a thick boundary of shrub masses, this slightly reduces the visual amenity that would otherwise be provided with individual specimens. The trees to the rear offer no visual amenity to the surrounding area as they are obscured from view by the existing built form. The trees provide reasonable screening landscape value, the trees help screen and reduce the perceptual load of the built form at and beyond the site boundaries reducing the visual impact of the hard landscape and roof line within the immediate area. The trees are not however aged or veteran specimens and do not form part of the historical landscape (hedgerow, pollards, coppice) or landform (ditches, ponds, woodland edge remnant etc), the trees are considered recent landscape additions and most are non-native specimens, further reducing the landscape value. The wildlife value is considered reasonable, the structural diversity and connectivity is good, with good ground, sub and higher canopy layers which increases foraging, breeding, migratory and navigational opportunity for less mobile fauna. The trees are mostly non-native specimens, non -native trees tend to have limited numbers of associated native insects. The trees are mostly young to early mature specimens, likely to have a limited number of microhabitats as these tend to favour older specimens. The trees are generally in poor condition, previous management and dense planting centres have reduced the longer-term viability of the stock as a unit.

11.1.2Trees T1, T2,T4, T6, T8, G1, G2 and G3 are to be removed to facilitate construction of the proposed driveway, cart lodge garage and extension. The trees to be removed are obscured from view by the existing dense shrub and coniferous vegetation that surround the site, replacement planting to the south and eastern boundaries using suitable native species is provided to mitigate loss. Hand excavation and removal of the existing driveway within minor sections of the RPA of T5 and T7 will be required for the construction of the proposed driveway. A suitable method statement is provided to reduce the impact that would otherwise occur with mechanical excavation resulting in

soil compaction, tearing of roots and unnecessary root loss. No further tree works are required to facilitate construction of the proposal or access to the site. The trees can be adequately protected using temporary barriers in accordance with BS 5837. Following development, the trees will not be further obscured, the development is therefore considered to have a low impact upon visual amenity value.

11.1.3 Tree protection and method statements have been provided within this report to reduce the risk of direct and indirect development related damage that may otherwise occur to the retained trees. In conclusion, assuming the method statements and tree protection are implemented as part of the development, the proposal can be constructed with reduced disturbance to the trees.

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Appendix 1 Tree survey and explanatory notes

Tree Survey Schedule

Site:
Date of Survey:
Arboricultural Consultant/Surveyor:
Weather:

					Branch spread												
Tree ref	**Species Common and Scientific**	**Height in m**	**Stem diameter in mm**	**Radial distance required for RPA**	**N**	**E**	**S**	**W**	**Height of crown clearance in m**	**Age class**	**Ground condition**	**Water demand**	**Observations**	**Preliminary management recommendations**	**Works urgency**	**Estimated remaining contribution in years**	**Category grading**
T1	Hawthorn Crataegus monogyna	6	350	4.2	2	2	2	2	1	M	Bare soil	High	Multi stem tree. Ivy clad.	None	0	20	C1
H1	Leyland cypress Cupressus x leylandii	6	100	1.2	1	1	1	1	0	EM	Bare soil	High	Maintained at current height and spread.	Maintain at current height and spread.	3	15	C1
T2	Apple Sp Malus Sp	5	189	2.268	2	2	2	2	1	EM	Grass	Moderate	Angle iron embedded into the stem at base,	None	0	10	C1
T3	Honey locust Gleditsia sp.	10	250	3	3	3	3	3	4	EM	Grass	Low	Good condition.	None	0	20	B1
G1	Lawson's Cypress Chamaecyparis lawsoniana	4	200	2.4	1	1	1	1	0	EM	Bare soil	High	Occasional tree with leaning stem.	None	0	15	C1
T4	Lawson's Cypress Chamaecyparis lawsoniana	15	400	4.8	2	2	2	2	0	M	Bare soil	High	Multi stem tree.	None	0	15	C1
T5	Oak Quercus robur	15	410	4.92	4	4	4	4	3	EM	Bare soil	High	Debris piled around base, unable to fully assess. Ivy clad stem.	None	0	25	B1
T6	Leyland cypress Cupressus x leylandii	15	500	6	2	2	2	2	2	M	Bare soil	High	Compression fork at 3m.	None	0	15	C1
G2	Lawson's Cypress Chamaecyparis lawsoniana	4	220	2.64	1	2	2	2	1	EM	Bare soil	High	Poor crown shape. Leaning stem.	None	0	10	C1
T7	Weeping willow Salix Sp.	5	680	8.16	3	3	3	3	3	M	Concrete	High	Maintained as high pollard,	None	0	20	C1
T8	Lombardy poplar Populus Sp.	17	500	6	3	3	3	3	4	M	Bare soil	High	Twin stem. Ivy clad. Leaning stem bias westerly direction. Topped at 10m.	Pollard to 10m.	3	15	C1
T9	Cherry Plum Prunus cerasifera	6	300	3.6	3	3	3	3	2	M	Grass	Moderate	Included union at base. Dense crown.	None	0	15	C1

G3	Leyland cypress Cupressus x leylandii	5	200	2.4	2	2	2	2	0	EM	Grass	High	Maintained at current height and spread.	Maintain at current height and spread.	3	15	C1
G4	Leyland cypress Cupressus x leylandii	5	200	2.4	1	1	1	1	0	EM	Grass	High	Maintained at current height and spread.	Maintain at current height and spread.	3	15	C1

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Explanatory Notes

Referencing
Each tree is given a unique reference number and plotted on the attached plans for clear identity. Individual trees are referenced as T1, T2 etc., Groups G1, G2 etc. Hedgerows H1, H2 etc. and Woodlands W1, W2 etc.

Species
All species are recorded using common names. Identification is made using experience and knowledge.

Tree dimensions
Tree height is measured and recorded in meters and taken from the base of the stem to the tip of the crown. Height is estimated using experience and knowledge.

Diameter at Breast Height (DBH) is measured at approximately 1.5m from the ground up the stem and is measured and recorded in millimeters. DBH is measured accurately using a diameter tape.

Crown spread is measured in meters from the stem to the extent of the crown spread to each compass point (NESW). Crown spread is estimated using experience and knowledge.

Crown clearance is the height from ground level to the lowest branch and is measured in meters. Crown clearance is estimated using experience and knowledge.

Age class
Age class falls in to 4 categories:

Y	Young
EM	Early Mature
M	Mature
OM	Over Mature

Observations
The biological condition of the tree is assessed and noted. Notable defects are recorded; fruiting bodies, cankers, die back, exudates, etc. are recorded.

The mechanics of the tree are assessed and noted. Notable defects are recorded; buckling, rib formation, stresses, bulges, soil cracks, large cavities or wounds, tight branch junctions, etc. are recorded.

Preliminary management recommendations
Tree management is recommended following the assessment of physiological and structural condition. Recommended works may include, no work required, crown reduction, crown lift, fell, crown thin, monitor etc.

Estimated remaining contribution in years
An estimate of remaining life expectancy recorded in years. Estimated remaining contribution is made using experience considering the structural and physiological condition of the tree, nuisance, previous management, etc.

Category grading and colour coding on plan
A (Green square) high quality and value

B (Blue square) moderate quality and value

C (Grey square) low quality and value

U (Red Square) those that cannot be retained as living trees

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Sub categories

1 arboricultural values

2 landscape values

3 cultural values, including conservation

Works priority

1 Works required immediately to make the tree safe

2 Works required within 60 days

3 Works required as part of routine operations

0 no works required

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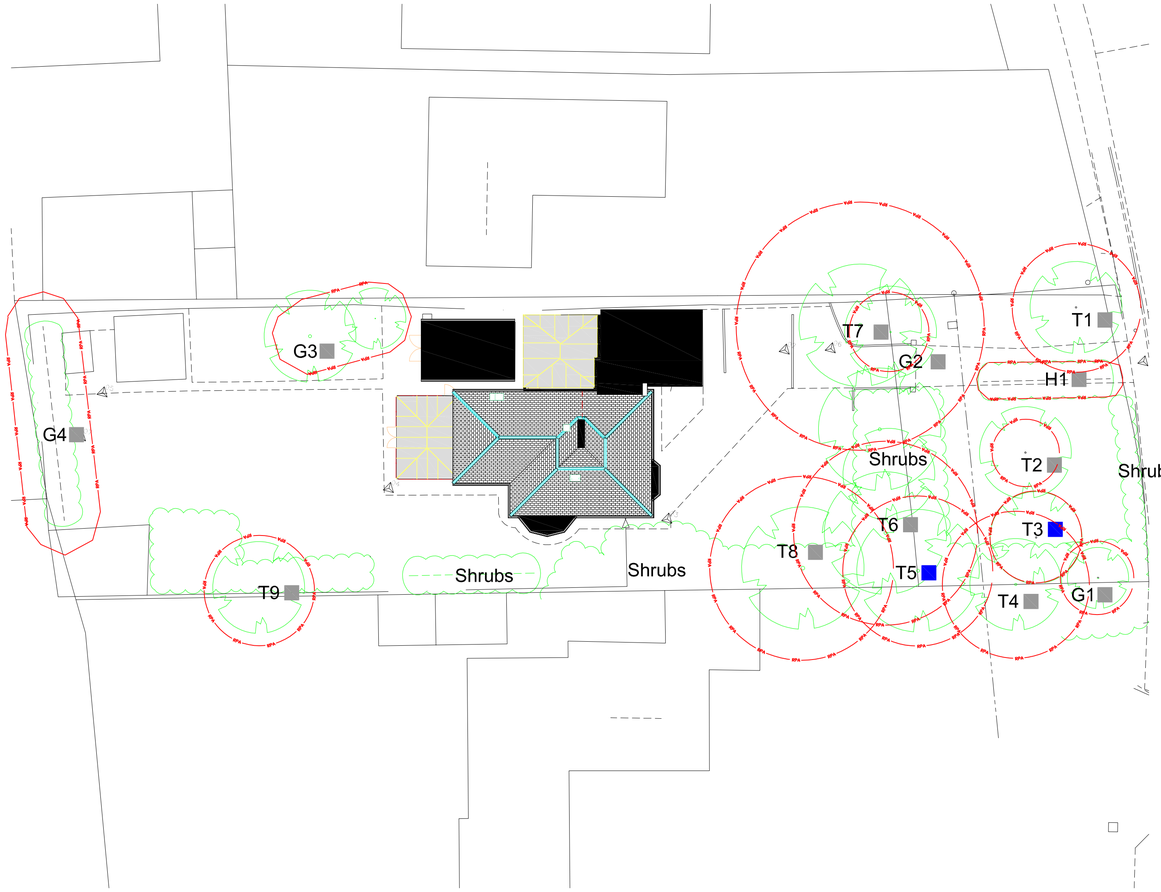
Appendix 2 Tree survey and constraints plan



Legend:

Tree reference

Tree and crown spread

Root protection area

BS 5837 Retention Category A

BS 5837 Retention Category B

BS 5837 Retention Category C

BS 5837 Retention Category U

Notes:

This drawing was produced in colour; a monochrome copy should not be relied upon.

Project:

Selbourne, Clacton Road, Weeley

Drawing Title:

Tree Survey and Constraints Plan

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Date: 1st May 2023

Scale: 1:200 @ A1

Drawing Number: TPSQU0050 TSCP

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Appendix 3 Barrier construction profile

Diagram 1 Weldmesh panels with block supports pegged to brace light impact

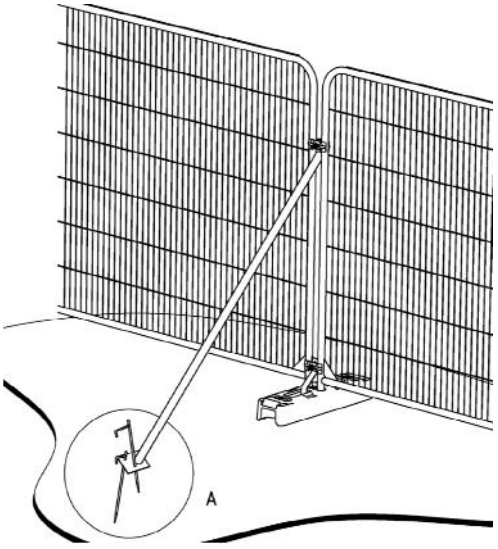

Diagram 2 Weldmesh panels with block supports and further block supports to brace intermediate impacts

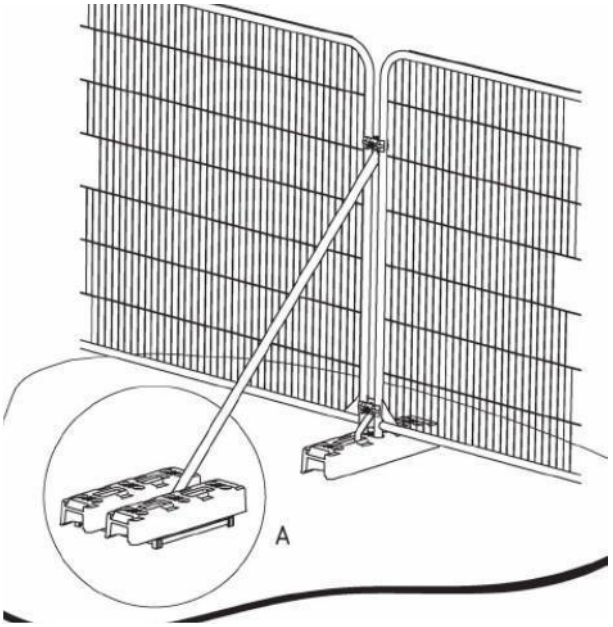

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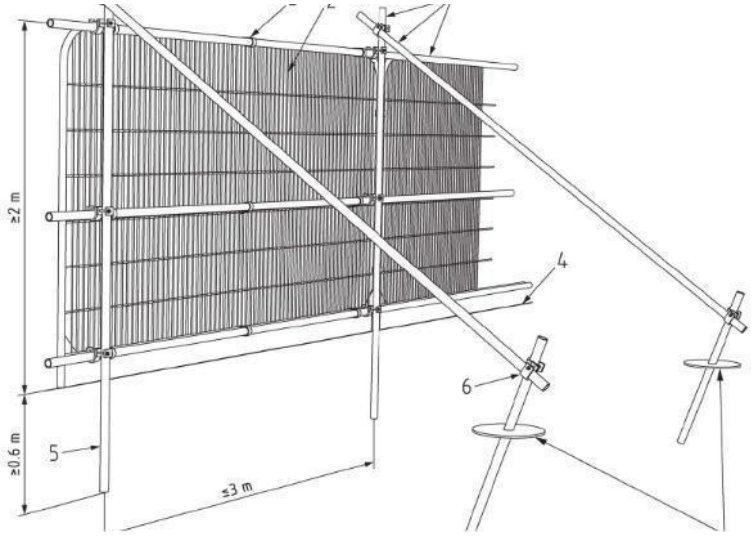
Diagram 3 Weldmesh panels with scaffold frame posts driven into the ground to brace heavy impacts



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Appendix 4 Example of informative to be placed on barrier

Construction Exclusion Zone

These trees have been retained and protected as part of the planning permission for this site.

Any breach of the protection will result in enforcement action from the Local Authority.

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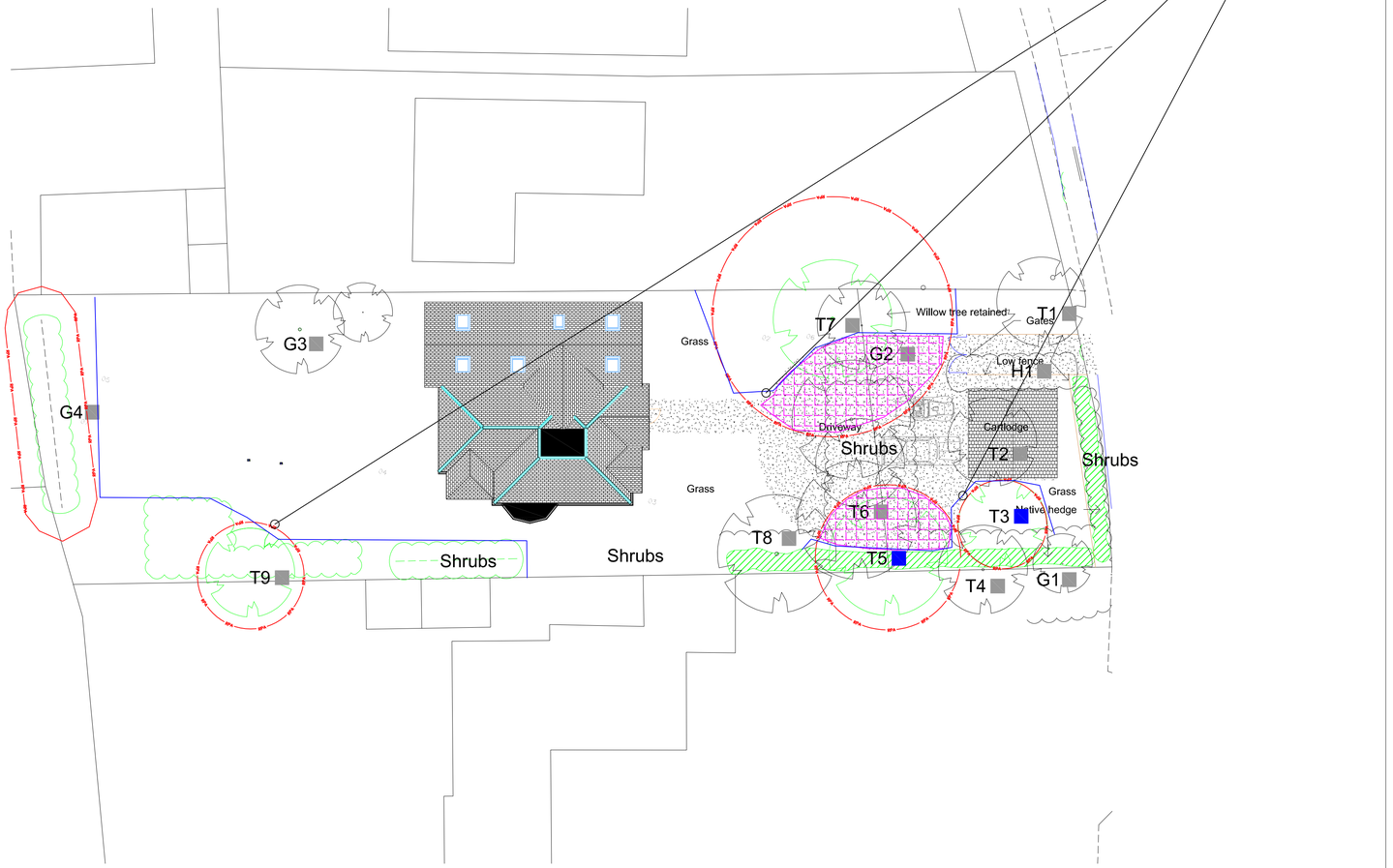
Appendix 5 Tree protection plan



Key Arboricultural Work Phasing

All methods statements below and annotations to the plan are to be read in conjunction with the arboricultural impact assessment Ref TPSQU0050

The installation and removal of the tree protection is to be supervised by the project arboriculturist and confirmed as correct as per the monitoring specification section 10.8.3 - 10.8.4 within the accompanying impact assessment Ref- TPSQU0050. Further monitoring assessments during the construction phase are recommended within the monitoring specification, the condition of the tree protection will be assessed during each visit.

Phase 1 - Tree works - See section 7 of accompanying impact assessment, no vehicle movements within the RPA

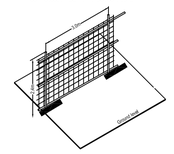
Phase 2 - Build / demolition phase barrier protection
- Erect scaffold frame as per drawing provided below and location shown to left.
- Install heras panels, slot into rubber block supports and cable tie to scaffold frame and to each additional panel ensuring continuous barrier. An 800mm gap for garden maintenance may be created.
- Cable tie weatherproof informative to barrier

Phase 3 - Intensive build phase

Phase 4 - Soft and hard landscaping phase barrier protection
- Move barriers to ensure protection of the stem and as much of the crown as possible whilst allowing access to carryout the approved soft and hard landscaping - see method statement below and within accompanying impact assessment

Phase 5 - Removal of ground and barrier protection. Temporary barrier is to be removed first then any ground protection as the end phase of development once the intensive build and landscape phase is complete.

Tree Protection Barrier to BS5837: 2012



Protective barriers should be erected prior to the commencement of any site clearance, demolition or development.,.No storage within the construction exclusion zone (fenced areas)

The fencing should utilise a scaffold framework in accordance with the detail shown above,

Weldmesh panels should be set in rubber block supports and cable tied or clamped with scaffold clamps, to the adjacent panel,

The fencing should be erected at or beyond the extremities of the RPA as shown on the tree protection plan and should not be moved unless agreed with the project arboriculturist and local planning authority,

Informatives should be placed on barriers at 1.5m in height at 3m intervals, facing outwards, Informatives should clearly provide details of the protection zone and correct procedures,

Construction Exclusion Zone

No access is permitted

The trees beyond this protected zone are subject to planning conditions and statutory protection

Any breach of this zone will result in enforcement action by the Local Authority

Sequential method statement for hand excavation and root pruning.

1. Break out any existing hard surface within the RPA working backwards away from the tree using the existing hard surface as ground protection. Handheld concrete breakers to be used breaking to the existing construction depth, assumed to be 150-200mm.

2. Underlying soils and / or existing grassed surfaces - Remove turf layer with turf remover set to 50mm, use an air spade or rake to soften the underlying soils. Carefully remove topsoil / upper soil horizon using handheld tools only (spade, shovel, soft brush, trowel) to achieve excavation depth assumed to be 150-200mm.

3. Where roots are pliable and will not damage from movement, push to side of pit or downwards.

4. Any exposed roots should immediately be wrapped or covered in damp hessian to prevent desiccation and to protect them from rapid temperature changes.

5. If required, sever any roots with a diameter less than 25mm (use a sharp tool to provide a clean cut across the cross section near to a root junction/ growth point).

6. Avoid severing roots greater than 25mm or clumps of roots (root mats). If this is necessary, then request an arboriculturist to attend the site to assess likely impact upon tree health and future stability.

7. Prior to backfilling any roots should be removed from the protective wrapping and surrounded by sharp sand, or other loose granular fill, before soil or other material is replaced. The backfill is to be free from any contaminants or foreign objects.

8. Monitor tree health during next 2 growth seasons. Check leaf colour, size, density and extension growth.

Soft surfaces within RPA

- No tractor mounted or heavy plant rotavating machinery is to be used unless working on surface fit for purpose to reduce/ spread load and prevent soil compaction.
- Cultivation is to be completed using manual hand tools only.
- Existing soil is to be used, where additional soil is required it should be contaminant free, well drained and suitable PH, texture and structure for the site and planting/ existing trees/ shrubs.
- Damage to roots is to be avoided, large structural roots may be seen at or near the surface and where they radiate from the stem of the tree from large buttresses. After around 4m radial distance structural roots tend to taper to around 3cm in diameter.
- Changes in ground levels are to be avoided, any lowering or raising of levels should be carried out using a suitable method statement that provides continued soil conditions of gas exchange and water percolation.
- Planting is to be done with care and to avoid severing tree roots; generally, planting should be completed outside the RPA.

Legend:

Tree reference — T1

Tree and crown spread

Root protection area — RPA

Temporary barrier protection

Tree to be removed

New hedgerow

Hand excavation / removal of existing hard surface

N

Notes:

This drawing was produced in colour, a monochrome copy should not be relied upon.

Project:

Selbourne, Clacton Road, Weeley

Drawing Title:

Tree Protection Plan

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Date: 1st May 2023

Scale: 1:200 @ A1

Drawing Number: TPSQU0050 TSCP

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Appendix 6

Example of arboricultural monitoring form

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Contract Monitoring Form

Details

Date	
Time	
Surveyor	
Client	
Site	
Ref	

Trees

Tree ref	Condition	Recommendations

Barrier

Tree ref	Barrier type	RPA radial distance as per planning permission	Actual barrier radial distance at site	Condition of barrier	Condition of signage	Comments

Ground Protection

Tree ref	Type of ground protection installed	RPA distance as per planning permission	Actual distance of ground protection at site	Condition of ground protection	Comments

Additional Comments