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Arboricultural Impact Assessment
and
Method Statements

For

Land adjacent 1 High Street, Leiston, Suffolk

Date	27th March 2024
Client	W H Developments
Report by	Mr James Choat BSc, M Arbor A
Site	1 High Street Leiston
Reference No.	TPSarb7751122
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Arboricultural ASSOCIATION
Professional Member
PR00530

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1. Summary

1.1.1 Tree Planning Solutions received instruction from W H Developments Ltd to complete a suitable arboricultural site survey and produce this subsequent arboricultural impact assessment (AIA) for an area of land adjacent 1 High Street, Leiston, Suffolk.

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 2023), which provides specific details of application acceptability; paragraphs 136, 185 and 186 specifically relate to tree planting, 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 4 dwellings with associated access, parking and hard / soft landscaping.

1.1.4 The site was surveyed on the 2nd December 2022 and again 8th February 2024, the weather was dry with a light wind, conditions for surveying trees were good. 4 individual trees 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 2018	National Planning Policy Framework

1.2 Statutory protection

1.2.1 East Suffolk District Councils planning constraints GIS data was checked 25th March 2024 the site is not subject to a tree preservation order (TPO), the site is situated within a designated conservation area (CA), as such trees with a stem diameter over 7.5cm measured at 1.5m agl, 10cm if thinning to improve the growing room for other trees, require 6 weeks prior notice to be provided to the local authority before carrying out tree works. The local authority have 6 weeks to determine whether to serve a tree preservation order or allow the works to proceed as per the notice received . The hedgerows at the site are not subject to the hedgerow regulations 1997 as they are not situated on land used for agriculture, keeping of horses, common land or within a site of special scientific interest (SSSI). It is recommended the applicant obtain written consent from East Suffolk 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 25th March 2024, specifically data sets for land designations and habitats (woodlands). The site is subject to site of special

scientific interest (SSSI), special area of conservation (SAC), Ramsar and special protection area (SPA) – Sizewell Marshes SSSI, Minsmere and Walberswick Ramsar, Southern and North Sea SAC and Leiston and Aldeburgh 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 Lanpro Ltd
- Proposed layout/concept drawing provided by Lanpro Ltd Ref 4346 LAN ZZ XX DRA 0100

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 25 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 centrally within the town of Leiston and accessed from Valley Road via a crossover providing vehicular access to the site. The site is situated within an urbanised position with limited number of 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 the following built structures – retail units, outbuildings and hardstands. The application site consists of the following habitat / green features – improved grass, bare soil and amenity trees.

2.3 Topographical survey

2.3.1 A topographical survey was provided with the instruction for this project, OD recordings were provided ranging from 16.46 to the south and 16.41 to the north. The site is generally flat with no significant changes in levels that will influence root orientation or morphology, it is therefore reasonable to assume the root protection areas will be normal in 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 Crag Group - Sand and superficial deposits of Lowestoft Formation- sand and gravel. 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 the tree is then graded for its quality. 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 quality grading. The categories for quality 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. 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 and Ancient trees are automatically graded as category A due to their age, cultural value and / or wildlife associations, although they will likely contain significant defects, generally the defects are the microhabitats that increase the ecological value. Should veteran or ancient trees be identified within the survey then standing advice from Natural England and the Forestry Commission will be considered in order to meet application acceptability as determined by NPPF 2023.

Table 1 Tree condition table

Tree ref	Species	Age class	Observations	Category grading
T1	Oak *Quercus robur*	M	Lapsed pollard with veteran associations (decay column, fungus, deadwood). 1 Pollard stem (north side) has failed (historical) resulting in large tear wound and decay within stem. Old decayed fungal fruit body within pollard head and at base, likely *Fistulina hepatica*, evidence of cubical brown rot. Low epicormic / lower crown. Recent high pollard / crown reduction, good vigorous regrowth at pruning point, good inner crown as a result of crown reduction. Ivy clad stem.	A2/3
T2	Holly *Ilex aquifolium*	Y	Good condition.	C1
T3	Sycamore *Acer pseudoplatanus*	EM	Compression fork at 3m.	C1

Tree ref	Species	Age class	Observations	Category grading
T4	Ash *Fraxinus excelsior*	EM	Ivy clad unable to assess.	C1

3.2 Further discussion

3.2.1 Visual amenity value.

Visual tree amenity value of the tree features is limited due to the position to the rear of the site and built form that obscures the trees from view from the publicly maintainable highway, footway or other significant public vantage point. The trees range in height and spread to a maximum of 17m in height and spread of 12m but are not prominent features within the street scene.

3.2.1 Landscape value

Tree T1 provides good landscape value, this particular tree helps reduce the perceptual load of the built form reducing the visual impact of the surrounding dwellings and hard roof line, Tree T1 is a lapsed pollard and likely around 300+ years of age, whilst the tree does not provide high visual amenity value the tree is part of the historical landscape and offers high landscape value and is synonymous with the surrounding historical town / associations.

3.2.2 Wildlife value

The wildlife value of T1 is good, trees with veteran associations provide niche microhabitats that have developed over the long life of the tree and are not found on younger stock, the microhabitats often provide a diverse range of habitats that increase local biodiversity. The wildlife value of the remaining species is limited, the structural diversity and connectivity is poor, with reduced ground, sub and higher canopy layers which limits foraging, breeding, migratory and navigational opportunity for less mobile fauna. The trees (T2-T4) are mostly native specimens, non -native trees tend to have limited numbers of associated native insects. The trees (T2-T4) are early mature specimens with a limited number of microhabitats as these tend to favour older / veteran specimens.

3.2.3 Condition

Typical defects observed were rot / decay columns, deadwood and ivy clad stems. Ivy is nonparasitic and does not cause direct harm to the host tree, it does however mask defects

and significant growth can limit the trees ability to photosynthesise. T1 has wood decay fungal fruit bodies within the pollard head and at the base, the fruit body was too decayed to identify but is thought to be *Fistulina hepatica* Beefsteak fungus. This particular fungus causes a slow degradation of the cellulose causing a cubical brown rot, this was evident within the visible decayed areas.

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

A = 1

B = 0

C = 3

U = 0

3.2.5 All category A trees should be retained. The development design should seek to accommodate such trees using special construction techniques and design modification. There should be only very minor work within the RPA and only minor crown works, generally those required to improve the condition of the tree. Category A trees are those that offer a significant contribution to the amenity and character of the area, they have a long-life expectancy and contain very few defects or are veteran trees with high wildlife and cultural values.

3.2.6 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.

3.2.7 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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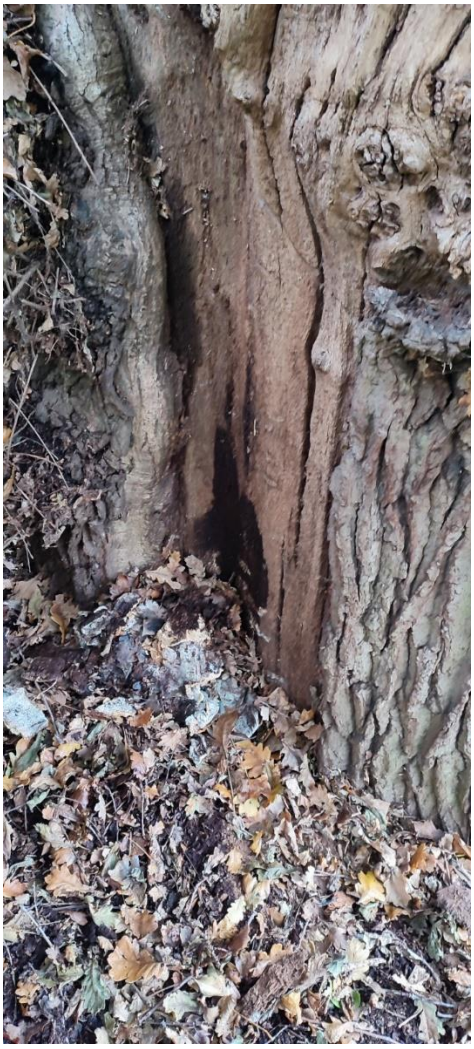
Photo 1 T1 Oak

Photo 2 T1 Oak – Historical pollard stem failure

Photo 3 T1 Oak – Decayed wood decay fungi at base, assumed to be *Fistulina hepatica*



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**	**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	Oak *Quercus robur*	17	1600	19.2	6	6	6	6	1-2	0	0	Likely to require future crown works either to the previous reduction points or slightly lower depending on the vigour and inner crown condition
T2	Holly *Ilex aquifolium*	3	100	1.2	1	1	1	1	1	0	0	Likely to require future crown works to reduce competition with T1
T3	Sycamore *Acer pseudoplatanus*	15	280	3.36	3	3	3	3	2	2	2	None
T4	Ash *Fraxinus excelsior*	13	300	3.6	3	3	3	3	2	2	2	None

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	• East Suffolk District Council Planning GIS checked 25/03/24, Trees not subject to TPO, site listed within CA, trees subject to CA. • MAGIC GIS checked 25/03/24 – site listed within SSSI, SAC, Ramsar and SPA Impact Zones. • Limited amenity value, high landscape and wildlife value. • Tree recommended for retention.		• Section of proposed access within increased RPA but outside BS 5837 capped RPA of 15m. Part of the area is existing type 1 surface and compacted soil. • Shed base, boundary fence and landscape path within RPA.	• Hand excavation /surface level preparation within the RPA using handheld tools only (50mm) for the construction of the no-dig access - detail TBC by the project structural engineer. • Hand excavation within the RPA for the construction of the landscape path, shed base and post holes for the fencing posts. • See method statement within section 9 and tree protection plan appendix 5.	• Front and rear amenity spaces not constrained by the retained tree. • Cyclical pruning is likely required to maintain the structure of the tree due to condition. • End use space remains unaltered from existing – domestic garden.	N/a	• Dwelling and front / rear amenity spaces to receive good amount of sunlight in the midsummer months. No significant shading to be caused by T1. • Cyclical pruning has been previously carried out which has established a high reduction pollard point, this work will likely require repeating in the near future to maintain structure.	• Tree at sufficient distance so as not to cause future nuisance.	• Low. Nuisance and proximity is limited. The tree is not likely to reduce the enjoyment or use of the dwellings / amenity spaces.	• 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.).

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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
T2, T3 and T4	• East Suffolk District Council Planning GIS checked 25/03/24, Trees not subject to TPO, site listed within CA, trees subject to CA. • MAGIC GIS checked 25/03/24 – site listed within SSSI, SAC, Ramsar and SPA Impact Zones. • Limited amenity value, high landscape and wildlife value. • Tree recommended for retention.	N/a	N/a	N/a	• Front and rear amenity spaces not constrained by retained trees. • Target pruning is a viable option should the trees require management.	• Remove T4 • Replacement planting as part of detailed landscape design.	• Dwelling and front / rear amenity spaces to receive good amount of sunlight in the midsummer months.	• Trees at sufficient distance so as not to cause future nuisance. • Target pruning and reduction is a viable option should it be required.	• Low. Nuisance and proximity is limited. The trees are not likely to reduce the enjoyment or use of the dwellings / amenity spaces.	• 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 T1 - The hard surface access is limited between the BS 5837 capped RPA of 15m and the increased RPA of 19.2m. The 15m RPA will remain as garden space but generally free from development association with the exception of landscaped path, shed base and boundary fence. The existing ground surface is a mix of compacted soil, type 1 and general debris left from neglect of the existing garden space The proposal seeks to improve upon the existing by creating permanent soft surface for the majority of the capped 15m RPA. It is recommended that the prior to development and installation of the protective barriers, the 15m RPA be decompacted using air injection.

5.2.2 The default position for hard, load-bearing surfaces should be outside of the RPA of the retained trees. However, if this is not viable then no/reduced dig construction methods should be adopted. Excavation may be required to allow pre-existing features such as road/footway levels or damp course layer to be maintained, the maximum depth for excavation should not exceed 150mm and where possible levels should be graded to existing joins to allow reduced excavation with construction above ground. Where existing levels do not need to be maintained, the excavation should be for preparation purposes only and excavation not exceeding 50mm. The finished surface should be porous and allow the tree roots to carry out their required biological and structural function (elongation, respiration, water/nutrient uptake, anchorage, storage of sugars). The finished surface should be easily cleaned and not tarnish from tree deposits.

5.2.3 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.

5.2.4 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.

5.2.5 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
T4	Facilitate construction of plot 4	Low. The tree cannot be seen from the publicly maintained highway, footway or other significant public vantage point. The tree is obscured by the existing built form.

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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	Age class	Tree works to facilitate construction and / or access	Preliminary management recommendations	Works urgency (Preliminary works only)	Category grading
T1	Oak *Quercus robur*	M	Sever ivy around base from ground level to 1m up stem, do not remove lower crown / growth. Decompact the soil within the 15m RPA using air injection, following decompaction erect the temporary protection barriers to prevent access. Excavation / surface level preparation using handheld tools only within the RPA – see method statement provided in section and appendix 5 tree protection plan.	Sever ivy around base from ground level to 1m up stem, **do not** remove lower crown / epicormic growth.	3	A2/3
T2	Holly *Ilex aquifolium*	Y	None	Do not allow to compete with Oak.	3	C1
T3	Sycamore *Acer pseudoplatanus*	EM	None	None	0	C1

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Tree ref	Species	Age class	Tree works to facilitate construction and / or access	Preliminary management recommendations	Works urgency (Preliminary works only)	Category grading
T4	Ash *Fraxinus excelsior*	EM	Fell and grind stump following below ground service assessment.	Sever ivy around base from ground level to 1m up stem.	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 an engineered design using 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 increased RPA but outside the capped 15m RPA as identified in the impact assessment section 5 and tree protection plan appendix 5 for the preparation of levels for the construction of the no-dig access, shed base, hard landscaped path and installation of a fence. It is unlikely that structural roots will be encountered due to the distance from the stem (Landscape below ground Vol 1 2005), structural roots tend to taper after around 4m radial distance. Feeder roots are likely to be encountered, however these die and reform as part of the trees normal biological process, careful removal of a small amount will not have a detrimental effect on the health of the tree assuming the below method statement is adhered to. The method statement provided below is in accordance with British Standard 5837 section 7.2.

Sequential method statement for excavation within the RPA.

1. Remove all grassed surfaces with turf remover set at 50mm, hand barrow and store all turfs outside of RPA. Loosen exposed soils with air spade or fork / rake. Carefully remove topsoil / upper soil horizon using handheld tools only (spade, shovel, soft brush, trowel). Excavation not to exceed 50-75mm for preparation of levels only for the no-dig, shed base and hard landscaped path. Post holes for the fencing will be hand excavated to a depth not exceeding 600mm and 300mm width, debris to be hand barrowed and stored outside of the RPA. Post holes will be lined with plastic sheeting to prevent leaching of cement into the soil, should roots be encountered within the excavated post hole pit, step 2 onwards will be applied.

2. Where roots are encountered but pliable and will not damage from movement, push to side of pit or downwards, pin with hazel rod and cover with minimum of 50mm of soil.

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

4. 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).

5. 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.

6. 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.

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

9.3 Hard surfacing within RPA

9.3.1 Hard, load-bearing surfaces will be required within part of the RPA's of T1 as detailed within the tree protection plan appendix 5. The new hard surfacing is between the capped BS 5837 RPA of 15m and increased RPA. The following method statement should be adopted once approved by the local authority. The construction profile and further information is provided in appendix 5 tree protection plan. The finished surface is to be permeable to allow water infiltration and gaseous diffusion.

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Sequential method statement for installation and construction of no-dig surface.

1 Point 1 may not be necessary if the levels have been prepared as above for hand excavation. Kill any ground vegetation using black plastic sheets laid over existing soft surface for around 12 weeks prior to construction.

2 Rake off dead vegetation. Loosen topsoil / leaf litter with air spade or rake and carefully remove to achieve excavation depth - 50mm for preparation of levels only (some excavation likely to have occurred due to removal of type 1 surface within RPA, see above method statement for hand excavation).

3 Remove major obstructions such as rocks or old tree stumps.

4 Fill major hollows with sharp sand to prepare a levelled flat surface.

5 Add the geotextile to cover the working area.

6 Lay the 100mm 3d cellular confinement system directly on to the geotextile as detailed within the tree protection plan appendix 5.

7 Install sleepers or metal banding for edge support with use of surveyors pegs as support fixings.

8 Working from outside of the RPA or suitable ground protection as described in section 8, tip the 20-40mm stone/ aggregate for the sub-base just before the start point of the cellular system. Initially rake/ shovel the 20-40mm stone for the first 2-3m of the area into place covering the cellular confinement system to the 100mm depth, compact and bind using movements from the tracked mini excavator. Following the first 2-3m of

construction of the access, then push the remaining stone using the tracked mini excavator working directly on the newly created surface/subbase not on any soft surface, compacting and binding as the surface is laid using movements of the tracked mini excavator.

9 Complete and / or repeat point 8 until the sub-base is constructed and covers the length of the cellular confinement/ access route to the required depths. Leave the finished surface until the intensive phase of development is complete.

10 Lay the final/ finished surface following intensive phase of development. Top dress to the edge support with topsoil and lawn seed mix.

9.4 Soft surfaces within RPA

9.4.1 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.
- 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.
- 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 for gas exchange and water percolation.
- 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.

- 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 lance 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 Barrier/ground protection altered after intensive phase of development.

10.7.6 Excavation as detailed within section 9 and tree protection plan appendix 5

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		
Lanpro Ltd	Lead consultants	Daniel@lanproservices.co.uk

Planning Authority

Name	Position	Contact details
Falcon Saunders	Tree and Landscape Officer	Falcon.Saunders@eastsuffolk.gov.ukn

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.	5-3 specifically when hand excavating within the RPA of T1 for the no-dig constructed access, shed base, landscaped path and fence post holes.	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

1010.1 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 the 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 tree features is limited due to the position to the rear of the site and built form that obscures the trees from view from the publicly maintainable highway, footway or other significant public vantage point. The trees range in height and spread to a maximum of 17m in height and spread of 12m but are not prominent features within the street scene. Tree T1 provides good landscape value, this particular tree helps reduce the perceptual load of the built form reducing the visual impact of the surrounding dwellings and hard roof line, Tree T1 is a lapsed pollard and likely around 300+ years of age, whilst the tree does not provide high visual amenity value the tree is part of the historical landscape and offers high landscape value and is synonymous with the surrounding historical town and associations. The wildlife value of T1 is good, trees with veteran associations provide niche microhabitats that have developed over the long life of the tree and are not found on younger stock, the microhabitats often provide a diverse range of habitats that increase local biodiversity. The wildlife value of the remaining species is limited, the structural diversity and connectivity is poor, with reduced ground, sub and higher canopy layers which limits foraging, breeding, migratory and navigational opportunity for less mobile fauna. The trees (T2-T4) are mostly native specimens, non -native trees tend to have limited numbers of associated native insects. The trees (T2-T4) are early mature specimens with a limited number of microhabitats as these tend to favour older / veteran specimens. Typical defects observed were rot / decay columns, deadwood and ivy clad stems (T1). Ivy is nonparasitic and does not cause direct harm to the host tree, it does however mask defects and significant growth can limit the trees ability to photosynthesise. T1 has wood decay fungal fruit bodies within the pollard head and at the base, the fruit body was too decayed to identify but is thought to be *Fistulina hepatica* Beefsteak fungus. This particular fungus causes a slow degradation of the cellulose causing a cubical brown rot, this was evident within the visible decayed areas.

11.1.2 Tree T4 will require removal to facilitate construction of the proposed development plot 4, the tree to be removed is low value (category C) and obscured from view from any significant public vantage point by the existing built form, the loss can be restored with

suitable replacement planting as part of the wider landscape scheme. Supervised excavation for ground level preparation (50-75mm) for the construction of the proposed no-dig access within a section of the RPA of T1 will be required. Minor excavation on the outer limits of the RPA of T1 will be required for the installation of a boundary fence, shed base and landscaped path. A suitable method statement is provided in section 9 and the tree protection plan appendix 5 for supervised hand excavation, the overriding aim of the method statement is to limit the impact that would otherwise occur from deep subbase support, soil compaction and mechanical excavation resulting in tearing of roots and unnecessary root loss. It is unlikely that structural roots will be encountered due to the distance from the stem (Landscape below ground Vol 1 2005), structural tend to taper after around 4m radial distance. Feeder roots are likely to be encountered, however these die and reform as part of the trees normal biological process, careful removal of a small amount will not have a detrimental effect on the health of the tree assuming all method statements are adhered to. Prior to construction it is recommended the RPA of T1 be decompacted to the 15m RPA limits, following this the tree protective fencing should be installed. 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.

TPS

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