

# ARBORICULTURAL IMPACT ASSESSMENT REPORT

BS 5837:2012 'Trees in relation to design, demolition and construction. Recommendations'

# Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE CLIENT Debden Village Hall Trust

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DATE: 7 October 2019
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#### **Executive summary**

This report is submitted in connection with a planning application the demolition of existing pavilion and village hall (retaining village shop) and the erection of a new village hall and associated car parking at Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE. 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).

The site is not protected by a Tree Preservation Order, and it does not lie in a conservation area.

The site is a village shop and village hall with associated parking, leading to a recreation ground.

There are mature, prominent trees on the road frontage and along the southern boundary which are integral to the character of the area.

The proposed footprint of the hall results in the removal of a low-quality semi-mature lime tree (SHA reference T21) which is in a fair condition with some minor defects. All other trees will be retained and protected during works. The building is within the root protection are a large, good quality, mature lime tree (SHA reference T2). The incursion is 11% of the root protection area and at c.4m at the closest point. Lime trees are very tolerant (physiologically) of crown and root pruning, and it is recommended that an exploratory root trench is carried out to establish the depth, extent and size of roots encountered. This will help determine foundation design and the amount of crown pruning to compensate for root pruning. The crown will also be pruned due to proximity to the building. At this stage, it is anticipated that the crown pruning would be c.2m, but this will be discussed with the Landscape Officer post planning.

The existing trees will partially screen the new village hall and help assimilate it in the setting. There are no changes to parking, and therefore no new impacts to trees. Minor tree works are recommended for safety reasons irrespective of the application, including a recommendation to remove dead branches on a lime tree T17. Most of this work is not urgent, but included in the report for due diligence. I recommend that the condition of the ash trees is monitored as G12 appears to be in decline, which is most likely due to ash die back disease.

The loss of T21 will have very limited impact on visual amenity, and there is room for a replacement tree to the immediate north of this tree. The lime tree T21 will have a slightly smaller profile and will need to be maintained at the new size by regular pruning every 3-5 years.

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#### 1. Introduction:

- 1.1. This report accompanies a planning application made by Plater Claiborne Architects on behalf of Debden Village Hall Trust to Uttlesford District Council for the demolition of existing pavilion and village hall (retaining village shop) and the erection of a new village hall and associated car parking. 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 Plater Claiborne Architects on behalf of Debden Village Hall Trust 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 for this new village hall is located in the county of Essex, in the village of Debden, which lies to the east of the A11 between Newport to the west and Thaxted to the east and approximately 3 miles south of Saffron Walden, The grid reference for the site is TL 55554, 23347. It is located on the village recreation ground in the south west corner, close to the recreation ground road access. The access road (Mill Road) is a minor road which eventually leads to Newport. To the north, east and west are fields and open countryside and to the south a small pond, restaurant, and residential accommodation of varying size.
  Source:- D&A Statement (Draft)
- 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 lime-rich 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.

#### 4. The trees:

- 4.1. *Generally:* There are 19 individual trees and 4 groups of trees which form the subject of this survey. Full details are found in the survey sheets at appendix 1 and their location on the tree survey plan *SHA 944 TSP* at appendix 2.
- 4.2. *Legislation:* The plot is not protected by a Tree Preservation Order, nor does it lie within a conservation area.
- 4.3 BS retention category:

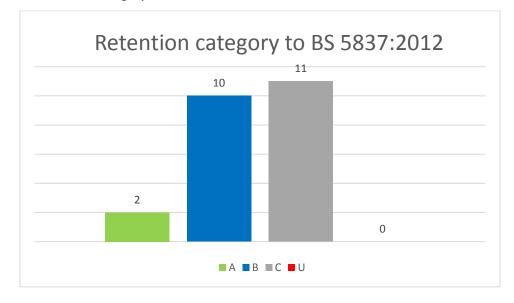


Table 1 – Retention category

A – high quality

B – moderate quality

C – low quality

*U* – unsuitable for retention

#### 5. The Proposal

5.1. For the demolition of existing pavilion and village hall (retaining village shop) and the erection of a new village hall and associated car parking.

## 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. Comments on specific trees and the arboricultural impact: Trees to the immediate north and south-east of the proposal: T1 lime (category B under the BS moderate value), T2 lime (category A under the BS high value) and T21 lime (category C under the BS low value). The two lime trees are the western trees of a line of important trees along the southern boundary of the recreation ground, which are a strong landscape feature. These two trees are in a good form and condition, with T2 being large tree with a better form. T21 is a semi-mature lime tree with a slight lean south and tight compression forks between main stems at 2m. See photo 10 on page 14.



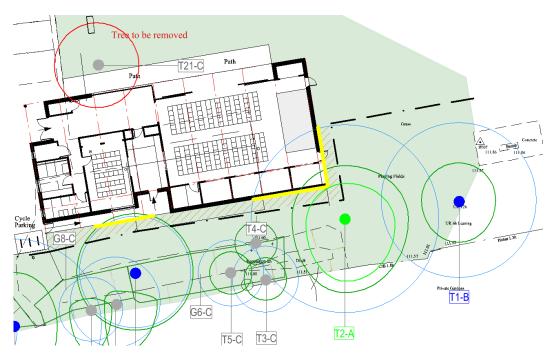
Photo 1 of T1, T2 and T7 looking south

T21 will be removed to facilitate construction. There is room for a replacement tree to its immediate north, and I recommend a different species than lime to build resilience in the landscape. Field maple or hornbeam and suitable native species for this location.

The building is within 11% of the root protection area of T1, and 4m at its closes point. The actual rooting area will be explored under arboricultural supervision to establish the depth, extent and size of any roots in the proposed footprint of the building. This will be done by a hand dug trial trench. The results of this will be reported to the Landscape Officer at Uttlesford District Council and be used to inform foundation design. It will also assist in calculating the amount of pruning required to compensate for any root pruning. Ideally some roots will continue under the building. The down pipes will be directed towards the tree and there will be no excavations for new services along the southern boundary. A draft method statement for the installation of the foundation is found at appendix 6, and the area to which this applies is shown by a thick yellow line (see plan 1 extract below).

At the time of writing it is presumed that the tree will be pruned approximately 2m (a crown reduction), as detailed in the tree surgery schedule at appendix 4.

The trees will be protected by tree protection fencing and ground protection to a specification at appendix 5 and at a location on the tree protection plan *SHA 944 TPP* at appendix 3.



Plan 1 – extract from SHA 944 TPP. Black dashed line – tree protection fencing. Brown hatching – ground protection. Blue circles – root protection area. Green inner circle of T2 – pruned outline (approximately). Yellow line – area where arboricultural method statement applies.

6.5. Trees on the southern boundary: T3 & T5 elder (C), T4 hawthorn (C), G6 damson & elder (C), T7 ash (B), G8 damson, elder, hawthorn and lime (C), T9 ash (C), T10 damson (C), T11 ash (C), G12 ash & sycamore (C) and G13 damson (C).

The prominent trees are ash (T7 and T11) which are in a reasonable form and condition, and G12 which contains a mix of reasonable sycamore and low quality ash which are likely to be in decline (most likely to do ash dieback). Straddling a ditch are groups of mixed thorn, damson and elder which form a dense native screen and wildlife corridor. None of the trees are managed, but form an attractive semi-natural thicket.



Photo 2 of G6 and T3 – T5 looking east, with T2 in the background. The vegetation is on a steep ditch



Photo 3 a general view of the character of the ditch with G6 on the left hand side. Looking west.



Photo 4 of T7 and T11 looking north from neighbouring property



Photo 5 of G12 ash and sycamore, with G13 in the fore ground. Note how the ash are tall, spindly and appear to be in decline. Looking south.

All will be retained and protected during works by tree protection fencing. There is a very small incursion into the root protection area of T7 ash, but this is very modest. The excavation for the foundation will be carried out in accordance with the draft method statement at appendix 6.

The trees and shrubs provide a good dense screen between the site and neighbouring restaurant car park.

6.6. Trees on the road frontage: T14 lime (B), T15 horse chestnut (B), T16 oak (A), T17 lime (B), T18 lime (B) and T19 horse chestnut (C).

This is a strategically important group providing a high level of amenity to Mill Road. The trees are prominent and in reasonable form and condition. Whilst outside of the immediate area for the application, they were surveyed for completeness. There are no works required to facilitate construction, but there are minor works recommended for safety reasons. The only urgent work is removal of large dead branches in the lime tree (SHA T17) which might fall next to the Village Shop. The attractive horse chestnut (SHA T19) has a steeply ascending form with a tight union between the stems (photo 9). This means that the stems may not be strongly attached to each other. I recommend that a tree surgeon carries out a climbing inspection to probe where the stems join the main trunk to check for decay, and reports this to the arboricultural consultant. If found to be weak, there are tree management options, such as pruning or bracing, available, but it is likely that no management would be required as this is the natural form of the tree. Other recommendations are found in the tree surgery schedule.

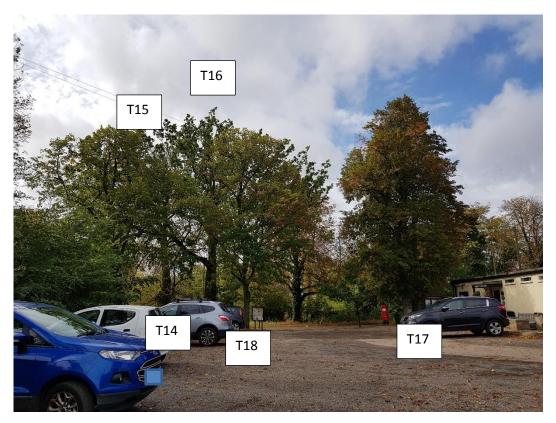


Photo 6 of T14, T15, T16, T17 and T18 looking west



Photo 7 of T18 - T20 looking north-east



Photo 8 of T19 long view looking south



Photo 9 of T19 tight fork. A climbing inspection is recommended to probe the union, with a view of bracing or reducing the crown.

There is no impact to, or from the proposal. The driveway is in constant use and would not need reinforcing for machinery. As the trees have high crowns there should not be a need to remove lower branches to clear delivery lorries. The trees need not be fenced during works, as this would never be a secure or sensible location to store materials, irrespective of the trees.

#### 6.7. Trees around the car park: T22 oak (B), and G23 silver birch (B)

The oak tree has good form and potential to make a fine amenity tree. Ideally it should be crown lifted to achieve 5m clearance over the car park, but this is not essential at this stage, or in connection with the proposal. The silver birch forms an attractive group providing softening and screening between the car park and play area and are in reasonable form and condition.



Photo 10 of T21 lime, T22 oak and G23 silver birch, looking west

There is no impact to, or from the proposal. As a precaution, the trees will be protected by tree protection fencing during construction.

#### 7. Conclusions:

- 7.1. The scheme results in the removal of one tree; a low quality semi-mature lime tree (T21). Its removal will have little impact on the visual amenity of the area and I recommend that it is replaced (with another native species) as part of the landscaping scheme.
- 7.2. The building is within an outer quadrant of the root protection area of T2, a large lime.
  Exploration of the actual rooting will be reported to the Landscape Officer and inform foundation design. Compensatory pruning will be required to balance the root-shoot ration.
  The installation of the foundation near T2 and T7 will be carried out under arboricultural supervision.
- 7.3. All other trees will be retained and protected during works. I recommend annual monitoring ,and minor tree works for safety reasons, but this is in the interests of good management and not in connection with the proposal. The only urgent work is the removal of dead branches on a lime tree (T17) next to the shop.
- 7.4. The existing planting will help soften and screen the large village hall from the south and when viewed from the road.

#### 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 subcontractors.
- 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.
- 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.
- 8.6. That the landscaping scheme includes a mix of native 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*.
- 8.7. That there is a replacement tree for T21 of a native species, and ideally not another lime, birch, ash or oak. Field maple or hornbeam would be suitable.
- 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 there is an exploratory trench hand dug under arboricultural supervision to determine the depth, size and extent of roots from T2 along the line of the building. The results of this are to be reported to the tree officer and a tree surgery recommendation for this tree finalized as part of the arboricultural method statement.
- 8.10. 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.
- 8.11. 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.

# **Sharon Durdant-Hollamby**

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Director Sharon Hosegood Associates Ltd

# Appendix 1

Tree survey sheets

# Site: Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE Client: Debden Village Hall Trust

Tree Number	Botanical Name (Common name)	Age	Dia (mm)		Height (crown height)		N	E	S	w	Cond		BS Cat	RPR (m	RPA (m²)	Comments	Recommendations
T1	Tilia X europaea (Common Lime)	М	610	1	15(5)	25	4	3.5		3.5	Good	40+	B2	7.32		Part of linear group. Epicormics on stem. Broken branches in crown.Tag 001608. Prominent tree in good condition and important in the setting. Has been heavily historically crown lifted resulting in sprouting wounds, some of which have partially occluded. Rooting area; grass.	
T2	Tilia X europaea (Common Lime)	М	740	1	18(4)	25	5	6	7	5	Good	40+	A2	8.88		Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Epicormics on stem. Broken branches in crown.Tag 001607. Prominent tree in good condition and important in the setting. Has been historically crown lifted resulting in sprouting wounds, some of which have partially occluded. Large full crown. Burr on southern aspect at 2m. Long over extended branch on south eastern aspect at 8m overhanging neighbouring shed. Rooting area; grass.	Sever Ivy. Remove Ivy. Inspect stem/basal area.Reduce length of lowest south eastern branch by 2m. Non urgent work.
Т3	Sambucus nigra (Elder)	M	150	3	5(1)	7	2	2	. 2	2 2	Fair	10+	C2	3.12		Suckers around stem base. Multiple stems at ground level.Growing on southern side of ditch in reasonable form and condition.	

Client: Debden Village Hall Trust

Tree	Botanical Name	Λαο	Dia	Stems	Height	Ult ht	N	E	S	W	Cond	Life	BS	DDD /m	DDA (m²)	Comments	Recommendations
Number	(Common name)	Age	(mm)		(crown		IN	-	3	l vv	Cona	Ехр	Cat	KPK (m	JRPA (m⁻)	Comments	Recommendations
Number	(Common name)		(,		height)	(,						LAP	Cat				
T4	Crataegus	М	100	3	5(1)	7	2	2	2	2	Fair	10+	C2	2.08	13.59	Suckers around stem base.	
	monogyna															Multiple stems at ground	
	(Hawthorn)															level.Growing on northern side of	
																ditch in reasonable form and	
																condition. Rose arching through	
																crown.	
T5	Sambucus nigra	M	150	3	5(1)	7	2	2	2	2	Fair	10+	C2	3.12	30.59	Suckers around stem base.	
	(Elder)															Multiple stems at ground	
																level.Growing on southern side of	
																ditch in reasonable form and	
																condition.	
G6	Prunus domestica	SM	100	2	6(0)	11	2	1.5	1.5	1.5	Fair	20+	C2	1.69		Part of linear group. Spindly.	
	(Damson),															Suckers around stem base.	
	Sambucus nigra															Multiple stems at ground level.	
	(Elder)															Crown distorted due to group	
																pressure.Informal group growing	
																mostly on the northern side of	
																the ditch. If left to mature, it will	
																form a dense suckering thicket.	
																Mostly damson, with occasional	
																elder with poor form in the	
																centre of the ditch. Provides	
					/ - )		-	l								screening.	
T7	Fraxinus excelsior	EM	440	] 1	15(8)	22	6	5.5	5.5	5.5	Good	40+	B2	5.28		Ivy on tree. Unable to inspect	
	(Ash)															stem due to Ivy.Growing on the	
																northern edge of the bank with a	
																very slight lean towards the	
																pavilion. Crown overhangs roof,	
																but way above the building, so	
																there is no conflict. Historically	
																crown lifted resulting in partially	
																occluded wounds.	

Client: Debden Village Hall Trust

Tree	Botanical Name	Age			Height		N	E	S	W	Cond	Life	BS	RPR (m	RPA (m²)	Comments	Recommendations
Number	(Common name)		(mm)		(crown height)	(m)						Ехр	Cat				
					lieigiitj												
G8	Prunus domestica	SM	100	2	6(0)	11	2	1.5	1.5	1.5	Fair	20+	C2	1.69	8.97	Part of linear group. Spindly.	
	(Damson),															Suckers around stem base.	
	Sambucus nigra															Multiple stems at ground level.	
	(Elder),															Crown distorted due to group	
	Crataegus															pressure.Informal group growing	
	monogyna															mostly on the northern side of	
	(Hawthorn),															the ditch. If left to mature, it will	
•	Tilia X europaea															form a dense suckering thicket.	
İ	(Common Lime)															Mostly damson. Provides	
1																screening.	
Т9	Fraxinus excelsior	SM	250	2	12(7)	22	1	4	5	1	Fair	20+	C2	4.25	56.75	Part of linear group. Spindly.	Sever Ivy. Remove Ivy. Inspect
	(Ash)															Leaning South. Ivy on tree.	stem/basal area. Remove major
																Unable to inspect stem due to Ivy.	
																Stem divides below 1.5m. Dieback	
																in crown. Major deadwood in	
																crown. Unbalanced crown shape.	
																Crown distorted due to group	
																pressure. Overhangs restaurant	
																car park. Densely ivy clad.	
																Whippy form. Dead branch	
																overhangs car park.	
T10	Prunus domestica	М	250	1	8(3)	11	1	1 2	2 4	2	Poor	<10	C2	3	28.28	Poor shape & form. Low vitality.	Sever Ivy. Remove Ivy. Inspect
	(Damson)															Declining. Leaning South. Ivy on	stem/basal area.Or remove and
																tree. Unable to inspect stem due	replace.
																to Ivy.Almost completely covered	
																in ivy which is weigh down the	
																crown and impeding	
																photosynthesis.	

Site: Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE Client: Debden Village Hall Trust

Tree Number	Botanical Name (Common name)	Age	Dia (mm)		Height (crown height)		N	E	S	W	Cond		BS Cat	RPR (m	RPA (m²)	Comments	Recommendations
T11	Fraxinus excelsior (Ash)	М	400 550		13(7)	22	5	4	6	4	Fair	20+	B2	8.16		Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Stem divides below 1.5m. Major deadwood in crown. Unbalanced crown shape. The best of the line of ash growing tight on the southern boundary, overhanging the car park. Swamped with ivy up to 9m.	Sever Ivy. Remove Ivy. Inspect stem/basal area. Remove major deadwood. Prune tree clear of service wires.
G12	Fraxinus excelsior (Ash),Acer pseudoplatanus (Sycamore)	EM	250	1	13(8)	22	3	2	4	. 2	Fair	10+	C2	3		Low vitality. Part of linear group. Spindly. Ivy on tree. Unable to inspect stem due to Ivy. Unable to inspect stem due to undergrowth. Dieback in crown. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Unable to individually examine due thicket of undergrowth. Some of the ash have Chalara ash die back disease and are likely to die. Sycamore in reasonable form and condition.	Sever Ivy. Remove Ivy. Inspect stem/basal area.Remove ash if fail to flush in the spring.
G13	Prunus domestica (Damson)	M	250	1	8(3)	11	1	2	4	2	Poor	<10	C2	3		Poor shape & form. Low vitality. Declining. Leaning South. Ivy on tree. Unable to inspect stem due to Ivy.Almost completely covered in ivy which is weigh down the crown and impeding photosynthesis.	Sever Ivy. Remove Ivy. Inspect stem/basal area.Or remove and replace.

# Site: Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE Client: Debden Village Hall Trust

Tree Number	Botanical Name (Common name)	Age	Dia (mm)		Height (crown height)		N	E	S	W	Cond		BS Cat	RPR (m	RPA (m²)	Comments	Recommendations
T14	Tilia X europaea (Common Lime)	M	530	1	12(2)	25	7	5.5	5.5	5.5	Good	40+	B2	6.36		Ivy on tree. Unable to inspect stem due to Ivy. Epicormics on stem.Prominent tree near the front of the road. In good form and condition. Has been crown reduced in the past.	Sever Ivy. Remove Ivy. Inspect stem/basal area. Remove major deadwood.
T15	Aesculus hippocastanum (Horse Chestnut)	М	930	1	. 20(2)	21	6	7.5	9	10	Good	20+	В2	11.16		Exudation on stem. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure.Prominent attractive tree integral to the setting. Seems to be recovering from Phytopthora bleeding canker on northern side of trunk. A few broken branches. Horse chestnut leaf miner present. A few old pruning wounds. Long low branches over the road.	Carry out aerial inspection. Remove major deadwood. Remove broken/damaged branches. Monitor bleeding canker.
T16	Quercus robur (Common Oak)	М	1050	1	20(2)	21	11	10	10	10	Good	20+	A2	12.6		Epicormics on stem. Broken branches in crown. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure.Prominent attractive tree integral to the setting. A few broken branches, most notably at the top of the crown A few old pruning wounds. Long low branches over the road.	Carry out aerial inspection. Remove major deadwood. Remove broken/damaged branches.

# Site: Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE

										Clien	t: Debo	den Vi	llage H	lall Trust			
Tree Number	Botanical Name (Common name)	Age	Dia (mm)		Height (crown height)	(m)	N	E	S	w	Cond		BS Cat	RPR (m)	RPA (m²)	Comments	Recommendations
T17	Tilia X europaea (Common Lime)	М	490	1	15(2)	25	4	1 4	3.5	5	Good	40+	В2	5.88	108.63		Remove major deadwood. Crown lift to 5m.Dead wood removal is urgent.
T18	Tilia X europaea (Common Lime)	M	490	1	20(2)	25	8	8 6	3.5	4	Good	40+	B2	5.88	108.63	Epicormics on stem.Tag 01601. Prominent tree near the front of the road. In good form and condition. Has been crown lifted in the past resulting in decaying cavity at 2m on northern aspect 10 x 20 cm diameter. Oak branches passing through crown,	

pressing on branches.

Site: Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE Client: Debden Village Hall Trust

Tree Number	Botanical Name (Common name)	Age	Dia (mm)		Height (crown height)		N	E	S	W	Cond		BS Cat	RPR (m	RPA (m²)	Comments	Recommendations
T19	Aesculus hippocastanum (Horse Chestnut)	М	830	1	20(2)	22	6	5.5	5.5	6	Fair	40+	C2	9.96		Ivy on tree. Unable to inspect stem due to Ivy. Exudation on stem. Included bark present in fork.Prominent tree important to the setting. Steeply ascending form. Very tight fork with included bark where the tree becomes triple stemmed at 3m. Weeping exudation from Phytopthora bleeding canker which is extensive on eastern and western side, although there appears to be some recovery. Horse chestnut leaf miner present.	Carry out aerial inspection. Remove major deadwood.Monitor bleeding canker and probe union.
T20	Quercus robur (Common Oak)	Υ	150	1	6(2)	22	. 3	3	4	3	Good	40+	B1	1.8	10.18	Young tree with great potential.	
T21	Tilia X europaea (Common Lime)	SM	390		6(1)	25	4	4	4		Fair	20+	C2	4.68		Leaning South. Epicormics on stem. Included bark present in fork. Tight compression forks at 2m at crown break. Low branches over car park.	Crown lift to 5m over car park.
T22	Quercus robur (Common Oak)	SM	210	1	7(1)	22	. 5	4.5	4.5	4.5	Good	40+	B1	2.52	19.95	Good form and condition with great potential. Minor twig sized deadwood interspersed in the crown.	Crown lift to 5m over car park.
G23	Betula pendula (Silver Birch)	EM	350	1	15(2)	18	4	4	4	4	Good	20+	B2	4.2		Average dimensions given. Graceful line of trees between car park and play area.	

#### **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 Numbe	Botanical Name r (Common name)	_	Dia (mm)		Height (crown height)	(m)	N	E S	W C			BS Cat	RPR (m)	RPA (m²)	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 – a senescent or moribund tree with a limited safe useful life expectancy

V – Veteran – a tree older than typical for the species 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 or 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

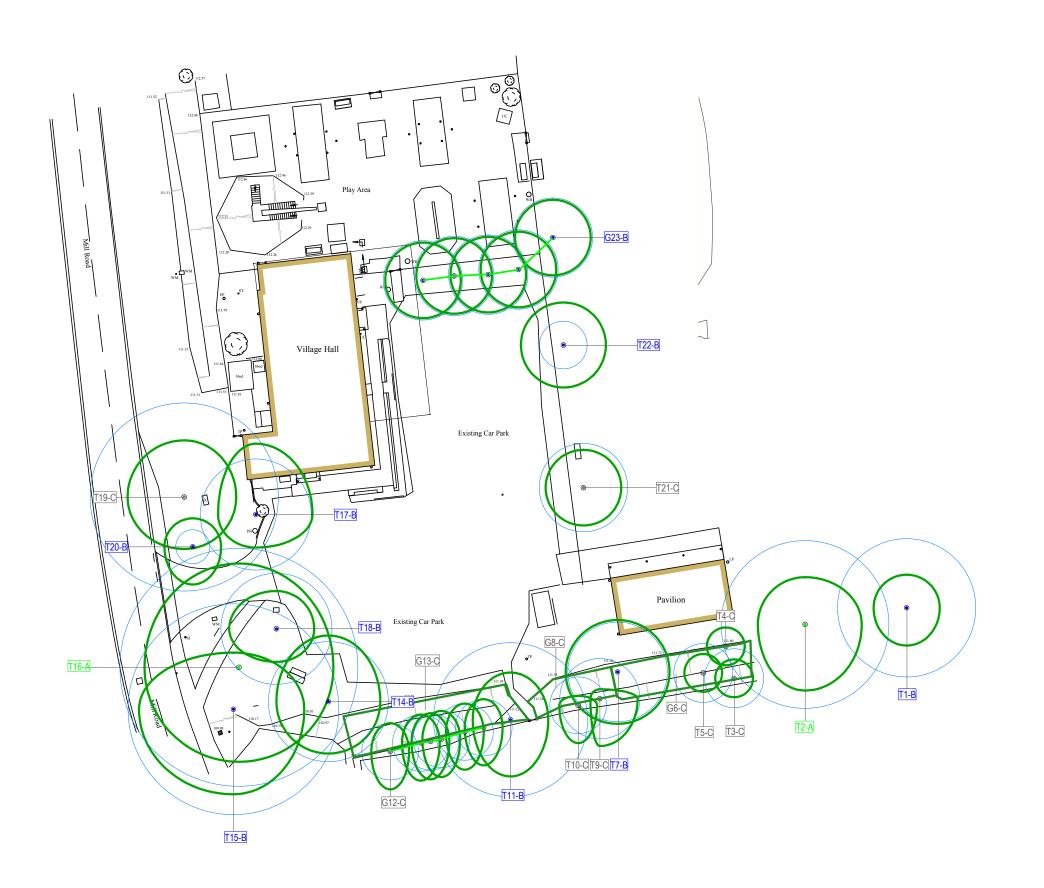
Detailed comments about the tree

#### 15 Preliminary recommendations

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

# Appendix 2

Tree survey plan SHA 944 TSP



Category A - high quality and value
Category B - moderate quality and value
Category C - low quality and value
Category U - unsuitable for retention

Crown spread

RPA - root protection area



RPA - root protection area as defined by Table 2 BS 5837:2012



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



Debden Village Hall Trust

Site Address

Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE

Tree Survey Plan
Date

Drawing Number

Drawn

ND-H

SMD-H

Drawing Number

Scale

Drawing Status

30.9.19

SHA 944 TSP

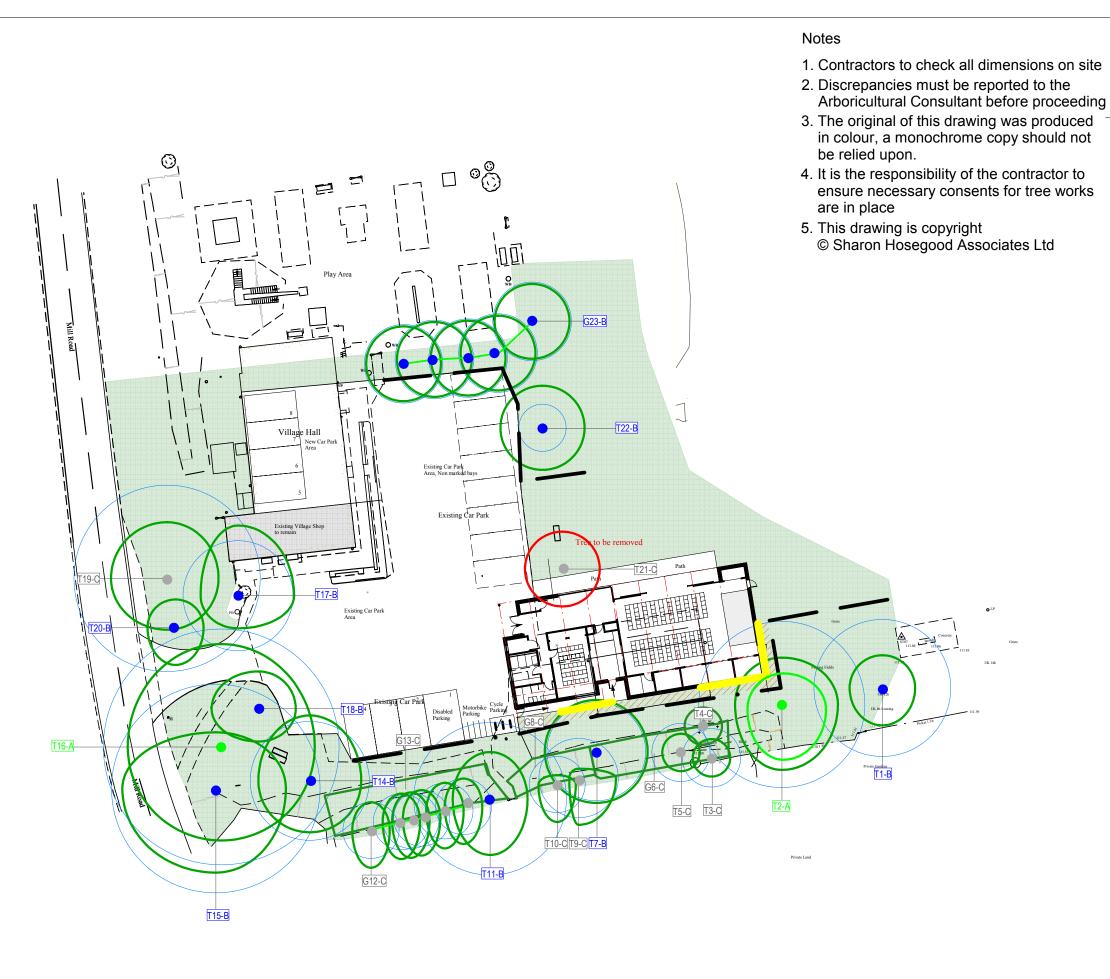
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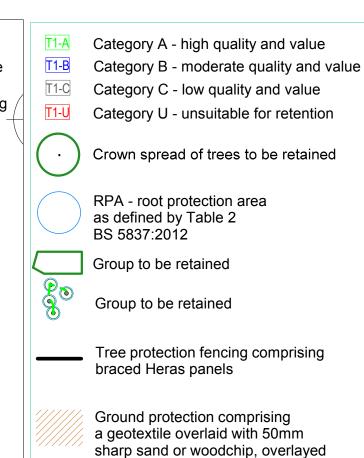
Revision

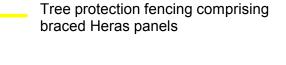
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# Appendix 3

Tree protection plan SHA 944 TPP







Crown spread of tree to be removed

with marine ply board.



Drawing Title Orientation Drawn Authorized

Tree Protection Plan
Date Drawing Number Scale Drawing Status

04.10.19 SHA 944 TPP 1:400@A3For Issue

Revision Do not scale from this drawing

Α	nr	Δr	h	iv	1
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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. Works should not take place until planning permission is granted and all pre-commencement conditions are discharged.

Tree	Species	Proposed works	Reason
no. T1	Lime	Crown reduce by up to 1 - 2m Remove any dead wood as part of this reduction	To compensate for root pruning require to install foundations  The amount of pruning will be determined following an exploratory trench to determine presence or absence of roots along the building line
T2	Lime	Sever Ivy. Remove Ivy. Inspect stem/basal area. Reduce length of lowest south eastern branch by 2m. Non urgent work.	For safety reasons Not in connection with the proposal
Т3	Elder	No works	n/a
T4	Hawthorn	No works	n/a
T5	Elder	No works	n/a
G6	Damson and elder	No works	n/a
Т7	Ash	Sever ivy and reinspect	For safety reasons Not in connection with the proposal
G8	Damson, elder, hawthorn, lime	No works	n/a
Т9	Ash	Sever Ivy. Remove Ivy. Inspect stem/basal area. Remove major deadwood.	For safety reasons Not in connection with the proposal
T10	Damson	Sever Ivy. Remove Ivy. Inspect stem/basal area. Remove major deadwood.	For safety reasons Not in connection with the proposal

Tree	Species	Proposed works	Reason
T11	Ash	Sever Ivy. Remove Ivy. Inspect stem/basal area. Remove major deadwood. Prune tree clear of service wires.	For safety reasons Not in connection with the proposal
G12	Ash, sycamore	Sever Ivy. Remove Ivy. Inspect stem/basal area. Remove the ash if fail to flush in the spring.	For safety reasons Not in connection with the proposal
T13	Damson	Sever Ivy. Remove Ivy. Inspect stem/basal area. Or remove and replace.	For safety reasons Not in connection with the proposal
T14	Lime	Sever Ivy. Remove Ivy. Inspect stem/basal area. Remove major deadwood.	For safety reasons Not in connection with the proposal
T15	Horse chestnut	Carry out aerial inspection. Remove major deadwood. Remove broken/damaged branches. Monitor bleeding canker.	For safety reasons Not in connection with the proposal
T16	Oak	Carry out aerial inspection. Remove major deadwood. Remove broken/damaged branches.	For safety reasons Not in connection with the proposal
T17	Lime	Remove major deadwood. Crown lift to 5m. Dead wood removal is urgent.	For safety reasons Not in connection with the proposal
T18	Lime	No works	n/a
T19	Horse chestnut	Carry out aerial inspection. Remove major deadwood. Monitor bleeding canker and probe union.	For safety reasons Not in connection with the proposal
T20	Oak	No works	n/a
T21	Lime	Fell to ground level and remove stump	To facilitate construction
T22	Oak	Crown lift to 5m over car park	For safety reasons Not in connection with the proposal
G23	Silver birch	No works	n/a

# Appendix 5

Tree protection specification

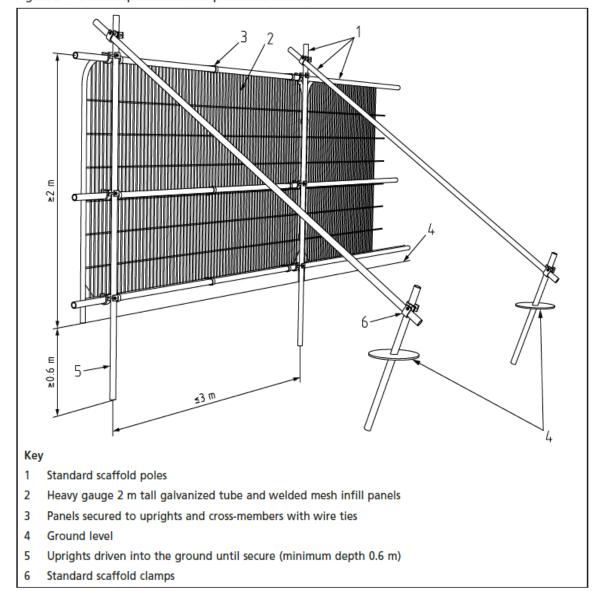


Figure 2 Default specification for protective barrier

Tree protection fencing specification from BS 5837:2012 Figure 2

#### Section 6.2.2 of BS.

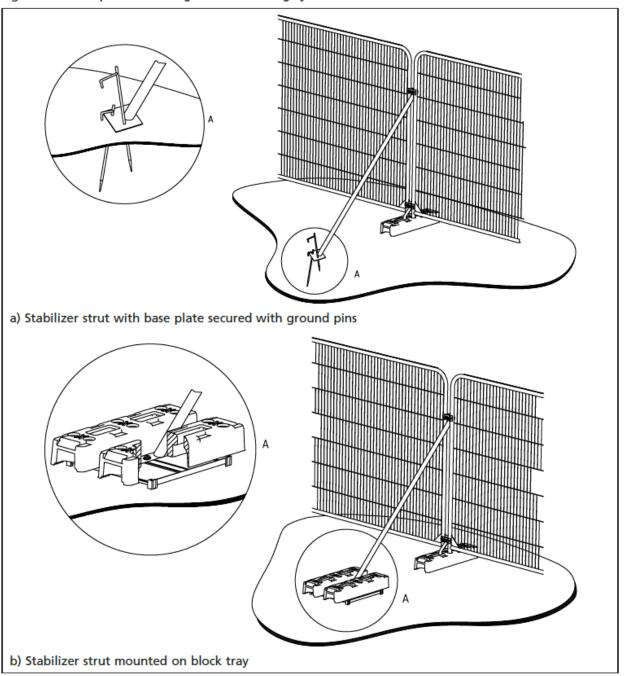
Barriers should be fit for purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees(s). Barriers should be maintained to ensure that they remain rigid and complete.

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 out 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





### 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 brown diagonal hatching, identified in the key.

Draft arboricultural method statement

### Tree works:

Recommendations for tree works can be found in the tree surgery schedule in Appendix 5. 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.

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

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

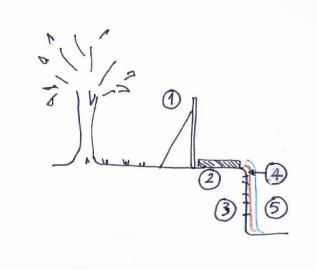
**Fires:** Fires on site should be avoided if possible. If unavoidable, they should be situated far enough so that there is no risk of damage to the trees, taking into consideration the wind direction.

**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.

**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.

**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.

Construction of the footings near T2 and T7: Within the yellow line area on the tree protection plan, the footings will be dug in the presence of an Arboriculturist. Any roots found will be cut cleanly with bypass secateurs or a small hand saw. If a root is larger than 25mm, then an assessment will be made as to whether tree surgery is needed to compensate for root loss. A photographic record will be kept of the pruned roots. The vertical wall of the trench (on the tree side) will be faced with a double layer of damp hessian pegged in place to prevent it from sagging. The purpose of this is to prevent desiccation of the roots. Work should not take place in very hot, dry, or frozen conditions to avoid root damage. The hessian will then be faced with an impermeable plastic sheet to prevent the alkalinity of the concrete scorching the cut ends of the roots. A simple diagram is found below:



- 1. Tree protection fencing
- 2. Ground protection
- 3. Root pruning
- Double layer of hessian (pegged)
- Impermeable plastic sheeting (pegged)

**New 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 within 1m of the stem. Top soil and other materials will be transported by wheelbarrow on running boards when working near trees.

## **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 Debden Village Hall, Mill Rd, Saffron Walden CB11 3LE' 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.

Tree related legislation and National Policy

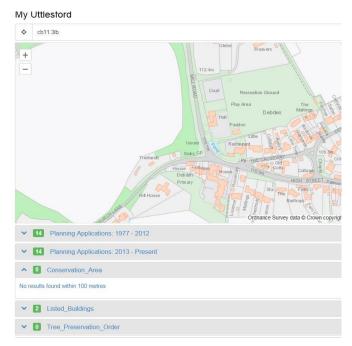
## **Tree preservation orders**

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

No tree preservation orders affect the site.

### **Conservation Area:**

The site does not lie in a conservation area.



Source:- Uttlesford interactive map

# **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.

### 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'.

**Common law** 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.

## **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 planning permission once all pre-commencement conditions are discharged
- Works to dangerous trees

# The National Planning Policy Framework February 2019

Section 175 states that:

- 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 reasons exists; and a suitable compensation strategy
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

# Appendix 8 Statement of methodology and reference material

Review of supplied plans and information

Site visit made by Sharon Durdant-Hollamby on 27<sup>th</sup> September 2019.

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).

#### **Received material**

1905 D&A Statement DRAFT 1905'10 Loc Plan 1905'11 Block,Sit D IMG 1354

## **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

**Uttlesford District Council website** 

C. Mattheck 'The body language of trees' 2015

# **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 Uttlesford 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 where 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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My experience and qualifications



# Sharon Durdant-Hollamby

FICFor FArbor A BSc (Hons) Tech Cert Arbor A







# <u>Profile</u>

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 DF Clark Contractors 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 regular presenter and an occasional trainer for Trevor Roberts Associates. She appeared on BBC1 in July 2015 and September 2015, in 'Britain Beneath Your Feet' demonstrating tree radar at the Burghley Country Park, Lincs, with Dallas Campbell, the consumer programme 'Rip Off Britain', and latterly, again with tree radar equipment, Springwatch, investigating the rooting of the Major Oak at Sherwood Forest in June 2018. Sharon was the technical coordinator and chair of the Institute of Chartered Foresters national study tour 2016 'The streets of London'. In November 2018 Sharon presented at the Annual International Arboricultural Summit in Hong Kong and is now on the Board of Advisors. She became Vice President of the Institute of Chartered Foresters in April 2019.

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:** Vice President of the Institute of Chartered Foresters

Fellow of the Institute of Chartered Foresters (ICF)

Assessor for the ICF examination board 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 since

2009 has 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

# 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	Methodology for the implementation of any aspect of development
statement	that is within the root protection area, or has the potential to result in
A 1 - 2 - 1 - 2 - 1	loss of or damage to a tree to be retained.
Arboriculturist	Person who has, through relevant education, training and experience
A waln't a atoma	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
Biochai	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
Diomechanical	organisms, such as trees.
Body language	In trees, the outward display of growth responses and/or deformation
body language	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.
Cambium	Layers of meristematic cells in the cells peripheral to the phloem that
	give rise to bark.
Canopy	The topmost layer of twigs and foliage in a tree.
Сапору	The tophiost 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 form the surrounding tissue; e.g. Live verses dead
	or decayed versus non-decayed.
Construction exclusion	An area based on the root protection area from which access is
zone	prohibited for the duration of the project.
Coupe	An area of woodland that has been (or is about to be) selectively clear-
	felled or coppiced.
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
1	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
Divert deves	often progressing proximally in stages.
Direct damage	Direct physical damage to a structure of surface from pressure exerted by the trunk or growing roots.
	by the trunk of growing roots.
Dormant bud	An axillar bud which does not develop into a shoot until after the
	second season following its formation. Many such buds persist
	through the life of a tree and develop only if stimulated to do so.
Ecosystem services	The benefits that a particular species or range of species bestow upon
	others (including humans) though ecological relationships. Such
	services can sometimes be estimated in a form that allows them to be
Fulleranie	included in financial accounting.
Epicormic	Pertaining to shoots or roots which are initiated on mature woody
	stems; shoots can form tin 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
ITAZATA	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	Point at which a newly planted tree is no longer reliant on excessive or
landscape	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.
Landssana sharastar	
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
	two differentiational image of the cross section of the free 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	The IML-RESI system is based on the measurement of drilling resistance.
	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.
	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.
Retrenchment	Progressive reduction in the size of the crown of an old tree, by means of the dieback of 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 'Trees in relation to design, demolition and construction – Recommendations'.
Root flare	Thickened and expanded base of s tree stem at ground level form 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 o apparatus for utility provision.
SULE	Safe useful life expectancy of a tree (Barrell)
Stress	In plant physiology, a condition under which one or more physiological functions are not operation 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.

(VIA)	signs and the application of mechanical criteria.
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
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.
Vigour	In tree assessment, an overall measure of the rate of shoot production, shoot extension or diameter growth.
Veteran tree	'A tree that has passed beyond maturity and is old, or aged, in comparison with other trees of the same species'. Ancient Tree Guide No. 4 (ATF, 2008).
Utility	An undertaker by statute that has a legal right to provide customer services (e.g. communication, electricity, gas and water).
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.



ARBORICULTURAL IMPACT ASSESSMENT REPORT BS 5837:2012 'Trees in relation to design, demolition and construction.

Recommendations'

SITE

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**CLIENT** 

Debden Village Hall Trust

DATE: 7 October 2019
OUR REF: SHA 944

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