

Sharon Hosegood
ASSOCIATES

ARBORICULTURAL REPORT

SITE

Ardleigh Oaks, Old Ipswich Road, Ardleigh, Essex, CO7 7QR

CLIENT

H T Industrial Ltd

report

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FICFor FARborA BSc (Hons) Tech Cert (ArborA)

DATE: January 2024

OUR REF: SHA 1720 Rev A

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Executive summary

This report is submitted in connection with a planning application for the demolition of existing buildings. The construction of a new storage warehouse with a B8 Use Class with associated yard space, parking and ancillary refuse and cycle storage at Ardleigh Oaks, Old Ipswich Road, Ardleigh, Essex, CO7 7QR. I have provided all information in accordance with the British Standard (BS 5837: 2012 *“Trees in relation to design, demolition and construction. Recommendations”* (referred to as BS).

There are no Tree Preservation Orders and the site is not in a Conservation Area. The site is a highway depot. On the northern boundary is an informal group of mature, good quality oaks with smaller scrub and trees in between. On the eastern boundary, on the far (eastern) side of the ditch is a similar line of oaks, although many are younger than the northern line. There is patchy scrub on the southern boundary and a mature group of trees offsite and set back from the western part of the southern boundary. The roadside is screened by native trees and shrubs on the southern half and a line of conifers on the northern half. The conifers are oppressive and incongruous in the semi-rural landscape.

The proposal requires the removal of the conifers to enable site visibility splays and parking. A decayed ash (SHA T8) will be removed due to the risk of failure under ecological supervision. The proposal retains all the mature oaks and enables the significant native planting of 11 trees, native hedging and native shrubbery. This report includes measures for their protection during construction by tree protection and the application of arboricultural method statements. The proposal is accompanied by a landscaping scheme that will enhance biodiversity and result in a net gain of 10 trees.

Categorisation of tree features - trees/groups/hedges/woodlands	Total	Trees/groups to be retained	Trees/groups to be removed
Category A (high value)	2	2	0
Category B (moderate value)	10	10	0
Category C (low value)	10	9	1 group of Leyland cypress
Category U (unsuitable for retention)	1	0	1
Total	23	21	2 (1 excluding U)

Table 1 – tree numbers by category

Trees/Groups to be retained	Trees/groups to be removed excluding	Standard Trees to be planted	Net gain
21	1	11	10

Table 2 – tree numbers

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1. Introduction:

- 1.1. This report accompanies a planning application to Tendring District Council for the demolition of existing buildings. The construction of a new storage warehouse with a B8 Use Class with associated yard space, parking and ancillary refuse and cycle storage at Ardleigh Oaks, Old Ipswich Road, Ardleigh, Essex, CO7 7QR. The work is in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction. Recommendations*' (referred to as BS).
- 1.2. This report details tree condition, the impact of the proposal on, and from, the existing trees and the measures taken to protect trees to be retained. It also includes tree surgery recommendations.
- 1.3. The survey has resulted in a layout as shown in the tree protection plan at Appendix 3. Where technical terms are used, explanations are found in the glossary.

2. Statement of instructions and the issues addressed:

- 2.1. I was instructed by Phase II Planning on behalf of H T Industrial Ltd to:-
 - 2.1.1. Carry out a tree survey in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*' (BS);
 - 2.1.2. Analyse the proposals and the impact on trees to be retained;
 - 2.1.3. Produce a tree protection plan, showing the location of the tree protection fencing in accordance with the BS and a specification for the protection of the existing trees;
 - 2.1.4. Provide a tree surgery schedule which includes work to facilitate construction, based on the layout of, and works to, trees due to their condition or previous management;
 - 2.1.5. Provide arboricultural method statements in as much detail as is practical at this stage.
- 2.2. The issues addressed are tree condition, and how the proposal impacts on the site and vice versa.

3. The site:

- 3.1. The site is a Highway Depot accessed on the western side from Old Ipswich Road. To the north is a commercial area, and to the east is a ditch parallel to the boundary beyond which is a narrow rectangular field. To the south is a bund with a belt of tree on the western part of the southern boundary. The site is laid to hard standing.



Plan 1 – extract from Location Plan reference 23.536.

Do not scale, north is vertical.

- 3.2. *Site soils:* An assessment of soils on-site was carried out by a desktop analysis using the National Soil Resources Institute website which identified the soils as likely to be slightly acid loamy and clayey soils with impeded drainage. This is a guide only and detailed on-site soil analysis should be undertaken by the project engineer to inform the foundation design. The soil is likely to be made ground and a contamination survey is likely to be required.

4 The trees:

- 4.1. *Generally:* There are 19 individual trees, 4 groups and 1 hedge which form the subject of this survey, 12 of which are offsite. Full details are found in the survey sheets at appendix 1 and their location on the tree survey plan *SHA 1720 TSP* at appendix 2.
- 4.2. *Legislation:* There are no Tree Preservation Orders affecting the site and it is not within a Conservation Area. Further information on legislation is found at appendix 7.

4.3. Trees along the northern boundary:

The mature oaks are part of an old field boundary. They have a strong landscape presence and are an important habitat. T3 has an area of missing bark and sounds hollow when tapped with a mallet. Further investigation is recommended using specialist equipment. T8 ash has a decay fungus (*Inonotus hispidus*) that could lead to tree failure. This has been assessed by climbing inspection by an ecologist at Tim Moya Associates and its removal will be carried under ecological supervision.

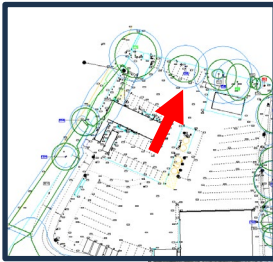
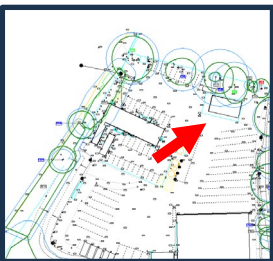


Photo 1 of T2 looking north



T3

T4



T3 Missing bark

Scrubby goat willow

Photo 2 of T3 and T4 looking north-east, Note scrub in the fenced area.

4.4. Trees on the eastern boundary

The oaks vary from mature to semi-mature and are growing on the eastern side of a deep boundary ditch. It is highly likely that the trees are rooting preferentially in the field to the west. They provide collective screening, habit and landscape value; with the northern half being the highest quality.



Photo 3 of T9 and T12 looking approximately south along the eastern boundary



Photo 4 of T17 looking north towards T13 along the eastern boundary

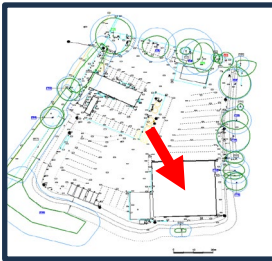
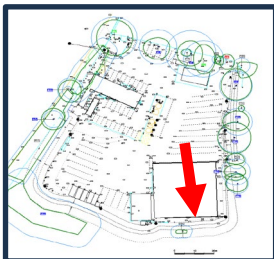


Photo 5 of T14 to T17 looking approximately south along the eastern boundary

4.5. Trees and vegetation on the southern boundary:

The bank is scrubby bramble with a small patch of thorn (G18). On the western side, set back from the boundary, is a mature group of mixed native trees of high landscape value.



G18



Photo 6 of a general view of the southern bund looking towards G18

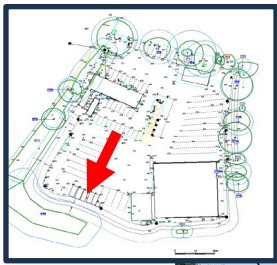


Photo 7 of G19 looking south

4.6. *Trees and vegetation on the eastern boundary:*

The southern half of the eastern boundary is on the Highway verge. It is a mix of native trees (mostly field maple), a semi mature ash (T20) and early mature oak (T22). They provide collective screening and are in keeping with the landscape character. On the site side is a dense line of Leyland cypress 18m high. This group is incongruous with the landscape character and is rather oppressive.

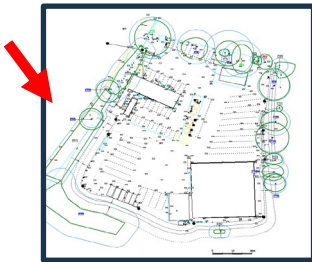


Photo 8 of T20 and G21 looking east

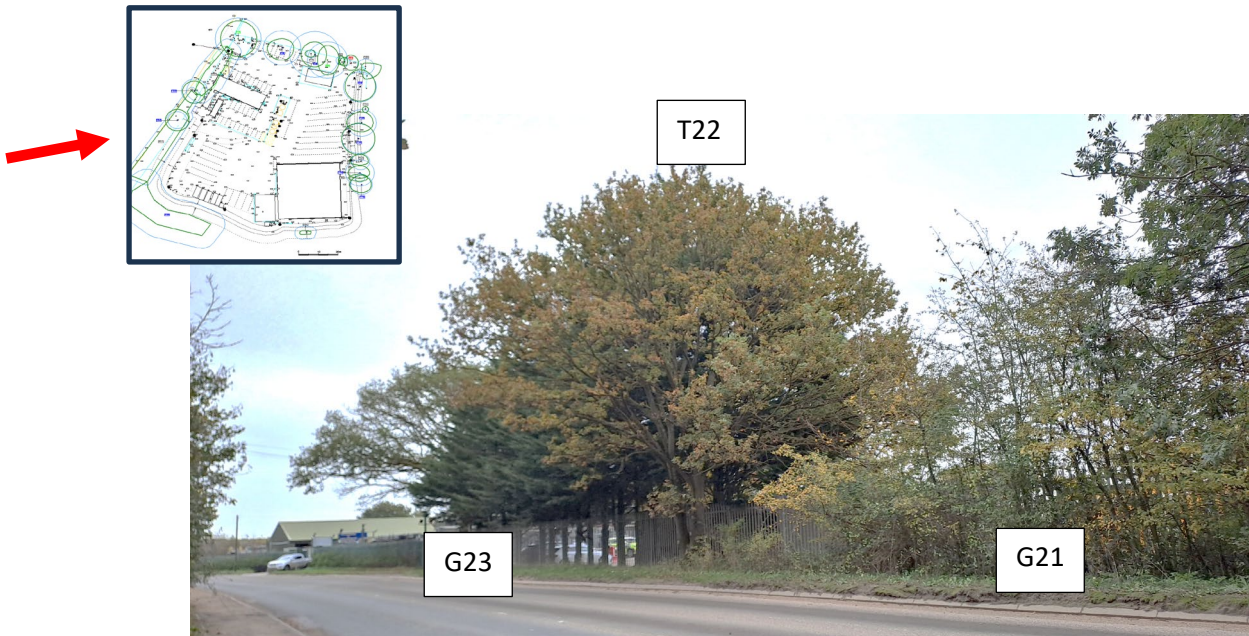


Photo 9 of T22 and G23 looking north east

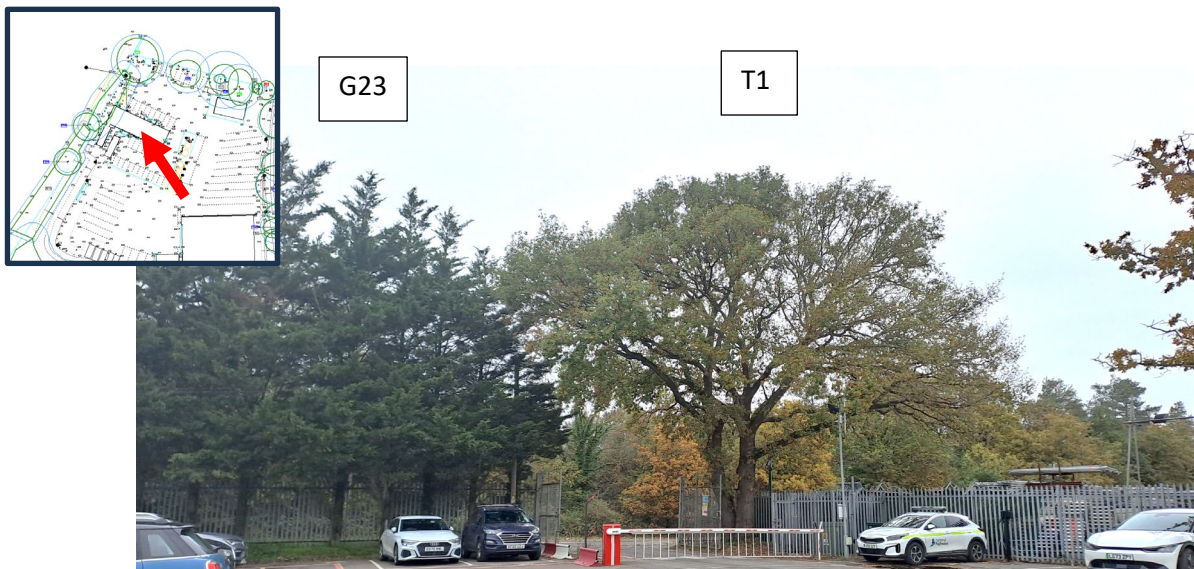


Photo 10 of T1 and G23 looking north-west

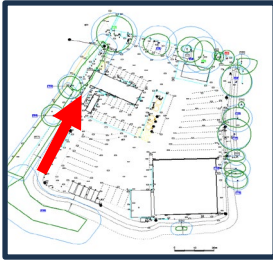


Photo 11 showing interior of the line of conifers G23. Looking north.

4.7. BS retention category of trees in this survey, including offsite trees:

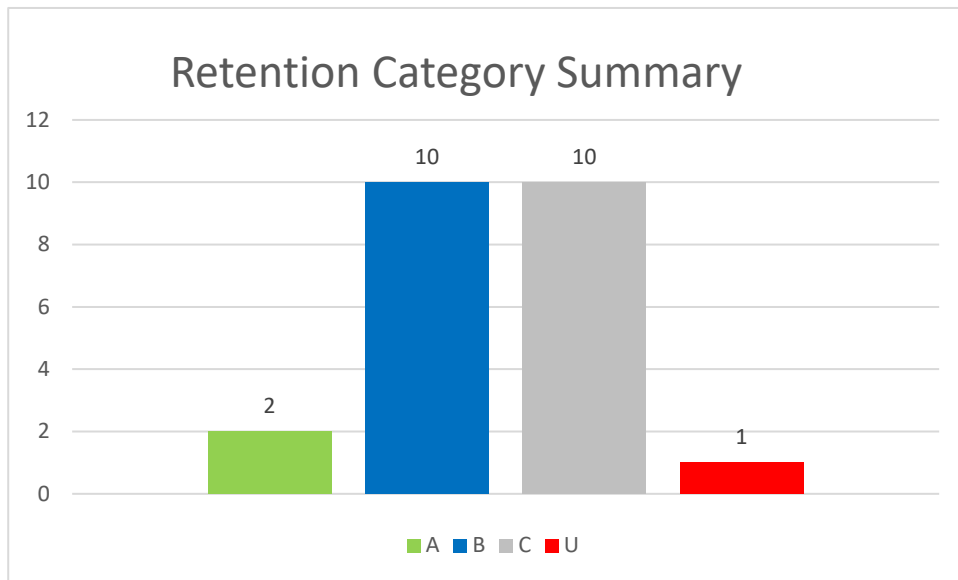


Table 3 – Retention category
 A – high quality
 B – moderate quality
 C – low quality
 U – unsuitable for retention

5. The Proposal

5.1. For the demolition of existing buildings. The construction of a new storage warehouse with a B8 Use Class with associated yard space, parking and ancillary refuse and cycle storage.

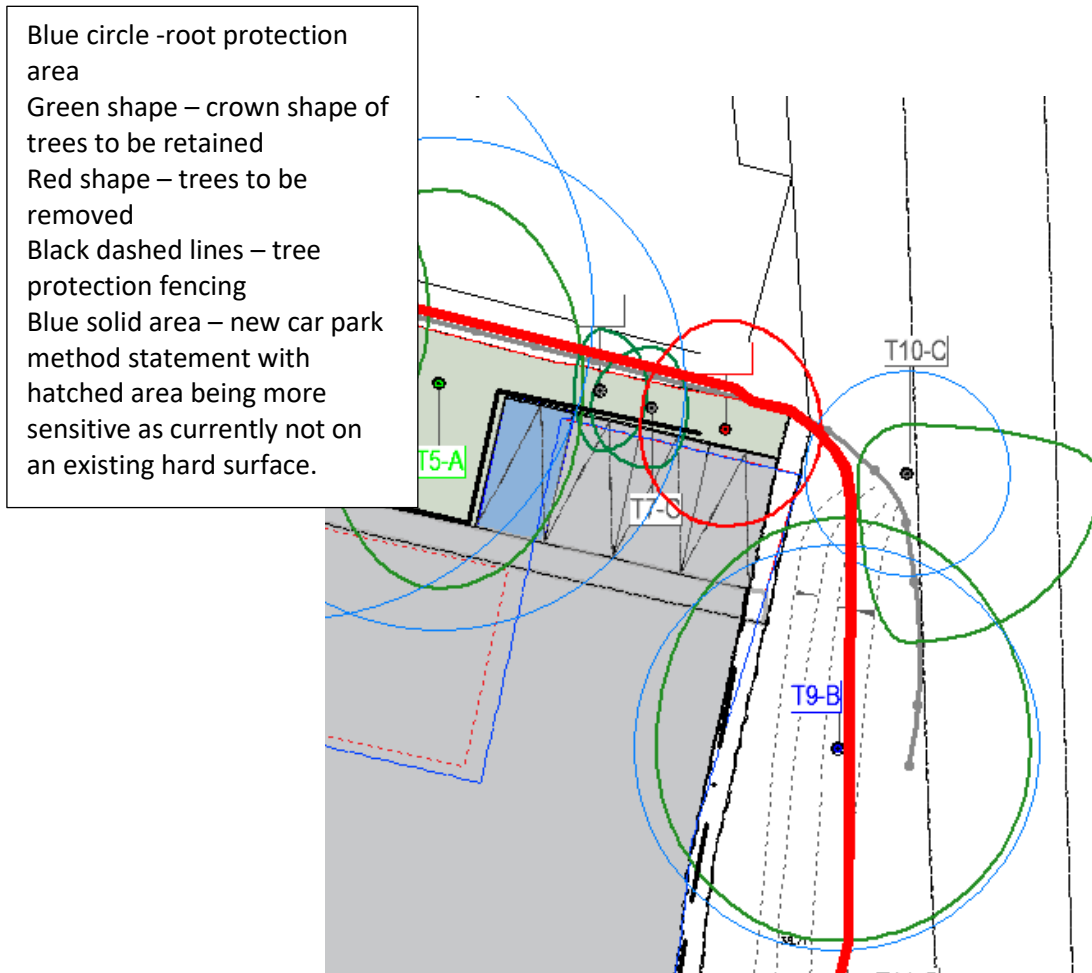
6. Arboricultural impact assessment:

- 6.1. *Summary of the impact on trees:* Development can adversely impact on trees by causing them to be removed to facilitate the development, or in the future, by adversely affecting their potential for retention through disturbance in root protection areas (RPAs) or through post development pressure to prune or remove.
- 6.2. Tree roots can be asphyxiated and die if the rooting zone becomes compacted and soil structure damaged which can easily occur, particularly on clay soils, even with the passage of light vehicles. At the design stage, disturbance within the RPA should be avoided. If unavoidable (which may need demonstrating), consideration must be given to any construction activity such as demolition, including removal of existing hard surfaces, changing soil levels and the provision of services where within RPAs, as well as new surfaces and structures.
- 6.3. At the planning stage, any works proposed with RPAs must be shown to be achievable with minimal impact on retained trees. Areas should be identified where a detailed Arboricultural Method Statement will be required post planning consent.
- 6.4. *Trees to be removed:*
- T8 (U) ash is recommended for removal due to decay by *Inonotus hispidus* fungus which is highly likely to lead to failure. This will be carried out under ecological supervision.
 - G23 (C) Leyland cypress group to facilitate site splay and parking.

Trees to be retained are shown as green on the plan SHA 1720 TPP A at appendix 3, and trees to be removed are shown as red.

6.5 *Trees to be pruned:*

Crown lifting and dead wood removal will take place over the hard surfaces, but not where the trees are growing over open ground. Two small trees, T6 (C) and T7 (C) will be pruned back to ease parking. All tree works are detailed in appendix 4 – Tree Surgery Schedule.



Plan 2 – extract from SHA 1730 TPPA. Do not scale, north is vertical.

6.6 Tree protection measures –

Trees to be retained and protected during works by a combination of tree protection fencing and ground protection in accordance with the specification at appendix 5 at the locations shown on the tree protection plan SHA 1720 TPPA at appendix 3.

6.7 Impact on the roots –

Sensitive areas of working are as follows:

T1 oak (A) – The installation of the kerb will be carried out under arboricultural supervision to ensure that the excavation is no deeper than the shallowest root (diameter greater than 20mm). The existing hard surface under the oak tree will mostly be removed as shown by the green diagonal hatching on plan 3 overleaf. This will be carried out under arboricultural supervision in accordance with the draft method statement at appendix 6 section 9.

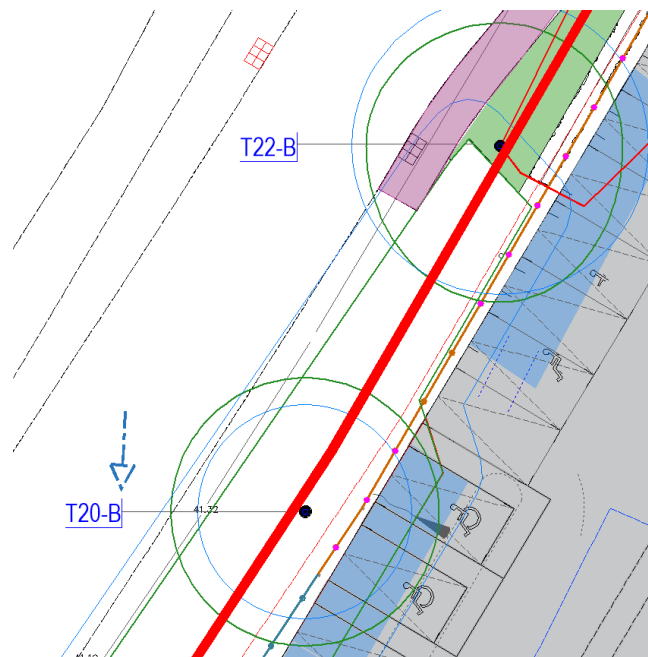
T5 oak (A), T20 ash (B) and T22 oak (B) – the installation of the parking will be carried out using minimal/do dig construction and porous tarmac with timber or steel edge treatments in the root protection areas of these trees.

A draft Arboricultural Method Statement at appendix 6 section 10 addresses this, and will be developed further post planning.



Plan 3 – extract from SHA 1730 TPPA. Do not scale, north is vertical. Pink is the kerb installation and green diagonal hatching is the area where Arboricultural Method Statement applies for lifting hard surfacing.

T20 and T22 (B) - will have new security fencing. Where the posts are within the root protection areas, the method statement at appendix 6 section 12 applies. The footpath on the highway within the root protection area of T22 will have to be constructed to ECC standards who (at the time of writing) do not accept porous construction and have a standard specification. Arboricultural supervision will ensure minimal dig to retain any rotos that may be growing under the proposed footpath.



Plan 4– extract from SHA 1730 TPPA. Do not scale, north is vertical. Blue area is for new hard surfacing (porous tarmac) and the purple area if for the new tarmac footpath.

7. Conclusions:

7.1. The proposal requires the removal of the conifers to enable site visibility splays. A decayed ash will be removed due to the risk of failure under the supervision of a licenced ecologist. All other trees will be retained and provide a mature landscape framework for the proposal.

7.2. The proposal retains all the mature oaks and significant native planting, and this report includes measures for their protection during construction by tree protection and the application of arboricultural method statements which will be carried out under arboricultural supervision. The proposal is accompanied by a landscaping scheme that will enhance biodiversity and result in a net gain of 10 trees. The species are: 2 field maple, 2 silver birch, 3 beech and 4 oaks. In addition, there will native hedging and shrub boundary planting.

7.3. The scheme adheres to the following policies (see appendix 7 for further details)

Policy	Compliance demonstrated (in relation to arboriculture)
NPPF 2021 186 (c)	The scheme does not result in the loss or deterioration of ancient woodlands or ancient and veteran trees.
Tendring District Local Plan 2013 - 2033	PPL3 The proposal retains the native hedges and trees of value
Tendring District Local Plan 2013 - 2033	PPL4 The proposal does not affect any veteran trees or ancient and semi-natural woodland
Tendring District Local Plan 2013 - 2033	EP - There will not be less green quality landscape features (including trees, hedges and shrubs), and all new green landscape features of an appropriate local or native species

Table 4 – policy impact

Categorisation of tree features - trees/groups/hedges/woodlands	Total	Trees to be retained	Trees to be removed
Category A	2	2	0
Category B	10	10	0
Category C	10	9	1 group of Leyland cypress
Category U	1	0	1
Total	23	21	2 (1 excluding U)

Table 5– tree numbers by category

Trees/groups to be retained	Trees/groups to be removed	Trees to be planted	Net impact
21	1	11	10

Table 6 – tree number

8. Recommendations:

- 8.1. That a copy of this report, and subsequent more detailed arboricultural method statement, is kept on site, including A3 colour copies of the tree protection plan. The arboricultural documents will be part of site induction by the main contractor to all sub-contractors.
- 8.2. That the arboricultural method statements are developed further and are observed by all site personnel and supervised at key stages by the project arboricultural consultant. Short supervision reports are to be written after each inspection as a record of compliance and audit trail to the Local Authority.
- 8.3. That the foundation design takes into account trees to be retained, trees to be removed and trees to be planted.
- 8.4. That there are no ground level changes with the area shown on the plan by tree protection fencing. A meeting is to be held with the Civils team and the arboriculturist in particular regarding parking near T5.

- 8.5. That the line of the underground services should be ideally located outside of Root Protection Areas. However, as a precaution the final service plan should be assessed by an arboriculturist. If it is unavoidable that services are to be located in RPAs, then a method statement must be produced. A meeting is to be held with the Civils team and the arboriculturist.
- 8.6. That the landscaping scheme includes a mix of trees from a cross section of species to ensure biosecurity against host specific pests and diseases. The trees must be planted and maintained in accordance with BS 8545:2014 *Trees: from nursery to independence in the landscape – Recommendations*. The landscaping scheme should include enriched biochar around new planted and existing trees. The current landscaping scheme is considered to be appropriate in terms of arboricultural and landscape architecture.
- 8.7. That no tree works take place until consent is granted other than the removal of dead and broken precarious branches
- 8.8. That the tree protection fencing is installed before machinery enters the site and remains in place until the soft landscaping stage.
- 8.9. That the locations of the exploratory intrusive investigation for contamination are assessed by the arboricultural consultant and that the ground remediation methodology near trees is discussed with the arboricultural consultant.
- 8.10. That the drainage strategy detailing on and/or offsite drainage works, including SUDS, is reviewed by the arboricultural consultant to ensure minimum impact on trees to be retained and is mindful of new trees to be planted.

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Director

Sharon Hosegood Associates Ltd

Appendix 1

Tree survey sheets

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T1	Quercus robur (Common Oak)	M	700 680	2	12(4)	22	10	9.5	10	9	Good	40+	A2	11.71	430.84	Provides a high level of visual amenity. Prominent tree. Good form and condition. Part of linear group. Epicormics on stem. Stem divides at ground level. Small amount of twig sized dead wood interspersed in the crown. At entrance next to fence. Has been crown lifted in the past with some large wounds. Owl box in tree.	Carry out aerial inspection. Remove major deadwood. Remove broken/damaged branches.
T2	Quercus robur (Common Oak)	EM	560 570	2	10(4)	22	5	6	7	7.5	Fair	40+	B2	9.59	288.96	Reasonable form and condition. Collective, rather than individual, visual amenity. Epicormics on stem. Stem divides below 1.5m. Dieback in crown. Broken branches in crown. Major deadwood in crown. On edge of car park with tarmac over half of footplate on southern side. Roots rippling tarmac. Ingrown wire around trunk. Concrete hard surfacing on Northern Side (offsite) is probable cause of dieback on Northern Side. A few old tear out wounds and an old scuff on southern side at 3m has emergent Dryads saddle (<i>Cerioporus squamosus</i>). Has been selectively reduced in the past with good growth.	Remove major deadwood. Remove broken/damaged branches.

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T3	Quercus robur (Common Oak)	M	1070	1	13(5)	22	7	6	7	7	Fair	40+	B2	12.84	518.01	Reasonable form and condition. Collective, rather than individual, visual amenity. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Decay present on stem. Major bark wounding on stem. Epicormics on stem. Small amount of twig sized dead wood interspersed in the crown. On edge of loose hardstanding. One third of the lower trunk has a large area of bark missing from the trunk. Tree sounded with a mallet revealing that it is hollow behind the decay and decayed fungal fruiting body at base. Ivy to 5m. Has been heavily pruned in the past resulting dense growth with late autumn.	Carry out investigation with tomography and or resistograph.
T4	Crataegus monogyna (Hawthorn)	SM	200	1	4(0)	10	2	2	2	3	Fair	10+	C2	2.4	18.1	Reasonable form and condition. Plotted by eye as not on topo. Ivy on tree. Unable to inspect stem due to Ivy. Suckers around stem base.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T5	Quercus robur (Common Oak)	M	850	1	17(5)	22	8	6	8.5	5	Good	40+	A2	10.2	326.89	Good form and condition. Collective, rather than individual, visual amenity. Part of linear group. Epicormics on stem. Stem divides above 1.5m. Co dominant. Small amount of twig sized dead wood interspersed in the crown. One of the higher quality trees. On edge of loose hardstanding. Branches have been reduced on North Eastern side next to adjacent building. Late to autumn. Dense ivy mid trunk.	
T6	Crataegus monogyna (Hawthorn)	SM	100 100 100 100	4	7(0)	11	2.5	2	2.5	1	Fair	10+	C2	2.4	18.1	Reasonable form and condition. Plotted by eye as not on topo. Ivy on tree. Multiple stems at ground level. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure.	
T7	Acer campestre (Field Maple)	SM	150	2	7(0)	15	2.5	1.5	2.5	2.5	Fair	20+	C2	2.54	20.27	Reasonable form and condition. Ivy on tree. Stem divides at ground level. Crown distorted due to group pressure. Low value shrubby tree under Ash canopy.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T8	Fraxinus excelsior (Ash)	M	700 150 300	3	9(2)	13	4.5	4	4	3.5	Poor	<10	U	9.31	272.34	Poor shape & form. Ivy on tree. Unable to inspect stem due to Ivy. Epicormics on stem. Stem divides at ground level. This tree has been heavily reduced down to 7m. Large Inonotus hispidus bracket with associated columns of decay. Risk of failure. Next to sign storage area.	Remove tree and retain root.
T9	Quercus robur (Common Oak)	M	700	1	10(2)	22	9.5	8	8	7.5	Good	40+	B2	8.4	221.7	Good form and condition. Collective, rather than individual, visual amenity. Squat. Ivy on tree. Unable to inspect stem due to undergrowth. Small amount of twig sized dead wood interspersed in the crown. Growing on Eastern side of bramble covered bank, so stem diameter and condition estimated. Likely to be an old lapsed pollard. Open, lax habit so unlikely to reach typical mature height.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T10	Fraxinus excelsior (Ash)	EM	250 200 150	3	10(3)	22	2	8	7	2	Fair	10+	C2	4.25	56.75	Offsite tree. Plotted by eye as not on topo. Stem data estimated as offsite. Leaning East. Unable to inspect stem due to undergrowth. Stem divides at ground level. Broken branches in crown. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure.	
T11	Crataegus monogyna (Hawthorn)	SM	100	2	4(0)	11	1.5	1.5	2	1.5	Fair	20+	C2	1.69	8.97	Offsite tree. Reasonable form and condition. Plotted by eye as not on topo. Stem data estimated as offsite. Unable to inspect stem due to undergrowth.	
T12	Quercus robur (Common Oak)	EM	550 300	2	10(4)	22	6	6	5	7.5	Good	40+	B2	7.51	177.21	Reasonable form and condition. Collective, rather than individual, visual amenity. Part of linear group. Unable to inspect stem due to undergrowth. Stem divides at ground level. Crown distorted due to group pressure. Small amount of twig sized dead wood interspersed in the crown. Growing on Eastern side of deep bramble covered ditch. Stem diameter and condition estimated.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T13	Quercus robur (Common Oak)	M	700	1	11(1)	22	8.5	8.5	9	8.5	Good	40+	B1	8.4	221.7	Offsite tree. Stem data estimated as offsite. Good form and condition. Collective, rather than individual, visual amenity. Part of linear group. Unable to inspect stem due to undergrowth. Epicormics on stem. Small amount of twig sized dead wood interspersed in the crown. Growing on the Eastern side of a deep bramble covered ditch. Stem diameter and condition estimated.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T14	Quercus robur (Common Oak)	SM	200 200 150 150 150	5	8(4)	22	4	4	2	5.5	Fair	40+	C2	4.61	66.77	Offsite tree. Reasonable form and condition. Stem data estimated as offsite. Collective, rather than individual, visual amenity. Part of linear group. Unable to inspect stem due to undergrowth. Stem divides at ground level. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Small amount of twig sized dead wood interspersed in the crown. Growing on Eastern side of deep bramble covered ditch. Stem diameter and condition estimated.	

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T15	Quercus robur (Common Oak)	EM	300 400 350	3	10(4)	22	4	5	3	6	Fair	40+	B2	7.32	168.36	Reasonable form and condition. Plotted by eye as not on topo. Stem data estimated as offsite. Collective, rather than individual, visual amenity. Part of linear group. Unable to inspect stem due to undergrowth. Stem divides at ground level. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Small amount of twig sized dead wood interspersed in the crown. Growing on Eastern side of deep bramble covered ditch. Stem diameter and condition estimated.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T16	Quercus robur (Common Oak)	SM	150	2	7(4)	22	2	4	2	5.5	Fair	40+	C2	2.54	20.27	Offsite tree. Reasonable form and condition. Plotted by eye as not on topo. Stem data estimated as offsite. Collective, rather than individual, visual amenity. Part of linear group. Unable to inspect stem due to undergrowth. Stem divides at ground level. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Small amount of twig sized dead wood interspersed in the crown. Growing on Eastern side of deep bramble covered ditch. Stem diameter and condition estimated. Very suppressed by neighbouring oaks.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T17	Quercus robur (Common Oak)	EM	300 350	2	12(4)	22	5	5	4.5	6	Fair	40+	B2	5.53	96.09	Reasonable form and condition. Plotted by eye as not on topo. Stem data estimated as offsite. Collective, rather than individual, visual amenity. Part of linear group. Unable to inspect stem due to undergrowth. Stem divides at ground level. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Small amount of twig sized dead wood interspersed in the crown. Growing on Eastern side of deep bramble covered ditch. Stem diameter and condition estimated.	
G18	Crataegus monogyna (Hawthorn), Ilex aquifolium (Holly)	SM	150	2	4(0)	11	2	2	2	2	Fair	20+	C2	2.54	20.27	Reasonable form and condition. Plotted by eye as not on topo. Unable to inspect stem due to undergrowth. Growing on top of bramble covered bund.	
G19	Quercus robur (Common Oak), Acer campestre (Field Maple)	M	600	1	18(4)	22	7	7	7	7	Good	40+	B2	7.2	162.88	Offsite group to the south of bund. Observed from site and plotted approximately. Attractive backdrop to site.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
T20	Fraxinus excelsior (Ash)	SM	400	1	8(1)	22	6	6	6	6	Fair	40+	B2	4.8	72.39	Offsite tree. Reasonable form and condition. Collective, rather than individual, visual amenity. Unable to inspect stem due to undergrowth. Growing in highway verges amongst dense undergrowth. Rounded form. No sign of Ash dieback at time of survey.	
T22	Quercus robur (Common Oak)	EM	350 430	2	10(3)	22	5.5	5.5	7	6	Good	40+	B2	6.65	138.95	Provides a high level of visual amenity. Prominent tree. Offsite tree. Reasonable form and condition. Stem divides below 1.5m. Historically crown lifted and occluded well. Small amount of twig sized dead wood interspersed in the crown. Growing in highway verge.	
G21	Acer campestre (Field Maple), Quercus robur (Common Oak), Prunus spinosa (Blackthorn)	SM	150	1	6(0)	18	2	2	2	2	Good	40+	C1	1.8	10.18	Offsite tree. Forms a dense screen. Part of linear group. Growing very close to neighbouring tree resulting in unbalanced crown. Dense roadside planting. Predominately field maple.	

Client: HT Industrial Ltd

Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations
G23	X Cupressocyparis leylandii (Leyland Cypress)	SM	350	1	18(2)	28	4.5	4.5	4.5	4.5	Good	40+	C1	4.2	55.42	Provides a high level of visual amenity. Reasonable form and condition. Forms a dense screen. Collective, rather than individual, visual amenity. Part of linear group. Crown distorted due to group pressure. Dense unmanaged line of conifers functioning as a high hedge. Average dimensions given.	

Explanation of the tree survey sheets

The tree survey has been carried out in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Below is an annotation of the abbreviations in the sheet and their meanings.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m ²)	Comments	Recommendations

1 Tree

T - Tree, **G** - Group of trees, **H** - Hedge and **S** -shrub mass

2 Species - Botanical name and (Common name)

3 Age

NP – Newly planted, **Y** – Young - an establishing tree that could be easily transplanted

SM - Semi-mature - an established tree still to reach its ultimate height and spread with considerable growth potential.

EM – Early mature – a tree reaching its ultimate height and whose growth is slowing, however it will still increase considerably in stem diameter and crown spread.

M – Mature – a tree with limited potential for further significant increase in size, although likely to have a considerable safe useful life expectancy

OM – Over-mature – of an age where the mature size of the tree can no longer be maintained, and adaptive growth strategies such as 'retrenchment' (growing down) are commencing. These strategies should not be confused with senescence or a moribund condition, as a good life expectancy can remain.

V – Veteran/Ancient – either a tree older than typical for the species, or a tree showing signs of age, and of great ecological, cultural or aesthetic value.

4 Dia (mm)

Diameter of the stem in millimetres at 1.5m above ground level for single stemmed tree or in accordance with Annex C of BS 5837 for multi-stemmed trees or trees with low forks or irregular stems.

5 Stems

Number of stems. Multi-stemmed is m/s

6 Height (Crown height)

Height in metres from the ground to the top of the crown

(Crown height) – height of canopy above ground level

7 Ult ht (m)

Height in metres that could be reasonably expected for the species given its condition, past management and location.

8 NSEW

The crown spread from the trunk to the tips of the crown at the four cardinal points

9 Cond

Physiological condition. Good, fair, poor or dead

10 Life Exp

Estimated remaining contribution in years; <10, 10+, 20+ and 40+.

11 BS Cat

Category in accordance with Table 1 and section 4.5 of BS

U – unsuitable for retention. Existing condition is such that they cannot be realistically retained as living trees in the context of the current land use for longer than 10 years. Note, category U trees can have existing or potential conservation value which might be desirable to preserve.

A – high quality and value (non-fiscal) with at least 40 years remaining life expectancy

B – moderate quality and value with at least 40 years remaining life expectancy

C – low quality and value with at least 10 years remaining life expectancy, or young trees with a stem diameter below 150mm

A, B and C category trees are additionally graded into: 1 – mainly arboricultural values, 2 – mainly landscape values and 3 – mainly cultural values including conservation

12 RPR (m)

RPR – Root protection area radius (m)

13 RPA – Root protection area (m²)

14 Comments

Detailed comments about the tree

15 Preliminary recommendations

Recommendations based on the tree's conditions and its current surroundings.

Appendix 2

Tree survey plan SHA 1720 TSP



- T1-A Category A - high quality and value
- T1-B Category B - moderate quality and value
- T1-C Category C - low quality and value
- T1-U Category U - unsuitable for retention
- Crown spread
- RPA - root protection area as defined by Table 2 BS 5837:2012
- G Group
- Group

Notes

1. Contractors to check all dimensions on site
2. Discrepancies must be reported to the Arboricultural Consultant before proceeding
3. The original of this drawing was produced in colour, a monochrome copy should not be relied upon.
4. It is the responsibility of the contractor to ensure necessary consents for tree works are in place
5. This drawing is copyright © Sharon Hosegood Associates Ltd

Rev :	Description :	Authorized :



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Client
H T Industrial Ltd

Site Address
**Ardleigh Oaks, Old Ipswich Road, Ardleigh,
Essex, CO7 7QR**

Drawing Title	Orientation	Drawn	Authorized
Tree Survey Plan		ND-H	SMD-H
Date	Drawing Number	Scale	Drawing Status
15.11.23	SHA 1720 TSP	1:500@A3	For Issue
Revision	-		

Appendix 3

Tree protection plan SHA 1720 TPP A

Notes

1. Contractors to check all dimensions on site
2. Discrepancies must be reported to the Arboricultural Consultant before proceeding
3. The original of this drawing was produced in colour, a monochrome copy should not be relied upon.
4. It is the responsibility of the contractor to ensure necessary consents for tree works are in place
5. This drawing is copyright © Sharon Hosegood Associates Ltd



- T1-A Category A - high quality and value
- T1-B Category B - moderate quality and value
- T1-C Category C - low quality and value
- T1-U Category U - unsuitable for retention
- Trees to be retained
- RPA - root protection area as defined by Table 2 BS 5837:2012
- Group to be retained
- Group to be removed
- Tree protection fencing comprising braced Heras panels
- New kerb installation to be no deeper than existing subbase for hard surface
- Arboricultural method statement for new hard surface installation
- Minimal/no dig installation of ECC Highway footpath specification
- Arboricultural method statement for removal of hard surface to create new soft surface
- Arboricultural method statement for installation of fence posts in root protection areas
- Line of existing hard surfacing

Rev : A Description : Updated scheme Authorized : SMD-H 19.01.24



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Drawing Title	Orientation	Drawn	Authorized
Tree Protection Plan	I	ND-H	SMD-H
Date	Drawing Number	Scale	Drawing Status
12.12.23	SHA 1720 TPP	1:500@A3	For Issue
Revision			

Appendix 4

Tree surgery schedule

Tree surgery schedule

All works to be carried out in accordance with BS 3998:2010 'Tree works – Recommendations'. All pruning cuts to be made at suitable growing points in the line with the principles of 'Natural target pruning'. An ecological check is required by a competent person prior to tree works being carried out and the ecological report referred to. Works should not take place until planning permission is granted and all pre-commencement conditions are discharged. This must be communicated to the tree surgeon and storage agreed with the demolition/main contractor.

Tree no.	BS category	Species	Proposed works	Reason
T1	A2	Common Oak	Carry out aerial inspection. Remove major deadwood. Remove broken/damaged branches. Ensure crown clearance of 5m on southern and western side.	For safety reasons To provide sufficient clearance under the crown for safety reasons
T2	B2	Common Oak	Remove major deadwood. Remove broken/damaged branches. Ensure crown clearance of 4m on southern side	For safety reasons and to provide clearance for the car park
T3	B2	Common Oak	Carry out investigation with tomography and or resistograph. Remove major deadwood. Remove broken/damaged branches. Ensure crown clearance of 4m on southern side	For safety reasons as the tree has large area of missing bark and sounds hollow. To provide clearance for the car park
T4	C2	Hawthorn	No works	n/a
T5	A2	Common Oak	Remove major deadwood. Remove broken/damaged branches. Ensure crown clearance of 4m on southern side	For safety reasons and to provide clearance for the car park
T6	C2	Hawthorn	Prune back hard on car park side	To ease car park use
T7	C2	Field Maple	Prune back hard on car park side	To ease car park use

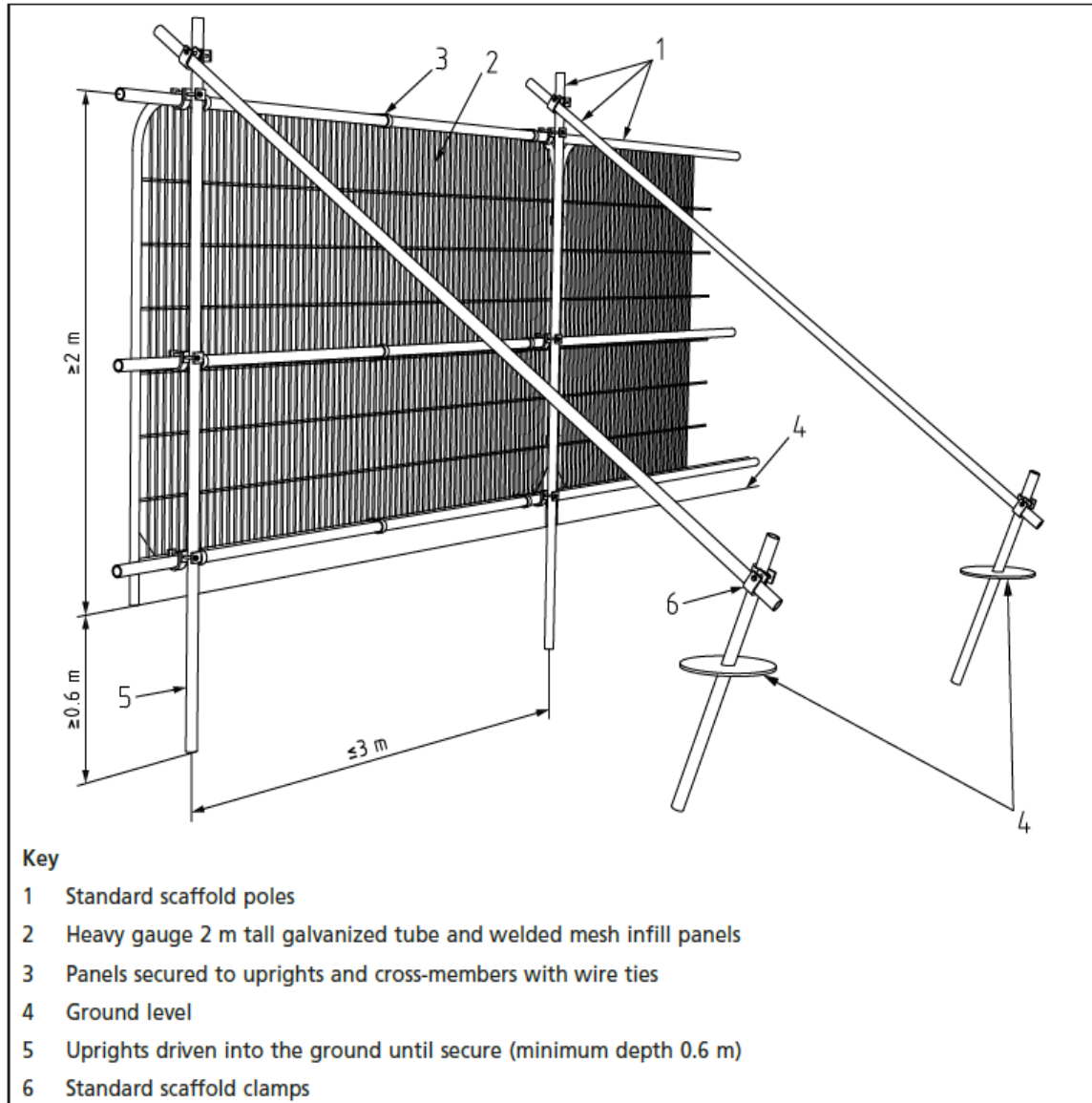
Tree no.	BS category	Species	Proposed works	Reason
T8	U	Ash	Remove tree and retain root under the supervision of a licenced bat ecologists	This tree has a decay fungus <u>Inonotus hispidus</u> and there is a risk that it might fall
T9	B2	Common Oak	Remove major deadwood on edge of western side only. Remove broken/damaged branches on edge of western side only. Ensure crown clearance of 4m on western side	For safety reasons and to provide clearance for the car park
T10	C2	Ash	No works	n/a
T11	C2	Hawthorn	No works	n/a
T12	B2	Common Oak	Remove major deadwood on edge of western side only. Remove broken/damaged branches on edge of western side only. Ensure crown clearance of 4m on western side	For safety reasons and to provide clearance for the car park
T13	B1	Common Oak	Remove major deadwood on edge of western side only. Remove broken/damaged branches on edge of western side only. Ensure crown clearance of 4m on western side	For safety reasons and to provide clearance for the car park
T14	C2	Common Oak	Remove major deadwood on edge of western side only. Remove broken/damaged branches on edge of western side only	For safety reasons and to provide clearance for the maintenance of the ditch
T15	B2	Common Oak	Remove major deadwood on edge of western side only. Remove broken/damaged branches on edge of western side only	For safety reasons and to provide clearance for the maintenance of the ditch
T16	C2	Common Oak	Remove major deadwood on edge of western side only. Remove broken/damaged branches on edge of western side only	For safety reasons and to provide clearance for the maintenance of the ditch

Tree no.	BS category	Species	Proposed works	Reason
T17	B2	Common Oak	Remove major deadwood on edge of western side only. Remove broken/damaged branches on edge of western side only	For safety reasons and to provide clearance for the maintenance of the ditch
G18	C2	Hawthorn, Holly	No works	N/a
G19	B2	Common Oak, Field Maple	No works	N/a
T20	B2	Ash	Remove major deadwood on edge of eastern side only. Remove broken/damaged branches on edge of eastern side only. Ensure crown clearance of 4m on eastern side	For safety reasons and to provide clearance for the car park
T22	B2	Common Oak	Remove major deadwood on edge of eastern side only. Remove broken/damaged branches on edge of eastern side only. Ensure crown clearance of 4m on eastern side	For safety reasons and to provide clearance for the car park
G21	C1	Field Maple, Common Oak, Blackthorn	Remove major deadwood on edge of eastern side only. Remove broken/damaged branches on edge of eastern side only. Ensure crown clearance of 4m on eastern side	For safety reasons and to provide clearance for the car park
G23	C1	Leyland Cypress	Remove trees and roots	To facilitate parking and site visibility splay.

Appendix 5

Tree protection specification

Figure 2 Default specification for protective barrier



Tree protection fencing specification from BS 5837:2012 Figure 2

Section 6.2.2 of BS.

Barriers should be fit for purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Barriers should be maintained to ensure that they remain rigid and complete.

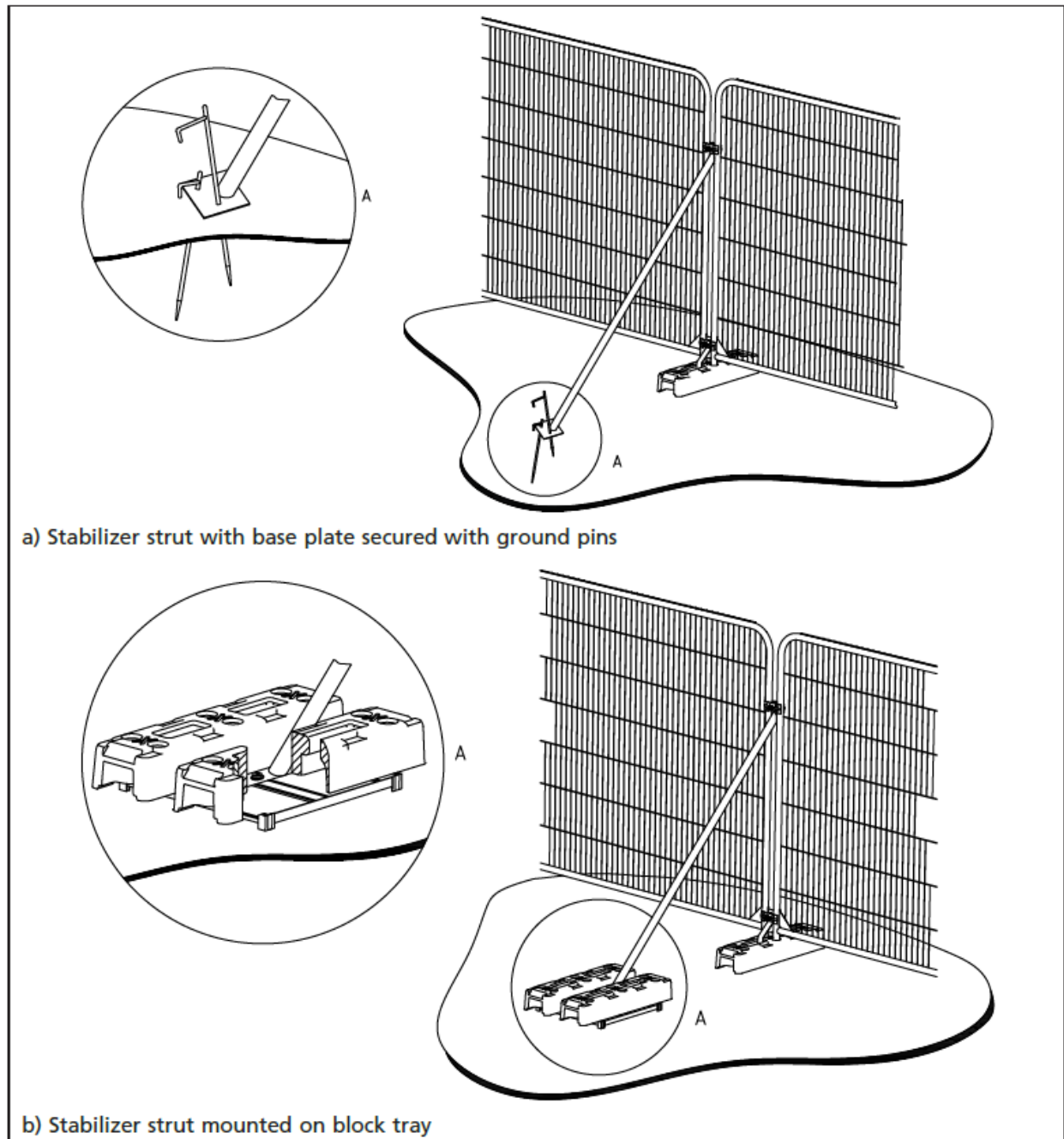
The default specification is shown above at Figure 2. Care should be taken when locating the vertical poles to avoid underground services and structural roots. Where it is not possible to drive a pole into the ground, for example on hard surfacing, figure 3 overleaf, applies.

The location for the tree protection fencing is shown on the tree protection plan delineated by a black dashed line. The location of the fencing is on the outer edge of the root protection area and the dimensions from fixed points are shown on the drawings. All weather signs should be affixed to the barriers, no more than 12m apart.

BRITISH STANDARD

BS 5837:2012

Figure 3 Examples of above-ground stabilizing systems



Suggested site warning sign format



Individual trunk protection for unique circumstances to be justified in this report

Recommend Green Grid Systems Trunk Protecta®

1.2m high, or 1.8m high. Orange ribbed padded protection which acts as an abrasion and impact resistance protected barrier over the tree bark, stopping wounds and tear injuries that could allow disease and decay to enter the tree.

- Unroll and wrap around trunk
- Connect the top buckle and pull the strap end to moderate tension. Repeat with the bottom buckle
- Release from the tree for a short period once a fortnight and reinstall for the time period required by the construction project.



<https://greengridsystems.com/products/trunk-protecta>

Ground protection during demolition and construction

Where working space 'temporary access' is needed within the root protection area during works, fencing should be set back the minimum amount to achieve the required room. If there is existing hard surfacing in this area, it should remain during the works as ground protection. The suitability of this surfacing for ground protection, and whether it needs to be reinforced to bear the weight of machinery, should be assessed by an engineer and discussed with an arboriculturist.

Where the set back of the fencing exposes unmade ground, the ground must be protected before any works take place on site. This is to prevent root damage and soil compaction.

The ground protection might comprise of one of the following: (section 6.2.3.3 of BS)

- A) For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane;
- B) For pedestrian-operated plant up to a gross weight of 2 tonnes, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane;
- C) For wheeled or tracked construction traffic exceeding 2 tonnes gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

The location for ground protection is shown on the tree protection plan by pink diagonal hatching, identified in the key.



SGN 3-02
Heavy-duty plywood set onto a compressible woodchip layer and pinned into position is suitable to spread the loading from pedestrian access.



SGN 3-05
A scaffold framework attached to the main scaffold fencing can be used to support either scaffold planks or plywood to create an elevated platform with a gap beneath.



SGN 3-06
Cellular products are a very effective means of providing ground protection where heavy vehicle use is expected. Here, it is being used to temporarily widen an existing road, to be removed once the construction is finished.

<https://www.barrelltreecare.co.uk/assets/Uploads/SGN-3-Ground-Protection-V3.pdf>

Appendix 6

Draft arboricultural method statement

1.0 Tree works:

1.1 Recommendations for tree works can be found in the tree surgery schedule in Appendix 4. All works shall be in accordance with BS 3998:2010 '*Tree work. Recommendations*'. The use of a competent and insured tree surgery contractor is necessary to comply with this. The main contractor and tree surgery contractor must ensure that any necessary consents have been received from the local authority and that no protected species are harmed whilst carrying out site clearance or tree surgery works. Within root protection areas, stumps, shrubs and other vegetation must be removed by hand or using stump grinding machinery to minimize root damage of retained trees. Where poisoning of stumps is specified, this must be carried out by competent operatives. Only chemicals approved for this purpose and used in accordance with the manufacturer's instructions will be used.

1.2 The following information must be sought:

- Current employers, public and product liability insurance
- Waste carriers' licence
- Qualification and experience of key personnel, including relevant NPTC certificates
- COSHH assessment
- Tool and task based risk assessment, including a Working at Height Risk Assessment
- Site specific risk assessment
- Emergency procedure plan
- Method Statement

1.3 A list of suitable tree surgeons is found at:

<http://www.trees.org.uk/find-a-professional/Directory-of-Tree-Surgeons>

Bio security measures are important and found at:

<https://www.forestry.gov.uk/biosecurity>

2.0 **Fires:** Fires on site should be avoided if possible. If unavoidable, they should be situated far enough so that there is no risk of damage to the trees, taking into consideration the wind direction.

3.0 **Site and fuel storage, cement mixing and washing points:** All site storage areas, cement mixing and washing points for equipment and vehicles and fuel storage areas should be outside root protection areas unless otherwise agreed with the Local Planning Authority. No discharge of potential contaminants should occur within 10m of a retained tree stem or where there is a risk of run off into Root Protection Areas.

4.0 **Temporary buildings for site use:** Site cabins, trailers and other temporary buildings can sometimes be used in root protection area if consent is agreed by the local planning authority. This can be very useful if there is a robust existing hard surfacing in place. The method for installing the buildings, and assessment of whether ground protection is needed is to be agreed with the Arboriculturist and specified prior to installation.

5.0 **Protection of tree canopies:** Piling rigs and cranes are often used close to trees. Work must be carefully planned so that there is sufficient room to avoid hitting the canopy during transportation or operation. Arboricultural supervision may be required, however, it is the responsibility of the contractor to assess and plan the work. Any access facilitation pruning required is detailed in the tree surgery schedule.

6.0 The following bespoke method statements will be developed further post planning:

The following are draft and detailed in the Arboricultural method statement post planning which will be developed with close team working.

7.0 Demolition:

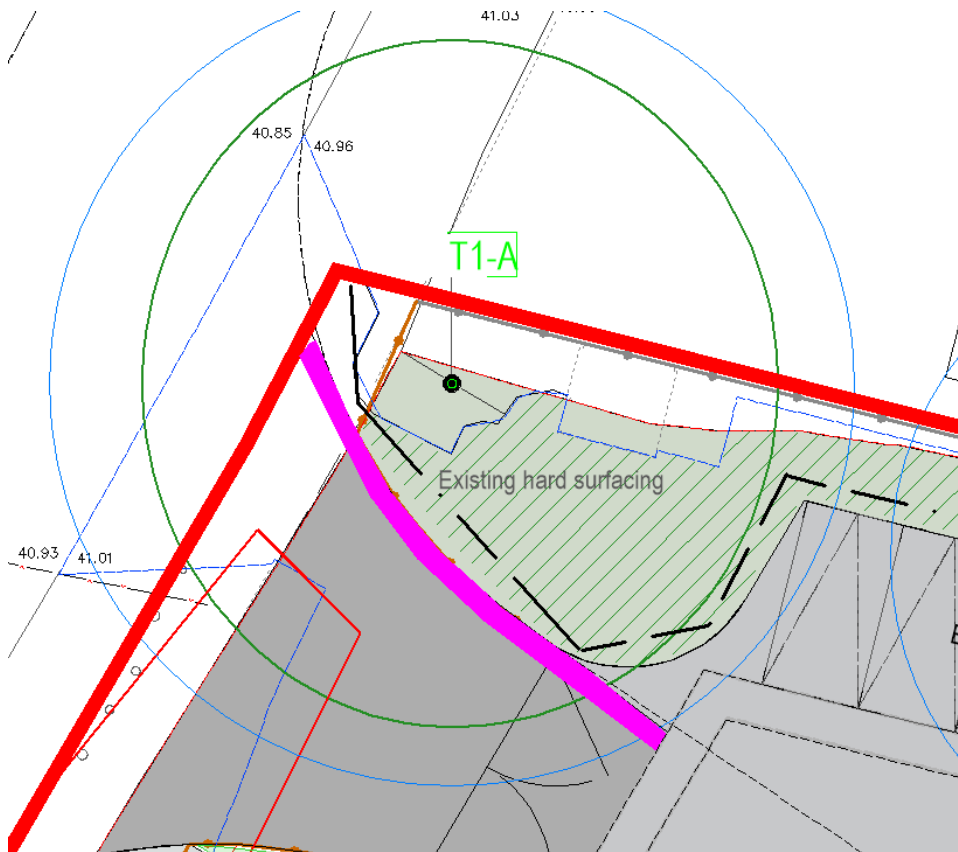
- Carry out the internal and soft strip
- Pull back the building from top down and pulling back working from outside the root protection area where possible. Remove debris away from the root protection area.
- If this creates dust, and the trees are in leaf, hose down until dust is no longer visible.
- Consider if the underground structures within the root protections can remain to avoid any root interference. Tracking down the soil/foundation interface with the foundations. When/if the slabs are removed, roots with a larger diameter will be gently pulled away from the foundation (where possible) and wrapped in damp hessian. This will be carried out in the presence of the arboriculturist. The digging will be carried out very carefully so that roots will be retained. Roots just under the slab will be protected temporarily with damp hessian and a blinding layer of soil. Great care will be taken to avoid scuffing any roots and attempts will be made to retain bundles of fibrous roots.
- Hard surfacing near trees to be retained until the external works phase
- The arboricultural consultant will record the numbers, diameters and depths of roots found.

- The foundation excavation work will not take place in frost or hot dry weather.
- The tree side of the trench exposed by demolition will be backfilled with topsoil from site.

8.0 **Services and drainage:** The final service plan will be reviewed by the arboriculturist to ensure that the principle of no new excavation in the root protection areas of trees to be retained is observed. If this is not possible, then this report will be updated and sent to xxx Council for approval and the principle of National Joint Utilities Council Volume 4 will be followed which is likely to require trenchless techniques. Any excavations within the root protection area will be observed by the arboricultural consultant.

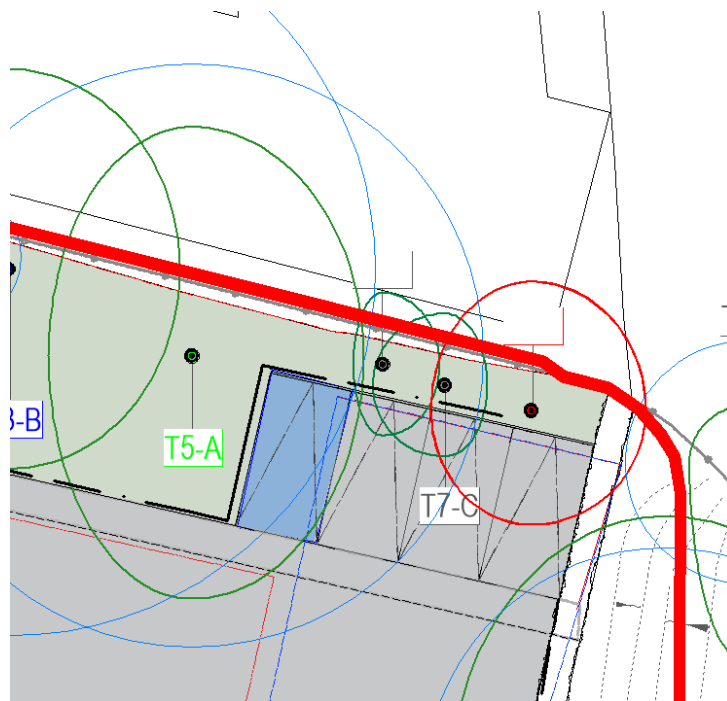
9.0 **Removal of hard surfacing within the root protection areas:** On this site is strongly advised that there is no excavation deeper than the existing subbase as the tree roots are likely to be shallow. Ideally the existing surface will be top dressed, but if not, the following applies. Lift the concrete/tarmac using handheld tarmac spade or a digger pulling backwards to lift the hard surfacing whilst keeping the ground underneath intact. In my experience, using a smooth bucket digger carefully can lift large slabs relatively easily without disrupting the ground beneath. There may be a sheath of fine feeder roots and main structural roots beneath the concrete. Great care must be taken to avoid scuffing and damaging these roots. Once removed, the exposed soil must be immediately covered with a suitable backfill medium such as good quality top soil. The works should not take place in frosty or hot sunny dry weather as this can harm fine roots. If roots are accidentally damaged, then the arboricultural consultant must be contacted immediately.

10.0 **New hard landscaping:** All hard landscaping is within the existing hard landscaping and is likely to be a matter of top dressing. Where the new road access alignment comes in, if there is a kerb, the kerb area shown pink on the plan SHA 1720 will be dug under arboricultural supervision and sleeved with polythene to prevent the alkalinity of concrete from scorching roots. The principle is that all roots with a diameter greater than 20mm will be retained.



Plan 5 - extract from SHA 1720 TPPA. Do not scale, north is vertical.

Pink area is for the kerb method statement (if a kerb is required). Green diagonal for the removal of hard surfacing and replacement with soft surfacing



Plan 6 - extract from SHA 1720 TPPA. Do not scale, north is vertical. Blue diagonal hatched area is for the hard surface method statement where currently it is semi-soft landscaped.

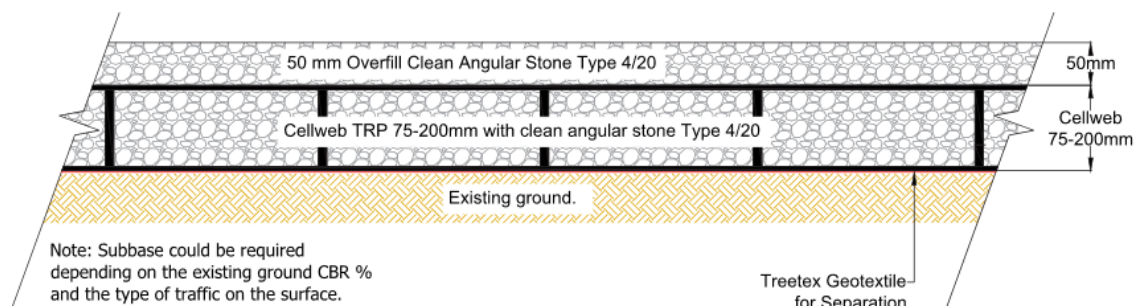
The purpose of the method statement is to ensure that tree roots are retained and that they can function. Therefore, digging down, compacting the soil and creating an impermeable surface will be prevented. A method to spread and support the load of the hard surface and anticipated usage without causing compaction of the soil structure beneath will be used. The sub-base will be porous to enable gaseous exchange and water infiltration. A suitable material is washed angular stone with a diameter between 20 – 40mm with no fines. Aggregates or stones must have a near neutral PH. The surface material will be permeable paving.

The levels for the top of the parking area will need to be carefully assessed and it might be that the bays will need to slope down slightly from the north to the south. The additional space near T5 will need to be a no dig and porous construction. This will be designed in conjunction with the engineer and arboriculturist.

- Immediately after an even soil grading has been achieved, a geo textile membrane will be laid flat on the surface. The use of a geotextile membrane (such as Tree Tex T300) will help support the sub-base and be a partial filter (a last line of defense) for contaminants such as oil and road salt. This works by laterally diffusing the contaminants over a wider surface area so that the effect is minimized.
- Lay a cellular confinement system such as <http://www.geosyn.co.uk/product/cellweb-tree-root-protection> – cross section below. Install as per the manufacturers specification and to the engineers prescribed depth. Typically, this is likely to be 100 - 150mm deep. An installation method is found at <https://www.geosyn.co.uk/wp-content/uploads/2016/05/Installation-Guide-Cellweb-Installation-Guide-81-3.pdf>.

Alternatively, if levels do not allow even this build up, this system

<https://greengridsystems.com/> may be a solution.



- A second geotextile layer to be added
- Porous tarmac to be laid in the normal way

- The edge treatment within the areas hatched blue will comprise treated timber laid on end pegged every 500mm with a wooden peg on the outside. The top of the peg will be flush with the top of the board. A small amount of topsoil will grade down from the top of the board to the soil to prevent a trip hazard.

11.0 New soft landscaping: Within the root protection areas of trees to be retained, the preparation of soil for planting and turfing will be carried out by hand. Cultivation will be kept to a minimum and new topsoil must not exceed 100mm in depth in the root protection areas, with no increase within 300mm of the stem. Top soil and other materials will be transported by wheelbarrow on running boards when working near trees. Enriched biochar to supplier's recommendations (typically 5% of soil volume) is advised to assist the establishment of new planting.

12.0 Installation of fence posts in the RPAs of T20 and T22 for the new security fence: Holes to be hand dug. Any root found to be pruned back neatly with bypass secateurs. Holes to be lined with impermeable plastic sheeting to stop the alkalinity of concrete from scorching pruned roots and locally raising soil PH.

13.0 Arboricultural site supervision

An initial site meeting:

Before works have started, but after the tree surgery and tree protection measures are in place. At this meeting the site manager, contractor, arboricultural consultant should discuss methodology and the tree protection measures will be examined. A '*What you need to know about working near trees at Ardleigh Oaks, Old Ipswich Road, Ardleigh, Essex, CO7 7QR*' sheet will be issued which includes contact details.

After each site supervision, a short report will be sent to the contractor, client and local authority as a record of compliance within 5 working days.

Appendix 7

Tree related legislation and National Policy

1. Tree preservation orders

The Town and Country Planning (Tree Preservation) (England) Regulations 2012.

No tree preservation orders affect the site. Copy of email sent on 22.11.2023 below:



Planning Services <planningservices@tendringdc.gov.uk>

Noel Durdant-Hollamby

RE: TPO and CA check

EXTERNAL EMAIL

Good Morning,

Further to your recent email requesting information relating to protected trees, please see results below:

Address: Ardleigh Oaks, Old Ipswich Road, Ardleigh, Essex, CO7 7QR

- Tree Preservation Order (s) – None Found
- Conservation Area – None Found

We hope this information is of assistance.

Kind regards,

Planning Services

Telephone: 01255 686 161 Email: planning.services@tendringdc.gov.uk

www.tendringdc.gov.uk

Tendring District Council, Town Hall, Station Road, Clacton-on-Sea, Essex, CO15 1SE



2. Conservation Area

The site is not within in a Conservation Area.

3. Ecological considerations

The Wildlife and Countryside Act 1981, as amended, The Conservation of Habitats and Species Regulations 2010 and the Countryside and Rights of Way Act 2000, provide statutory protection to species of flora and fauna including birds, bats and other species that are associated with trees. A Preliminary Ecological Appraisal, a Biodiversity Net Gain Assessment, Outline Bat Mitigation Strategy and Climbed Tree Inspection (T8) was carried out by Tim Moya Associates (TMA) reference 230961-ED-01a in December 2023 and January 2024.

The following is an extract from the Preliminary Ecological Appraisal:

6.8 Trees T1, T2, T3, T5, and T8 were assessed as having Moderate potential for roosting bats as trees were of the size and maturity to hold potential roost features, and because dense canopy cover may obscure potential roost features from being seen.

6.9 Trees T7, T17, T16, T15, T14, T13, T12, T9, and T10 were assessed as having Low potential for roosting bats. Wounds were present on the westerly and easterly stems of T7; however, cavities do not lead into a sufficient feature for roosting bats. All other low potential trees were not assessed fully as access to neighbouring land Page 25 of 56 was required, however their size and condition indicates that features may be present. 6.10 All other trees on-site were assessed as having Negligible bat roosting potential, due to no notable potential bat roost features being viewed.

The following is the summary of the Aerial Tree Bat Inspection by TMA

Summary: Climbed inspection was undertaken on 19th December 2023 of tree T8 to confirm if features identified on the tree during the ground-level inspection provide suitable opportunities for roosting bats. Features present within the tree were inspected using an endoscope and consequently assessed as offering limited suitability for roosting bats (PRF-I). As such, a pre-works inspection is recommended to ensure no bats are present prior to felling.

4. Occupiers Liability Act 1957 and 1984

The Occupiers Liability Act (1957 and 1984) places a duty of care to ensure that no reasonably foreseeable harm takes place due to tree defects. Therefore, this report includes recommendations within the tree tables for work required for safety reasons. ‘Common sense risk management of tree (National Tree Safety Group 2012)’ states that ‘*The owner of the land on which a tree stands, together with any party who has control over the tree’s management, owes a duty of care at Common Law to all people who might be injured by the tree. The duty of care is to take reasonable care to avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property.*’

5. Common law

This enables pruning back to the boundary line providing the work is reasonable. Other restrictions, such as tree preservation orders/conservation areas still apply.

The owner of a tree is not obliged to trim their trees or hedges to prevent them from crossing over a boundary. Whilst the tree owner is not obliged to cut back the branches, the person whose property is overhung has the right to cut back the branches to the boundary providing there are no planning or legal restrictions on the trees such as Tree Protection Orders or if they are located in a church yard, in which case suitable consent must be obtained. Such pruning works must be undertaken to a suitable standard and must not cause damage to the tree.

The resulting debris remains the property of the tree owner, but you must not cause any damage to their property when returning it back to them and you do not have the right to trespass on the tree owner's property in carrying out the works. In the interests of good neighbourly relations, we would encourage neighbours to discuss their intentions with each other before carrying out such works, providing the work is reasonable and that the trees are not subject to TPO or Conservation Area protection.

6. Felling licence

A felling licence is required to fell more than 5 cubic metres of timber in a calendar quarter. Applications typically take 13 weeks to process and are administered by the Forestry Commission.

Exemptions include:

- Tree surgery other than felling.
- Trees smaller than 8cm at 1.3m.
- Trees growing in a garden, orchard, and churchyard or designated open space.
- Works to facilitate full planning permission once all pre-commencement conditions are discharged and the subject trees are shown to be removed on the approved tree protection plans.
- Works to dangerous trees.

7. Hedgerows

1997 Hedgerow Regulations protects hedges if it meets the following criteria for:

- Length (more than 20m long with gaps of 20m or less in its length, or Less than 20m long, but meets another hedge at each end)
- Location
- Importance based on age (more than 30 years old), or of historical or ecological importance.

Further details are found at <https://www.gov.uk/guidance/countryside-hedgerows-regulation-and-management>.

There are no suitable hedgerows which would qualify as Important on this site

8. Veteran Trees

“The term veteran tree is one that is not capable of precise definition but it encompasses trees defined by three guiding principles: trees of interest biologically, aesthetically or culturally because of their age; trees in the ancient stage of their life; trees that are old relative to others of the same species.”*

There are no veteran trees on, or immediately adjacent to the site.

*(English Nature (200) Veteran Trees – A Guide to Good Management. [Online]. [Accessed 21st March 2019]. Available from: <http://publications.naturalengland.org.uk/publication/75035>)

National Policy

National Planning Policy Framework December 2023

186. When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶⁷ and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Tendring District Local Plan 2013-2033 and Beyond: North Essex Authorities' Shared Strategic Sections 1 and 2

Policy PPL 3

THE RURAL LANDSCAPE

The Council will protect the rural landscape and refuse planning permission for any proposed development which would cause overriding harm to its character or appearance, including to:

- a. *estuaries, rivers and undeveloped coast;*
- b. *skylines and prominent views including ridge-tops and plateau edges;*
- c. *traditional buildings and settlement settings;*
- d. *native hedgerows, trees and woodlands;*

Policy PPL 4

Sites designated for their local importance to nature conservation, including Local Wildlife Sites (LoWS), Ancient Woodlands Protected Verges and aged or veteran trees will be protected from development likely to have an adverse impact on such sites or features. Proposals for enhancement of special interest and features will be supported, subject to other material planning considerations.

POLICY EP – NATURAL, BUILT AND HISTORIC ENIRONMENT [neighbourhood plan policy]

There should be not less of green quality landscape features (including trees, hedges and shrubs), with all new green landscape features of an appropriate local or native species

Appendix 8

Statement of methodology and reference material

Statement of methodology

Review of supplied plans and information

Site visit made by Sharon Durdant-Hollamby on 14.11.23.

Tree survey using Visual Tree Assessment carried out in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*' (BS). All investigations were from ground level only and binoculars were used when necessary. All trees with a trunk diameter of 75mm or above were surveyed. Obvious hedges and shrub masses were identified where appropriate. Information collected is in accordance with recommendations in subsection 4.4.2.5 of BS and include species, height, diameter, branch spread, crown clearance, age class, physiological condition, structural condition and remaining contribution. Each tree was then allocated one of four categories (U, A, B or C).

TPO/Conservation Area check made with Tendring District Council on 22 November 2023.

Ongoing discussion with the team.

Received material

2306470-D001 Proposed Access Plan, Project Contact Information, FRNT_23.536_Old Ipswich Road_PLANNING PACKAGE V3, 103986, Topo Survey, AL 23 30086 PREAPP Ardleigh Oaks, Old Ipswich Road, Ardleigh, Design Briefing Note, FRNT_23.536_001_Location Plan_A3, FRNT_23.536_100.1_P2_Proposed Site Plan_A3, FRNT_23.536_Old Ipswich Road_PLANNING PACKAGE V4, 230961-TMA-XX-DR-L-3001-P02 Landscape Proposals Plan, 230961-TMA-XX-DR-L-3005-P01 Detailed Planting Plan, 230961-TMA-XX-DR-L-3006-P01 Planting Specification and FRNT_23.536_Old Ipswich Road_PLANNING PACKAGE V4. 230961-TMA-XX-DR-L-3001-P03 Landscape Proposals Plan, 230961-TMA-XX-DR-L-3005-P02 Detailed Planting Plan, 230961-TMA-XX-DR-L-3006-P02 Planting Specification, 230961-ED-01a Land on the south-east side of A12, Ardleigh - Preliminary Ecological Appraisal, 230961-ED-03a Land on the south-east side of A12, Ardleigh - Biodiversity Net Gain Assessment, 230961-ED-04a Land on the south-east side of A12, Ardleigh - Outline Bat Mitigation Strategy, 230961-ED-05a Land on the south-east side of A12, Ardleigh - Climbed Tree Inspection

Reviewed text

BSI. BS 3998:2010 *Tree work-Recommendations*.

BSI. BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*

R.G.Strouts and T.G.Winter 'Diagnosis of ill-health in trees' TSO 1994

Tendring District Council website

Arboricultural Association Guidance Note 12 'The use of Cellular Confinement Systems Near Trees

Appendix 9

Caveats & Exclusions

Specific report caveats

1. At the time of writing this report, the protected tree status is correct. However, this can change. Therefore, I advise that a further check is made with Tendring District Council before any works to trees take place.
2. No internal diagnostic equipment was used other than a sounding mallet and probe and all inspections were from ground level only, with the aid of binoculars where necessary.
3. The survey is concerned solely with arboricultural issues.
4. Any changes in ground level, or excavations near to tree roots not discussed within this report may change the stability and condition of the trees and a further examination would be required.
5. As trees are a dynamic living organism this report is only valid for a period of 12 months, in respect to their health and condition.
6. Only the trees listed in this report have been examined.
7. The measure of offsite trees has been estimated, except any crown within the site overhang which is measured. Where the crown of an onsite tree overhangs the boundary, the crown spread in this direction is also estimated.
8. The base and trunk of the offsite trees could not be examined, and therefore a full assessment of the trees condition could not be made.
9. Dense ivy and undergrowth prevent a full condition survey being carried out. The vegetation may be hiding structural defects.
10. The tree information is from the time of the survey. Some pests, diseases and fungi only appear seasonally, therefore it is possible not all issues that may affect the health of the trees could be observed.

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Appendix 10

Experience and qualifications of author



Sharon Durdant-Hollamby

FICFor FArbor A BSc (Hons) Tech Cert Arbor A



Profile

Sharon is an Expert Witness, chartered arboriculturist and Director of Sharon Hosegood Associates Ltd. Sharon had eleven years' experience as a local government tree and landscape officer before joining a contractor as a tree consultant in 2005. In 2007 she formed an environmental practice in Essex with the owner. As managing director, she built up the ecological and arboricultural consultancy to a team of 20. She is a past President of the Institute of Chartered Foresters (May 2021 – April 2023). She joined Essex Quality Review Panel in May 2023 as an arboricultural expert. She is a regular speaker, home and abroad, and the host of Tree Lady Talks podcast.

Specialties: Trees in relation to development, including appeals and planning hearings

Tree root investigations, including TreeRadar

Tree hazard evaluation

Tree preservation orders

Trees and well-being with community engagement

Professional bodies: Immediate Past President of the Institute of Chartered Foresters
Fellow of the Institute of Chartered Foresters (ICF)
Fellow of the Arboricultural Association

Qualifications: Cardiff University Law School Bond Solon Civil Expert Certificate
Arboricultural Associations Technicians Certificate
BSc (Hons) Geography and Landscape Studies
Managing Safely IOSH (2017)

Awards: Top student award for the Technician's certificate in 2005

The Broomfield Hospital Woodland Management project she has managed between 2009 -2015 won the following awards:

The Essex Biodiversity Awards (nomination)

The Excellent Community Engagement Award (NHS Forest)

Green Flag and Green Apple Award

Highly commended for the Health Sector Journal Award 2013

Honorary College Fellow (Services to Arboriculture and Forestry) University Centre, Myerscough

Appendix 11

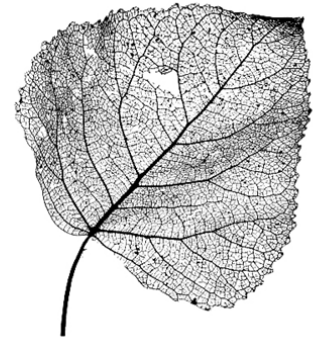
Glossary

Arboriculture	Formerly all aspects of the culture of trees, especially for forestry. Latterly, the art and science of cultivating and managing trees as groups and individuals, primarily for amenity and other non-forestry purpose.
Arboricultural method statement	Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.
Arboriculturist	Person who has, through relevant education, training and experience in the field of trees in relation to construction.
Architecture	In a tree, a term describing the pattern of branching of the crown or root system.
Biochar	Biochar is charcoal used as a beneficial soil amendment enabling nutrient uptake and assisting the trees defense mechanism
Biodiversity	The variability among all living organisms of an ecological complex.
Biomechanical	Pertaining to the mechanical functions and properties of living organisms, such as trees.
Body language	In trees, the outward display of growth responses and/or deformation in response to mechanical stresses.
Branch	A limb extending from the main stem or parent branch of a tree.
Branch bark ridge	The raised arc of bark tissues that forms the acute angle between a branch and its parent stem
Branch collar	The swelling or roughened bark often found at the base of a branch which should be left intact if the branch is to be pruned off.
Canker	A lesion in which bark and cambium have been killed, sometimes exposing the wood and often showing a swollen appearance owing to the encircling growth of new tissues.
Canopy	The topmost layer of twigs and foliage in a tree.
Co-dominant	In trees, a similarity between two or more stems or branches with regard to their size and their position within the canopy.
Column	In the wood or phloem of a tree, an axially elongated zone of tissue that is distinguished from the surrounding tissue; e.g. Live versus dead or decayed versus non-decayed.
Construction exclusion zone	An area based on the root protection area from which access is prohibited for the duration of the project.
Crown	In arboriculture, the main foliage-bearing portion of a tree.
Crown lifting	The removal of shortening of the branches that form the lower part of the crown of a tree.
Crown reduction	Pruning in order to reduce the size of the crown of a tree.
Crown thinning	Pruning inside the crown of a tree in order to reduce its density.
Defect	In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.
Dieback	The death of part of a plant, usually starting from a distal point and often progressing proximally in stages.
Direct damage	Direct physical damage to a structure of surface from pressure exerted by the trunk or growing roots.

Ecosystem services	The benefits that a particular species or range of species bestow upon others (including humans) through ecological relationships. Such services can sometimes be estimated in a form that allows them to be included in financial accounting.
Epicormic	Pertaining to shoots or roots which are initiated on mature woody stems; shoots can form in this way from dormant buds or they can be adventitious.
Failure	In connection with tree hazards, a partial or total fracture within woody tissues or loss of cohesion between roots and soil.
Flush cut	A pruning cut close to the parent stem which removes part of the branch bark ridge.
Foreseeable	In hazard assessment, pertaining to failure and associated injury of damage which are predictable on the basis of evidence from a tree and its surroundings.
Fungi	Organisms of several evolutionary origins, most of which are multicellular and grow as branched filamentous cells within dead organic matter or living organisms.
Hazard	A thing, a process or a potential event that has the potential to cause harm.
Heartwood	The dead or predominantly dead central wood of various tree species whose outer living wood, sapwood, has a finite and pre-determined lifespan.
Independent in the landscape	Point at which a newly planted tree is no longer reliant on excessive or abnormal management intervention in order to grow and flourish with realistic prospects of achieving its full potential contribute to the landscape.
Level arm	A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch.
Landscape character	A distinct, recognisably and consistent pattern of elements in the landscape that make one landscape different from another, rather than better or worse.
Mulch	Material laid down over the rooting area of a tree or other plant to help conserve moisture, suppress weeds and encourage a beneficial microflora.
Mycorrhizal	Pertaining to an intimate symbiotic association between plant roots and specialised fungi.
PICUS	The Picus Sonic Tomograph is a non-invasive tool for assessing decay in trees. It works on the principle that sound waves passing through decay move more slowly than sound waves traversing solid wood. By sending sound waves from a number of points around a tree stem to a number of receiving points, the relative speed of the sound can be calculated and a two-dimensional image of the cross-section of the tree can be generated
Pollard	A term for a pollarded tree
Pollarding	The complete or partial removal of the crown of a young tree so as to encourage the development of numerous branches; also, further cutting to maintaining this growth pattern.
Probability	A statistical measure of the chance that a particular event (e.g. a specific failure of a tree or specific kind of harm to persons or property) might occur.
Resistograph	

	<p>The IML-RESI system is based on the measurement of drilling resistance.</p> <p>The IML-RESI operates in a similar manner to a normal drill. A drilling needle with a diameter of 1.5mm is inserted into the wood under constant drive. While drilling, the resistance is measured as a function of the drilling depth of the needle. The data is printed and stored electronically at a scale of 1:1 simultaneously.</p> <p>Although invasive the relatively small needle diameter causes very little damage, testing is normally only undertaken to confirm the remaining stem wall thickness in decaying trees.</p>
Retrenchment	Progressive reduction in the size of the crown of an old tree, by means of the dieback or breakage of twigs and small branches, accompanied by the enhanced development of the lower or inner parts of the crown.
Risks	The likelihood of the potential harm from a particular hazard becoming actual harm.
Root protection area	A layout tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. BS 5837:2012 <i>'Trees in relation to design, demolition and construction – Recommendations'</i> .
Root flare	Thickened and expanded base of a tree stem at ground level from which buttress roots form.
Rootplate	The central part of the root system of a tree, consisting of the large-diameter main roots and a dense mass of smaller roots and soil.
Service	In construction, any above-or below-ground structure or apparatus for utility provision.
SULE	Safe useful life expectancy of a tree (Barrell)
Stag-headed	In a tree, a state of dieback in which dead branches protrude beyond the current living crown.
Stress	In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example owing to lack of water, inadequate nutrition or extremes of temperature.
Stub cut	A pruning cut which is made at some length distal to the branch bark ridge.
Target pruning	The pruning of a twig or branch so that tissues recognisably belonging to the parent stem or branch are retained and not damaged.
Targets	In tree hazard assessment, persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it.
Tree Preservation Order	In Great Britain, an order made by a local authority, whereby the authority's consent is generally required for the cutting down, topping or lopping of specified trees.
Tree protection plan	Scale drawing, informed by descriptive text where necessary, based upon the finalized proposal, showing trees for retention and illustrating the tree and landscape protection measures.
Utility	An undertaker by statute that has a legal right to provide customer services (e.g. communication, electricity, gas and water).

Veteran tree	<i>'A tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species'.</i> Ancient Tree Guide No. 4 (ATF, 2008).
Vigour	In tree assessment, an overall measure of the rate of shoot production, shoot extension or diameter growth.
Vitality	In tree assessment, an overall appraisal of physiological and biomechanical processes, in which high vitality equates with near-optimal function, in which high vitality equates with healthy function.
Visual Tree Assessment (VTA)	In addition to the literal meaning, a system expounded by Matteck and Breloer (1995) to aid the diagnosis of potential defects through visual signs and the application of mechanical criteria.
White-rot	Various kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded.
Wound	Injury caused to a tree by a physical force.



Sharon Hosegood
ASSOCIATES

ARBORICULTURAL REPORT

SITE

Ardleigh Oaks, Old Ipswich Road, Ardleigh, Essex, CO7 7QR

CLIENT

H T Industrial Ltd

Sharon Durdant-Hollamby
FICFor FARborA BSc (Hons) Tech Cert (ArborA)

DATE: January 2024

OUR REF: SHA 1720 AIA Rev A

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