

**Sharon Hosegood**  
ASSOCIATES

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

report

SITE

Land east of Pines Hill, Stansted Mountfitchet, Essex

CLIENT

Luxus Homes Ltd

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**DATE: August 2021**  
**OUR REF: SHA 1306**

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## Executive summary

This report is submitted in connection with an outline application for development of up to 31 units with 48% social housing on land east of Pines Hill, with all matters reserved for subsequent approval apart from access, which is submitted in detail at Land east of Pines Hill-Stansted Mountfitchet. 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 trees on site are not protected by a Tree Preservation Order, and the site is not in a Conservation Area. The site is largely a Christmas tree plantation which is no longer under active management. There are three main plantation areas: the northern boundary with Stoney Common Road, a belt of trees adjacent to the track leading south from the road and two clusters on area of land to the east of Pines Hill. There is also a line of sycamores and cypress on the southern boundary and a mixture of deciduous and coniferous trees on the raised bank next to Pines Hill.

Development results in the majority of the coniferous plantation being removed, except for the trees closest to Stoney Common Road and trees on the western side of the site where they can be reasonably incorporated in rear gardens. The retained trees provide the highest visual amenity out of these groups as they are closer to the road/access. The majority of the coniferous trees in the area to the east of Pines Hill will be removed, with trees being retained adjacent to the property to the north, where practical to do so.

Trees on the southern boundary will be removed, and the dense planting on the Pine Hill planting will mostly be removed to enable access, with the best tree in the group, T17 beech, being retained. The site is on higher ground than Pines Hill, necessitating excavation and a retaining wall into the site, hence the higher number of tree removals than would appear to be necessary on plan form.

The driveway parallel with Stoney Common Road will be minimal dig and porous construction and installed under arboricultural supervision. The foundation near T2 and T24 are on the outer edge of the root protection area and be installed under arboricultural supervision. Draft method statements for this, and tree protection details are within this report.

There will be a landscaping scheme to be developed as part of a Reserved Matters application including new tree planting on the peripheries of the site and to create some tree lined streets in line with National Planning Policy Framework 2021.

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**1. Introduction:**

- 1.1. This report accompanies a planning application to Uttlesford District Council for an outline application for development of up to 31 units with 48% social housing on land east of Pines Hill, with all matters reserved for subsequent approval apart from access, which is submitted in detail. 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 Luxus Homes 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 an area of open land to the south of Stoney Common Road and west of Pine Hill. There are two residential properties to the mid-west of the site and a property to the south.

3.2. The site is largely a Christmas tree plantation which is no longer under active management. There are three main plantation areas: the northern boundary with Stoney Common Road, a belt of trees adjacent to the track leading south from the road and two clusters on area of land to the east of Pines Hill. There is also a line of sycamores and cypress on the southern boundary and a mixture of deciduous and coniferous trees on the raised bank next to Pines Hill.

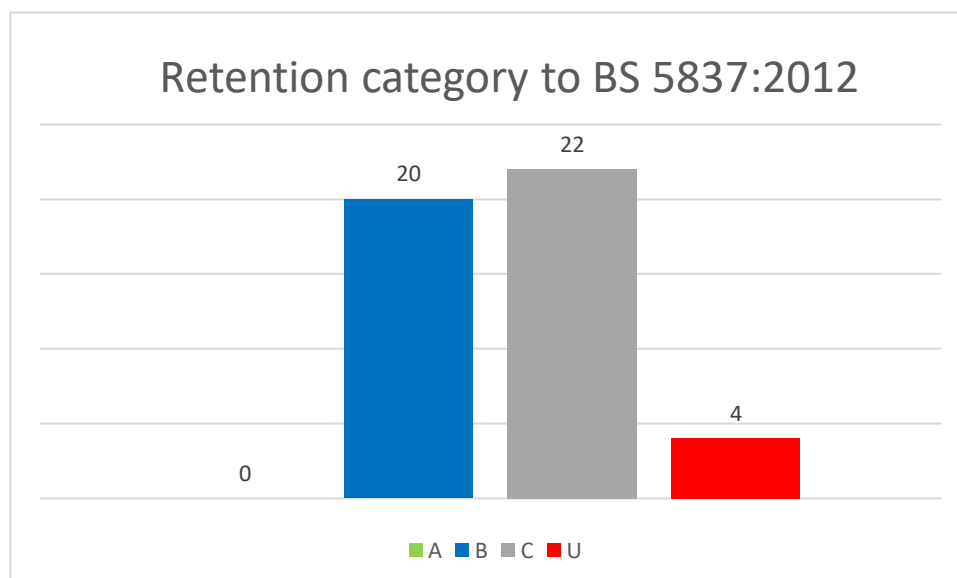
3.3. *Site soils:* An assessment of soils on-site was carried out by a desktop analysis using the National Soil Resources Institute website which identified the soils as likely to be freely draining slightly acid but base-rich soils. This is a guide only and detailed on-site soil analysis should be undertaken by the project engineer to inform the foundation design.

#### 4 The trees:

4.1 *Generally:* There are 39 individual trees, one woodland and 6 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 1306 TSP at appendix 2.

4.2 *Legislation:* No Tree Preservation orders exist on site. The site does not lie within a Conservation Area. Further information on legislation is found at appendix 7.

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. Outline application for development of land east of Pines Hill for up to 31 dwellings with 48% social housing with all matters reserved for subsequent approval apart from access, which is submitted in detail.

## 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 on the northern boundary: W1 Norway spruce, Scots Pine, sycamore, hawthorn, Lawson cypress and Norway maple (collectively category B under the BS – moderate value) and T2 horse chestnut (B).*

This informal wooded belt of trees provides collective visual amenity to Stoney Common Road. The trees are predominantly Lawson cypress, pine and spruce. Some trees are swamped with ivy and have a low vitality, whilst others have a fuller crown. The trees on the southern side of the group are spindly as planted too close together. Some trees have fallen and are resting on the ground.

The horse chestnut is a mature tree on the corner of the access and Stoney Common Road. It is swamped with ivy making full inspection difficult.



*Photo 1 of W1 looking east along Stoney Common Road*



*Photo 2 of interior of W1*



*Photo 3 of W1 looking south*



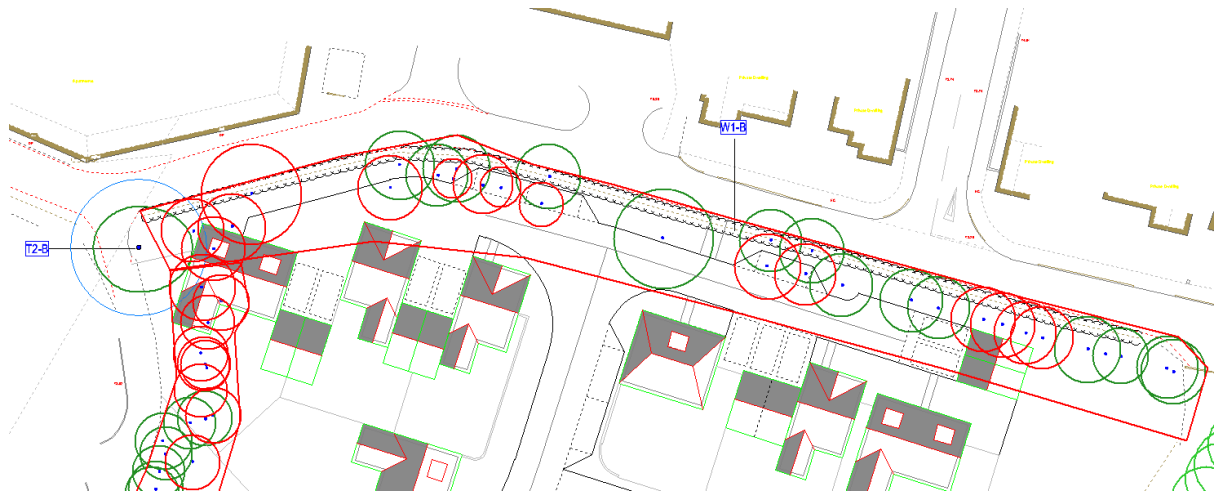
*Photo 4 of T2 W1 looking south-east along Stoney Common Road towards the track*



*Arboricultural impact assessment:*

Trees to be retained: 14 in W1, and T2. Trees to be removed: 16.

The trees to be removed, including any smaller or fallen trees not identified on the topographical survey will be marked up by the arboricultural consultant. Trees to be retained will have minor works for safety reasons and a further inspection will be carried out on their condition. The results of this will be reported to the Landscape Officer at Uttlesford District Council. A full tree surgery schedule is found at appendix 4.



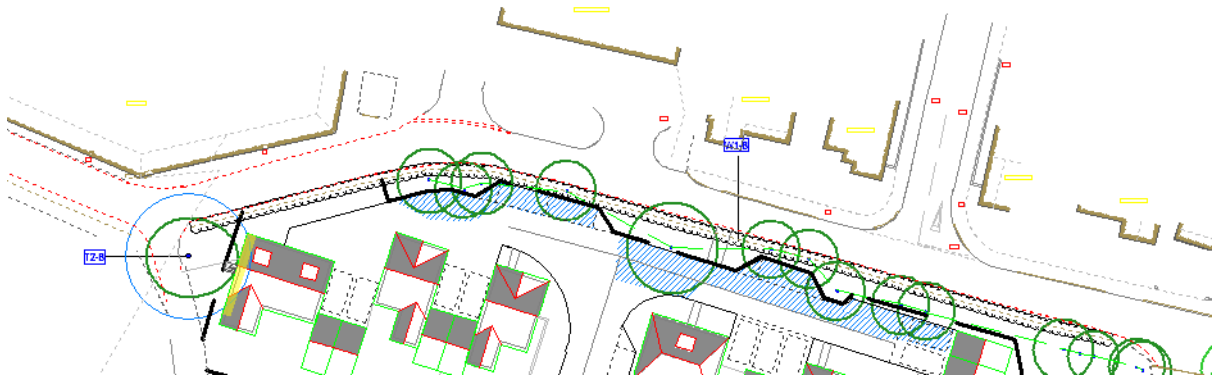
*Plan 1 – Extract from SHA 1306 TPP 1 – do not scale, north is vertical. Red trees to be removed and green to be retained*

The retained trees will be protected during construction by tree protection fencing in accordance with the specification at appendix 5 and at a location on the plan SHA 1306 TPP2 at appendix 3. The area to the south of the fencing will be protected with ground protection in accordance with the specification at appendix 5, or the sub base for the drive prior to any machinery being on site. The drive will be a minimal dig and porous construction in accordance with the draft method statement at appendix 6. The area to which this applies is shown by blue shading on the plan extract overleaf.

This blue area is an exclusion zone for new services and drainage.

The trees to be retained will provide screening and softening and, the gaps created by tree removals will be planted up with new trees and hedging.

The proposed property near the horse chestnut T2 is in the outer edge of the root protection area and is 6m from the trunk. As this area is currently occupied by the roots of trees to be removed, it is unlikely to be occupied by many roots from the horse chestnut. As a precaution, the foundation will be installed in accordance with the method statement at appendix 6.



*Plan 2 – Extract from SHA 1306 TPP 2 – do not scale, north is vertical. Black dashed lines – tree protection fencing, blue dashed lines paving to be minimal dig and porous construction.*

*Yellow shaded area near T2 – area for arboricultural method statement for foundation installation*

6.5. *Trees on the western boundary: G3 Norway spruce and Norway maple (collectively B), T4 Norway spruce (B) and T5 sycamore (B)*

This Christmas tree plantation is predominantly spruce with occasional self sown early mature self-sown Norway maple. The trees average 18m high with average crown spreads of 4m. The group forms a dense screen but visual amenity is limited mostly to the immediate property to the west, and the site. The plantation is incongruous to the landscape character of the area.



*Photo 5 of G3 looking west*

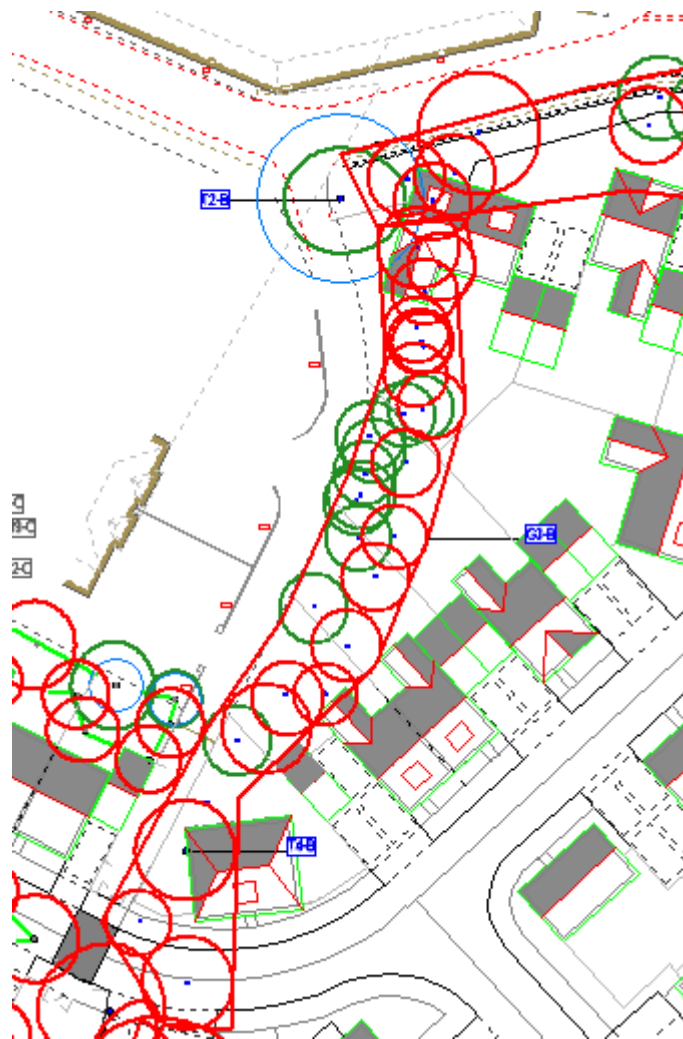
*Arboricultural impact assessment:*

Trees to be retained: 10. Trees to be removed: 18 plus T4.

The trees to be removed, including any smaller or fallen trees not identified on the topographical survey will be marked up by the arboricultural consultant. Trees to be retained will have minor works for safety reasons and a further inspection will be carried out on their condition. The results of this will be reported to the Landscape Officer at Uttlesford District Council.

The maximum number of trees have been retained without unreasonably dominating proposed rear gardens. The trees will be protected by tree protection fencing during works.

The trees are on the western aspect and will cast some shade in the evening, but the properties will be benefit from the screening and visual interest.



*Plan 3 – Extract from SHA 1306 TPP 1 – do not scale, north is vertical. Red trees to be removed and green to be retained*

6.6. *Trees on the southern boundary: T6, T7, T9, T10, T11, T12, T13 sycamore (B), T8 sycamore (C – low value) and G14 Lawson cypress (C)*

The mature sycamores average 18m high and are in a reasonable form and condition. They are growing amongst the line of Lawson cypress trees on the top of a steep bank. G14 Lawson cypress is also 18m tall and is a line of closely planted spindly trees forming a dense screen.



*Photo 6 of G14 with T5 - T9 looking south-west from within the site*

*Arboricultural impact assessment:*

Trees to be removed: T5 – T9 plus G14. Trees to be retained: T10 – T13 which will be protected during works.

6.7. *Trees in the western part of the site: T15 Norway maple (C), T19 & T34 holly (C). T17 beech (B), T18 oak (C), T19 ash (B), T20 pine (U – unsuitable for retention), T21 & T25 sycamore (C), T22 pine (C), T23 ash (C), T24 walnut (B – offsite), T26 holly (B), T27 yew (C), T28 beech (B), T29 Norway maple (B), T30 hazel (C), T31 yew (B), T32 & T33 ash (C), T35 Scots pine (U), T36 Norway maple (B), T37, T38 and T39 ash (C), T40 & T41 Norway spruce (U), G42 & G43 Norway spruce (C), G44 rowan (C- offsite), T45 Lawson cypress (C) and G46 2 x Nordmann Fir.*

This densely planted area includes two Norway spruce plantations and a mix of deciduous and coniferous trees, some of which are in a poor condition as detailed in the tree survey sheets at appendix 1. The best tree in terms of condition and visual amenity is T17 beech.



*Photo 7 of the view from Pines Hill – key trees numbered*



*Photo 8 of the view from Pines Hill*



*Photo 9 showing the plantation in the western area near Pines Hill. Looking north.*

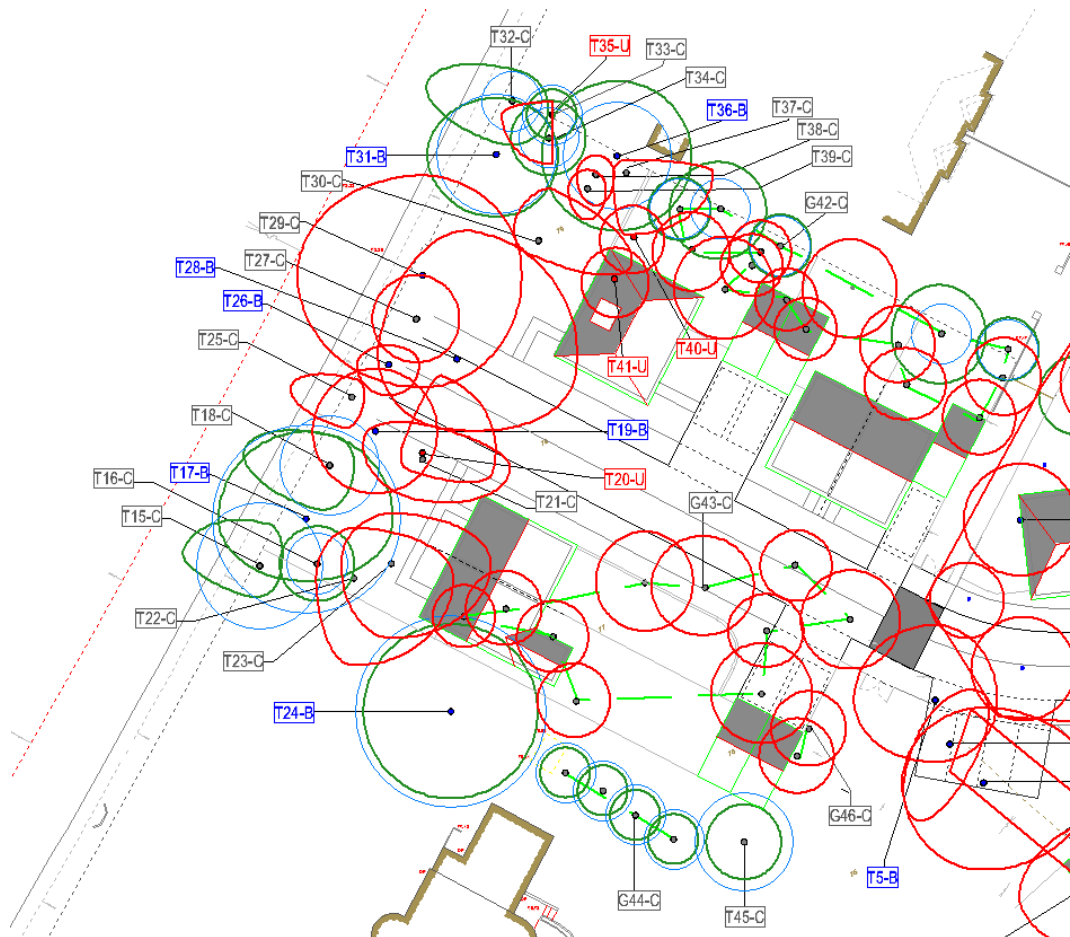
*Arboricultural impact assessment:*

Trees to be removed: T19 - T23, T25 – T30, T33, T37 – T41, 11 trees in G42, all in G43 and G46. Trees to be retained: T15 – T18, T31, T32, T34, T35, T36, 5 trees in G42 and offsite trees T24, G44 and T45.

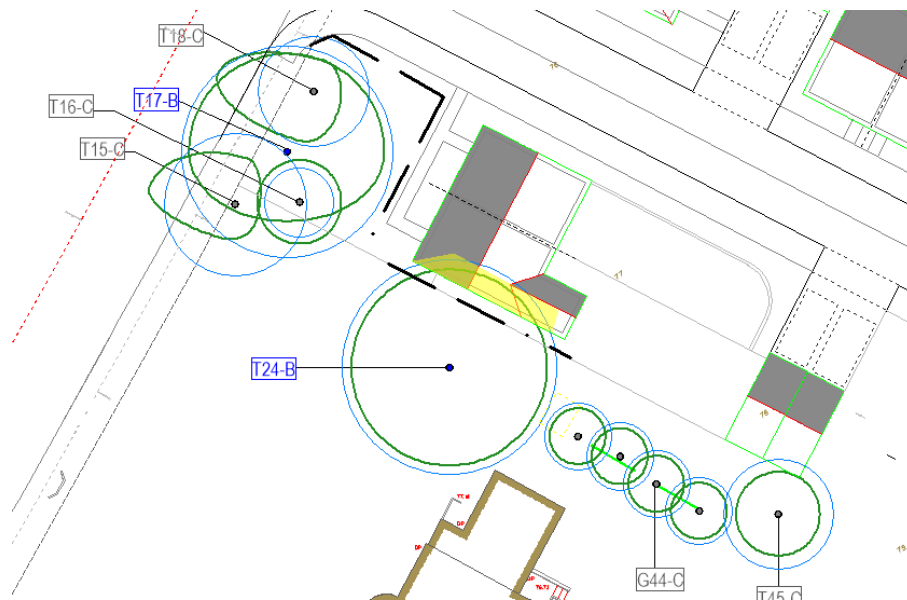
One of the reasons for the high number of tree removals is the fact that the access from Pines Hill needs to be cut into the site, as the road is lower than the site. The drive will be edged with a retaining feature rather than battering back so that trees to the south of the access can be retained. The best tree, T17, is retained.

Trees to be retained will be protected during works by tree protection fencing. There is a slight incursion in the root protection for the proposed property near T24, however there are unlikely to be many roots present as there are two trees in G43 which will be removed in the footprint of the building. As a precaution the installation will take place under arboricultural supervision in accordance with the method statement at appendix 6. T24 will be lightly pruned back to the boundary line to enable scaffolding.





*Plan 4 – Extract from SHA 1306 TPP 1 – do not scale, north is vertical. Red trees to be removed and green to be retained*



*Plan 5 – Extract from SHA 1306 TPP 2 – do not scale, north is vertical. Black dashed lines – tree protection fencing. Yellow shaded area near T2 – area for arboricultural method statement for foundation installation*

## **7. Conclusions:**

- 7.1. Development results in the majority of the coniferous plantation being removed, except for the trees closest to Stoney Common Road and trees on the western side of the site where they can reasonably be incorporated in rear gardens. The retained trees provide the highest visual amenity out of these groups as they are closer to the road/access. The majority of the coniferous trees in the area to the east of Pines Hill will be removed, with trees being retained to the adjacent to the property to the north where practical to do so.
- 7.2. Trees on the southern boundary will removed, and the dense planting on the Pine Hill planting will mostly be removed to enable access, with the best tree in the group, T17 beech, being retained. The site is on higher ground than Pines Hill, necessitating excavation and a retaining wall into the site, hence the higher number of tree removals than would be to be necessary on plan form.
- 7.3. The driveway parallel with Stoney Common Road will be minimal dig and porous construction and installed under arboricultural supervision. The foundations near T2 and T24 are on the outer edge of the root protection area sand be installed under arboricultural supervision. Draft method statements for this, and tree protection details are within this report.
- 7.4. There will be a landscaping scheme to be developed as part of a Reserved Matters application including new tree planting on the peripheries of the site and to create some tree lined streets in line with National Planning Policy Framework 2021. This will include infill planting on Stoney Road Common and on the frontage of Pines Hill. Species in relation to the section on the periphery of the site will be locally native, whilst within the site there will be a wide range of species to ensure biodiversity and some resilience to climate change.

## **8. Recommendations:**

- 8.1. That a copy of this report, and subsequent more detailed arboricultural method statement, is kept on site, including A1 colour copies of the tree protection plans. 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.
- 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 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 no tree works take place until consent is granted.
- 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 installation of new hard surfacing near trees to be retained is carried out under arboricultural supervision.
- 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.

8.12. That the trees to be removed are marked on site by the arboricultural consultant and that the tree surgeon ensures that a full inspection of trees to be retained can be made by removal of dead wood, ivy and carrying out a climbing inspection.

**Sharon Durdant-Hollamby**

FICFor FArborA BSc (Hons) Tech. Cert. (Arbor A)

Director

Sharon Hosegood Associates Ltd

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Appendix 1

Tree survey sheets

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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 <sup>2</sup> )	Comments	Recommendations
W1	Picea abies (Norway Spruce), Pinus sylvestris (Scots Pine), Acer pseudoplatanus (Sycamore), Crataegus monogyna (Hawthorn), Chamaecyparis lawsoniana (Lawson Cypress), Acer platanoides (Norway Maple)	EM	550	1	18(0)	28	4	4	4	4	Fair	20+	B2	6.6	136.87	Provides a high level of visual amenity. Prominent tree. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Unable to inspect stem due to undergrowth. Dieback in crown. Broken branches in crown. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Linear woodland strip. Predominantly Lawson cypress, pine and spruce. Some trees are swamped with ivy and have a low vitality, others have a fuller crown. Trees on the southern side of the group are spindly as planted too close together. Some trees have fallen and resting on the ground. Forms a dense screen.	A full topographical survey needed followed by a detailed individual tree inspection. From this a woodland management plan will be produced (depending on number of trees retained).

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 <sup>2</sup> )	Comments	Recommendations
T2	Aesculus hippocastanum (Horse Chestnut)	M	350 250 350 300	4	15(2)	20	5	6	5	5	Fair	40+	B2	7.56	179.58	Prominent tree. Reasonable form and condition. Ivy on tree. Unable to inspect stem due to Ivy. Unable to inspect stem due to undergrowth. Stem divides below 1.5m. Broken branches in crown. Major deadwood in crown. Growing on site boundary. Overhead wires pass through crown. Dense ivy to near top of crown impeding photosynthesis.	Sever Ivy. Remove Ivy. Inspect stem/basal area. Carry out further inspection. Remove major deadwood. Prune tree clear of service wires.
G3	Picea abies (Norway Spruce), Acer platanoides (Norway Maple)	EM	350	1	18(0)	28	4	4	4	4	Good	40+	B2	4.2	55.42	Reasonable form and condition. Part of linear group. Ivy on tree. Unable to inspect stem due to undergrowth. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Informal plantation of predominantly spruce with occasional self sown early mature Norway maple. Forms a dense screen.	
T4	Picea abies (Norway Spruce)	M	520	1	22(0)	28	5	5	5	5	Good	20+	B1	6.24	122.34	Prominent tree. Reasonable form and condition. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Larger tree has more space to grow.	

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 <sup>2</sup> )	Comments	Recommendations
T5	Acer pseudoplatanus (Sycamore)	M	480	1	18(4)	22	6	5	5	7	Good	40+	B2	5.76	104.24	Reasonable form and condition. Part of linear group. Stem divides above 1.5m. Co dominant. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure.	
T6	Acer pseudoplatanus (Sycamore)	M	350	1	18(4)	22	5	2	7	3	Fair	40+	B2	4.2	55.42	Reasonable form and condition. Part of linear group. Stem divides at ground level. Co dominant. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Very asymmetric crown.	
T7	Acer pseudoplatanus (Sycamore)	M	520	1	18(4)	22	6	9	7	7	Good	40+	B2	6.24	122.34	Reasonable form and condition. Part of linear group. Suckers around stem base. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Prominent tree amongst line of Lawson cypress.	



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 <sup>2</sup> )	Comments	Recommendations
T8	Acer pseudoplatanus (Sycamore)	M	520	1	18(4)	22	4	5	6	7	Fair	40+	C2	6.24	122.34	Reasonable form and condition. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Unable to inspect stem due to undergrowth. Suckers around stem base. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Prominent tree amongst line of Lawson cypress. Lower quality as some evidence of sooty bark disease in smaller diameter branches.	Sever Ivy. Remove Ivy. Inspect stem/basal area. Remove major deadwood. Remove broken/damaged branches.
T9	Acer pseudoplatanus (Sycamore)	M	550	1	18(4)	22	7	6	6	6	Good	40+	B2	6.6	136.87	Reasonable form and condition. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Stem divides below 1.5m. Included bark present in fork. Co dominant. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Prominent tree amongst line of Lawson cypress.	Sever Ivy. Remove Ivy.

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 <sup>2</sup> )	Comments	Recommendations
T10	Acer pseudoplatanus (Sycamore)	M	500	1	18(4)	22	7	3	8	3	Good	40+	B2	6	113.11	Reasonable form and condition. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Stem divides below 1.5m. Included bark present in fork. Co dominant. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Prominent tree amongst line of Lawson cypress. Growing on top of steep bank.	Sever Ivy. Remove Ivy.
T11	Acer pseudoplatanus (Sycamore)	M	300	1	18(4)	22	7	3	8	3	Good	40+	B2	3.6	40.72	Reasonable form and condition. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Stem divides below 1.5m. Included bark present in fork. Co dominant. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Prominent tree amongst line of Lawson cypress. Growing on top of steep bank.	Sever Ivy. Remove Ivy.

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 <sup>2</sup> )	Comments	Recommendations
T12	Acer pseudoplatanus (Sycamore)	M	500	1	19(4)	22	7	3	8	3	Good	40+	B2	6	113.11	Reasonable form and condition. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Stem divides below 1.5m. Included bark present in fork. Co dominant. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Prominent tree amongst line of Lawson cypress. Growing on top of steep bank.	Sever Ivy. Remove Ivy.
T13	Acer pseudoplatanus (Sycamore)	M	500	1	19(4)	22	7	7	6	3	Good	40+	B2	6	113.11	Reasonable form and condition. Part of linear group. Ivy on tree. Unable to inspect stem due to Ivy. Stem divides below 1.5m. Included bark present in fork. Co dominant. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Prominent tree amongst line of Lawson cypress. Growing on top of steep bank.	Sever Ivy. Remove Ivy.

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 <sup>2</sup> )	Comments	Recommendations
G14	<i>Chamaecyparis lawsoniana</i> (Lawson Cypress)	EM	300	1	18(0)	28	2	2	2	2	Fair	40+	C1	3.6	40.72	Prominent tree. Reasonable form and condition. Part of linear group. Unable to inspect stem due to undergrowth. Unbalanced crown shape. Crown distorted due to group pressure. Line of closely planted trees (average 2m apart). Growing on top of steep bank. Forms a dense screen.	
T15	<i>Acer platanoides</i> (Norway Maple)	EM	300	2	16(6)	18	4	2	2	6	Fair	20+	C2	5.09	81.4	Prominent tree. Reasonable form and condition. Ivy on tree. Unable to inspect stem due to Ivy. Stem divides at ground level. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Two trees growing very close together. On top of steep bank next to busy road.	
T16	<i>Ilex aquifolium</i> (Holly)	SM	150 100 100	3	5(0)	11	3	3	3	3	Fair	20+	C2	2.47	19.17	Reasonable form and condition. Suckers around stem base. Multiple stems at ground level.	

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 <sup>2</sup> )	Comments	Recommendations
T17	<i>Fagus sylvatica</i> (Beech)	M	630	1	22(4)	24	7	7	5	7	Fair	40+	B2	7.56	179.58	Provides a high level of visual amenity. Prominent tree. Reasonable form and condition. Ivy on tree. Unable to inspect stem due to Ivy. Major deadwood in crown. Elongated branches over the road.	Remove Ivy. Inspect stem/basal area. Remove major deadwood.
T18	<i>Quercus robur</i> (Common Oak)	EM	330	1	18(10)	21.5	3	2	3	7	Fair	40+	C2	3.96	49.27	Plotted by eye as not on topo. Spindly. Leaning West. Ivy on tree. Unable to inspect stem due to Ivy. Broken branches in crown. Unbalanced crown shape. Crown distorted due to group pressure.	
T19	<i>Fraxinus excelsior</i> (Ash)	M	320	2	18(12)	22	5	5	5	5	Fair	20+	B2	5.44	92.98	Reasonable form and condition. Ivy on tree. Unable to inspect stem due to Ivy. Stem divides below 1.5m. Co dominant. Historically crown lifted and occluded well. Broken branches in crown. Major deadwood in crown. Over crown lifted leaving a high crown on slender trunks.	
T20	<i>Pinus sylvestris</i> (Scots Pine)	M	500	1	16(5)	16	2	7	4	5	Dead	<10	U	6	113.11	Dead. Ivy on tree. Unable to inspect stem due to Ivy. Growing right next to neighbouring tree.	Remove tree and retain root.

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 <sup>2</sup> )	Comments	Recommendations
T21	Acer pseudoplatanus (Sycamore)	EM	375	1	16(1)	20	6	7	2	1	Fair	20+	C2	4.5	63.63	Ivy on tree. Unable to inspect stem due to Ivy. Unbalanced crown shape. Crown distorted due to group pressure. Growing right next to pine. Very asymmetric crown.	
T22	Pinus sylvestris (Scots Pine)	M	600	1	18(5)	22	4	8	7	3	Fair	20+	C2	7.2	162.88	Leaning East. Ivy on tree. Unable to inspect stem due to Ivy. Dieback in crown. Low bud/leaf density. Broken branches in crown. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. A third of the crown is dead. Large hanging dead branch on Northern aspect.	Sever Ivy. Remove Ivy. Remove major deadwood. Remove broken/damaged branches.
T23	Fraxinus excelsior (Ash)	EM	440	1	18(10)	22	4	8	6	4	Fair	20+	C2	5.28	87.59	Spindly. Leaning East. Ivy on tree. Unable to inspect stem due to Ivy. Historically crown lifted and occluded well. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Large dead branch on Eastern aspect.	

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 <sup>2</sup> )	Comments	Recommendations
T24	Juglans regia (Walnut)	M	500 400	2	18(2.5)	20	7	7	7	7	Good	40+	B2	7.68	185.32	Offsite tree. Reasonable form and condition. Ivy on tree. Stem divides below 1.5m. Major deadwood in crown. Stem data estimated as offsite.	
T25	Acer pseudoplatanus (Sycamore)	SM	320	1	18(3)	22	2	1	2	5	Fair	20+	C1	3.84	46.33	Spindly. Ivy on tree. Unable to inspect stem due to Ivy. Low bud/leaf density. Unbalanced crown shape. Crown distorted due to group pressure. Branches restricting highway light. Rather spindly. Growing close to fence.	
T26	Ilex aquifolium (Holly)	M	300	1	8(0)	13	2	3	3	3	Good	20+	B2	3.6	40.72	Leaning North. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Tall, drawn up tree.	
T27	Taxus baccata (Yew)	SM	200	1	8(0)	18	4	4	4	4	Good	40+	C2	2.4	18.1	Reasonable form and condition. Wide form	

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 <sup>2</sup> )	Comments	Recommendations
T28	Fagus sylvatica (Beech)	M	1,020	1	24(0)	25	10	10	6	6	Good	40+	B2	12.24	470.73	Prominent tree. Reasonable form and condition. Leaning East. Ivy on tree. Unable to inspect stem due to Ivy. Cavity on stem. Broken branches in crown. Major deadwood in crown. Unbalanced crown shape. Imposing tree. 100mm x 50mm cavity at 4m on northern side with exudation. Two large cavities on southern aspect.	Sever Ivy. Remove Ivy. Inspect stem/basal area. Carry out further inspection. Carry out aerial inspection. Remove major deadwood. Remove broken/damaged branches.
T29	Acer platanoides (Norway Maple)	M	710	1	18(8)	22	8	8	9	10	Good	40+	B2	8.52	228.08	Provides a high level of visual amenity. Prominent tree. Reasonable form and condition. Ivy on tree. Unable to inspect stem due to Ivy. Suckers around stem base. Broken branches in crown. Major deadwood in crown. Shattered branches on Eastern aspect High in Crown. Ivy only on lower trunk. Major dead wood on road side.	Sever Ivy. Remove Ivy. Inspect stem/basal area. Carry out aerial inspection. Remove major deadwood. Remove broken/damaged branches. Dead wood removal urgent as over the road.
T30	Corylus avellana (Hazel)	M	200 150 250 100 100	5	10(0)	11	3	8	3	2	Poor	<10	C2	4.57	65.62	Poor shape & form. Coppice. Ivy on tree. Unable to inspect stem due to Ivy. Major bark wounding on stem. Arches est. Lapsed coppice. Large dead stems.	Remove stems and retain coppice stool.



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 <sup>2</sup> )	Comments	Recommendations
T31	Taxus baccata (Yew)	M	400	1	13(0.5)	15	5	5	5	6	Good	40+	B1	4.8	72.39	Provides a high level of visual amenity. Prominent tree. Attractive tree. Inner branches dead due to shading.	
T32	Fraxinus excelsior (Ash)	SM	200	1	16(10)	22	3	3	3	7	Poor	10+	C2	2.4	18.1	Spindly. Dieback in crown. Broken branches in crown. Major deadwood in crown. Unbalanced crown shape.	
T33	Fraxinus excelsior (Ash)	SM	200	1	10(10)	22	2	2	2	2	Poor	10+	C2	2.4	18.1	Poor shape & form. Spindly. Dieback in crown. Broken branches in crown. Major deadwood in crown. Unbalanced crown shape.	
T34	Ilex aquifolium (Holly)	SM	200	1	7(0)	13	3	3	3	3	Fair	20+	C2	2.4	18.1	Low vitality. Reasonable form and condition. Spindly. Ivy on tree. Suckers around stem base.	
T35	Pinus sylvestris (Scots Pine)	M	400	1	15(10)	15	1	0	4	4	Dead	<10	U	4.8	72.39	Dead.	Remove tree and root.
T36	Acer platanoides (Norway Maple)	M	360	1	18(2)	22	6	6	6	6	Good	40+	B2	4.32	58.64	Reasonable form and condition. Growing right next to boundary. Shattered branch at 2.5m.	
T37	Fraxinus excelsior (Ash)	SM	300	1	18(8)	22	1	7	5	1	Fair	40+	C2	3.6	40.72	Reasonable form and condition. Spindly. Ivy on tree. Unable to inspect stem due to Ivy. Unbalanced crown shape. Crown distorted due to group pressure. Tall drawn up tree. No sign of Ash dieback disease.	

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 <sup>2</sup> )	Comments	Recommendations
T38	Fraxinus excelsior (Ash)	SM	200	1	14(8)	22	2	2	3	2	Fair	40+	C2	2.4	18.1	Reasonable form and condition. Spindly. Ivy on tree. Unable to inspect stem due to Ivy. Unbalanced crown shape. Crown distorted due to group pressure. Tall drawn up tree. No sign of Ash dieback disease.	
T39	Fraxinus excelsior (Ash)	SM	200	1	14(8)	22	2	2	3	2	Fair	20+	C2	2.4	18.1	Poor shape & form. Spindly. Leaning South. Major deadwood in crown. Unbalanced crown shape. Crown distorted due to group pressure. Tall drawn up tree leaning heavily south. Large dead branches. Low quality C.	
T40	Picea abies (Norway Spruce)	SM	200	1	14(2)	14	2	2	2	2	Dead	<10	U	2.4	18.1	Dead.	Remove tree and root.
T41	Picea abies (Norway Spruce)	SM	200	1	14(2)	14	2	2	2	2	Dead	<10	U	2.4	18.1	Dead.	Remove tree and root.
G42	Picea abies (Norway Spruce)	SM	200	1	12(0)	28	3	3	3	3	Fair	20+	C1	2.4	18.1	Reasonable form and condition. Average dimensions given.	
G43	Picea abies (Norway Spruce)	SM	350	1	15(0)	28	3	3	3	3	Fair	20+	C1	4.2	55.42	Reasonable form and condition. Average dimensions given.	
G44	Sorbus aucuparia (Rowan)	SM	200	1	8(2)	15	2	2	2	2	Fair	20+	C1	2.4	18.1	Offsite tree. Part of linear group. Suckers around stem base.	
T45	Chamaecyparis lawsoniana (Lawson Cypress)	M	250 150 150	3	10(0)	28	3	3	3	3	Good	40+	C2	3.94	48.78	Offsite tree. Reasonable form and condition. Multiple stems at ground level.	

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 <sup>2</sup> )	Comments	Recommendations
G46	Abies normanniana (Nordman Fir) x 2	SM	300	1	12(0)	28	3	3	3	3	Good	40+	C1	3.6	40.72	Reasonable form and condition.	

### 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 <sup>2</sup> )	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 (m<sup>2</sup>)

## 14 Comments

Detailed comments about the tree

## 15 Preliminary recommendations

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

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Appendix 2

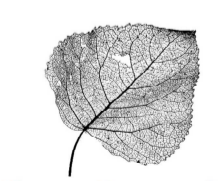
Tree survey plan SHA 1306 TSP

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- 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
- Group
- Group
- Offsite line of trees providing screening and a backdrop

- 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

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Sharon Hosegood Associates t: 01245 210420 <a href="http://www.sharonhosegoodassociates.co.uk">www.sharonhosegoodassociates.co.uk</a>		
Client		
Luxus Homes Ltd		
Site Address		
Pines Hill, Stanstead Mountfitchet		
Drawing File	Description	Drawn
Tree Survey Plan	1	ND-H SMD-H
Date	Drawing Number	Scale
22.3.21	SHA 1306 TSP	1:400@A1
Revision	For Issue	

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Appendix 3

Tree removal plan SHA 1306 TPP1

Tree protection plan SHA 1306 TPP2

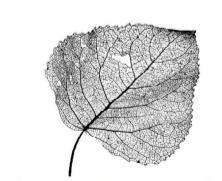
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- T1-A Category A - high quality and value
- T1-B Category B - moderate quality and value
- T1-C Category C - low quality and value
- T1-U Category U - unsuitable for retention
- Trees to be retained
- RPA - root protection area as defined by Table 2 BS 5837:2012
- Group to be removed
- Group
- Offsite line of trees providing screening and a backdrop
- Trees to be removed


- 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.
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Client:		
Luxus Homes Ltd		
Site Address:		
Pines Hill, Stanstead Mountfitchet		
Drawing Title:	Description:	Drawn:
Tree Removal Plan	1	ND-H
		SMD-H
Date:	Drawing Number:	Scale:
11.08.21	SHA 1306 TPP1	1:400@A1
Revision:		For Issue



- 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
- Offsite line of trees providing screening and a backdrop
- ▨ Arboricultural method statement for ground protection during construction and for installation of no dig and porous drive construction
- ▨ Arboricultural method statement for foundation installation
- Tree protection plan comprising braced Heras panels

- 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
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Client:		
Luxus Homes Ltd		
Site Address:		
Pines Hill, Stanstead Mountfitchet		
Drawn By:	Drawn:	Authorized:
Tree Protection Plan	ND-H	SMD-H
Date:	Drawing Number:	Scale:
11.08.21	SHA 1306 TPP2	1:400@A1
Revision:	For Issue	

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Appendix 4

Tree surgery schedule

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### 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 no.	BS category	Species	Proposed works	Reason
W1	B2	Norway Spruce, Scots pine, Sycamore, hawthorn, Lawson cypress and Norway maple	<p>Removal of all undergrowth, dead and fallen trees</p> <p>Removal of 16 trees as identified on the topographical survey. There may be additional smaller tree removals which are not identified on the topographical survey and surveying was difficult due to ground conditions.</p> <p>All tree removals to be marked up by the arboricultural consultant.</p> <p>Sever ivy and remove dead wood from all trees to be retained. Carry out a full inspection of the base and a climbing inspection of the crowns during the dead wood removal. Further crown pruning work to balance newly exposed trees may be required and will be prescribed by the arboricultural consultant.</p> <p>Works will be reported to the Landscape Officer at Uttlesford District Council.</p>	<p>To facilitate development</p> <p>For safety reasons</p>
T2	B2	Horse Chestnut	<p>Sever Ivy. Remove Ivy. Inspect stem/basal area. Carry out further Inspection. Remove major deadwood. Prune tree clear of service wires.</p> <p>Crown reduce on eastern side by 1m</p>	<p>For safety reasons</p> <p>To ensure clearance for scaffolding</p>

Tree no.	BS category	Species	Proposed works	Reason
<b>G3</b>	B2	Norway Spruce, Norway maple	<p>Removal of all undergrowth, dead and fallen trees</p> <p>Removal of 18 trees as identified on the topographical survey. There may be additional smaller tree removals which are not identified on the topographical survey; surveying was difficult due to ground conditions.</p> <p>All tree removals to be marked up by the arboricultural consultant.</p> <p>Sever ivy and remove dead wood from all trees to be retained. Carry out a full inspection of the base and a climbing inspection of the crowns during the dead wood removal. Further crown pruning work to balance newly exposed trees may be required and will be prescribed by the arboricultural consultant.</p> <p>Works will be reported to the Landscape Officer at Uttlesford District Council.</p>	
<b>T4</b>	B1	Norway Spruce	Fell and remove stump	To facilitate development
<b>T5</b>	B2	Sycamore	Fell and remove stump	To facilitate development
<b>T6</b>	B2	Sycamore	Fell and remove stump	To facilitate development
<b>T7</b>	B2	Sycamore	Fell and remove stump	To facilitate development
<b>T8</b>	C2	Sycamore	Fell and remove stump	To facilitate development
<b>T9</b>	B2	Sycamore	Fell and remove stump	To facilitate development

Tree no.	BS category	Species	Proposed works	Reason
T10	B2	Sycamore	Sever ivy and remove ivy. Remove dead wood Carry out a full inspection of the base and a climbing inspection of the crown during the dead wood removal. Reduce crown on northern side by 1m	For safety reasons  To ensure clearance for scaffolding
G14	C1	Lawson Cypress row	Fell and remove stumps	To facilitate development
T16	C2	Holly	Crown lift to 2.5m	To ensure access under the tree for garden use
T17	B2	Beech	Sever ivy and remove ivy. Remove dead wood. Carry out a full inspection of the base and a climbing inspection of the crown during the dead wood removal.	For safety reasons
T18	C2	Common Oak	Sever ivy and remove ivy. Remove dead wood. Carry out a full inspection of the base and a climbing inspection of the crown during the dead wood removal. Reduce crown over the road by 1.5m	For safety reasons  To balance the tree
T19	B2	Ash	Fell and remove stump	To facilitate development
T20	U	Scots Pine	Fell and remove stump	To facilitate development
T21	C2	Sycamore	Fell and remove stump	To facilitate development
T22	C2	Scots Pine	Fell and remove stump	To facilitate development

Tree no.	BS category	Species	Proposed works	Reason
T23	C2	Ash	Fell and remove stump	To facilitate development
T24	B2	Walnut	Crown reduce on the northern side back to the boundary	To provide room for scaffolding
T25	C1	Sycamore	Fell and remove stump	To facilitate development
T26	B2	Holly	Fell and remove stump	To facilitate development
T27	C2	Yew	Fell and remove stump	To facilitate development
T28	B2	Beech	Fell and remove stump	To facilitate development
T29	B2	Norway Maple	Fell and remove stump	To facilitate development
T30	C2	Hazel	Fell and remove stump	To facilitate development
T31	B1	Yew	Crown lift to 2.5m	To ensure access under the tree for garden use
T32	C2	Ash	Monitor for ash dieback disease and remove if the vitality continues to decline	Due to disease
T34	C2	Holly	Crown lift to 2.5m	To ensure access under the tree for garden use
T35	U	Scots Pine	Fell and remove stump	Dead

Tree no.	BS category	Species	Proposed works	Reason
T36	B2	Norway Maple	Remove dead wood. Carry out a full inspection of the base and a climbing inspection of the crown during the dead wood removal. Works on site side only	For safety reasons
T37	C2	Ash	Fell and remove stump	To facilitate development
T38	C2	Ash	Fell and remove stump	To facilitate development
T39	C2	Ash	Fell and remove stump	To facilitate development
T40	U	Norway Spruce	Fell and remove stump	To facilitate development
T41	U	Norway Spruce	Fell and remove stump	To facilitate development



Tree no.	BS category	Species	Proposed works	Reason
G42	C1	Norway Spruce	<p>Removal of 11 trees as identified on the topographical survey. There may be additional smaller tree removals which are not identified on the topographical survey; surveying was difficult due to ground conditions.</p> <p>All tree removals to be marked up by the arboricultural consultant.</p> <p>Sever ivy and remove dead wood from all trees to be retained. Carry out a full inspection of the base and a climbing inspection of the crowns during the dead wood removal. Further crown pruning work to balance newly exposed trees may be required and will be prescribed by the arboricultural consultant.</p> <p>Works will be reported to the Landscape Officer at Uttlesford District Council.</p>	
G43	C1	Norway Spruce	Fell and remove stumps	To facilitate development
G46	C1	Nordmann Fir x 2	Fell and remove stumps	To facilitate development

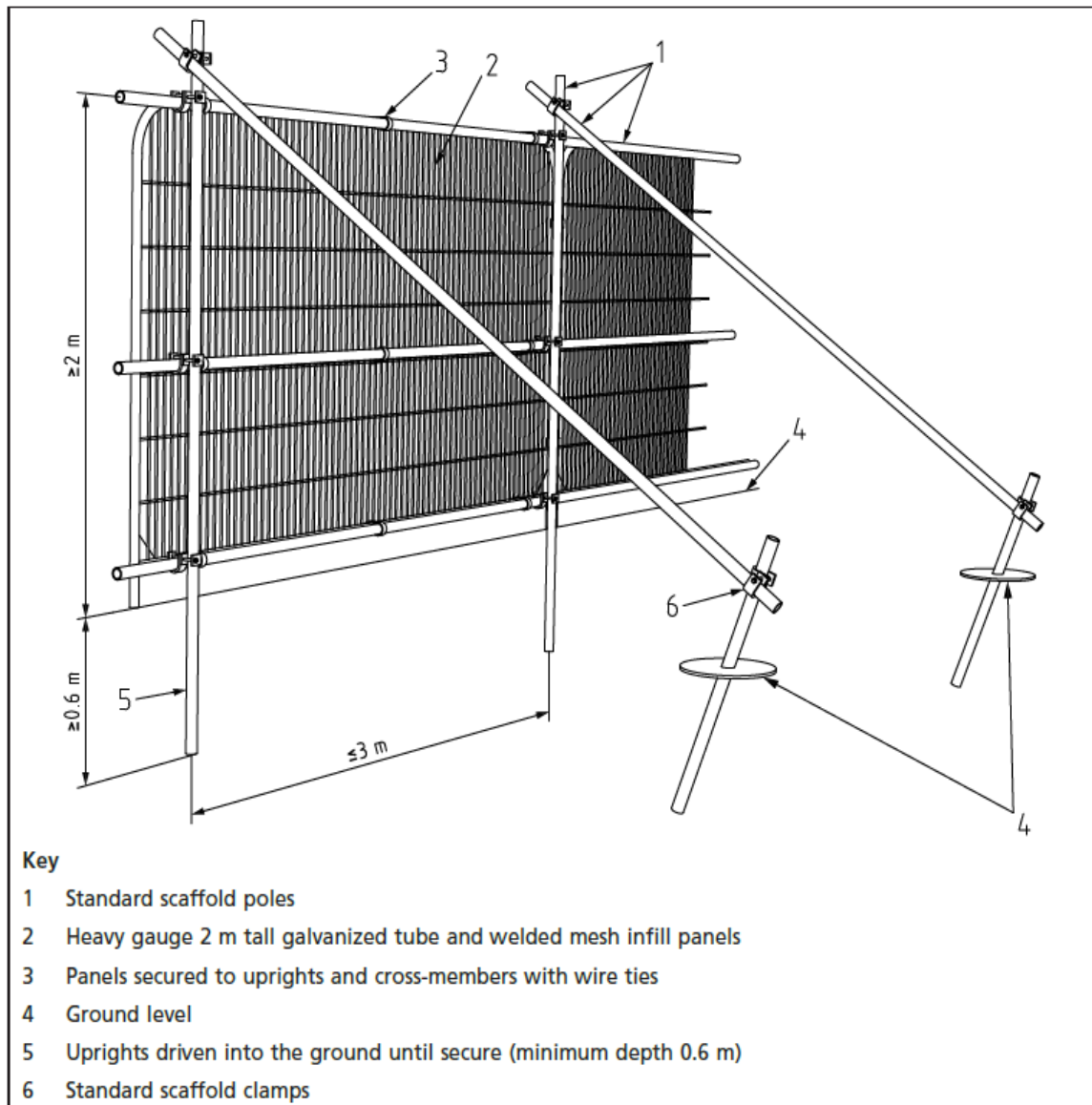
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Appendix 5

Tree protection specification

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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.

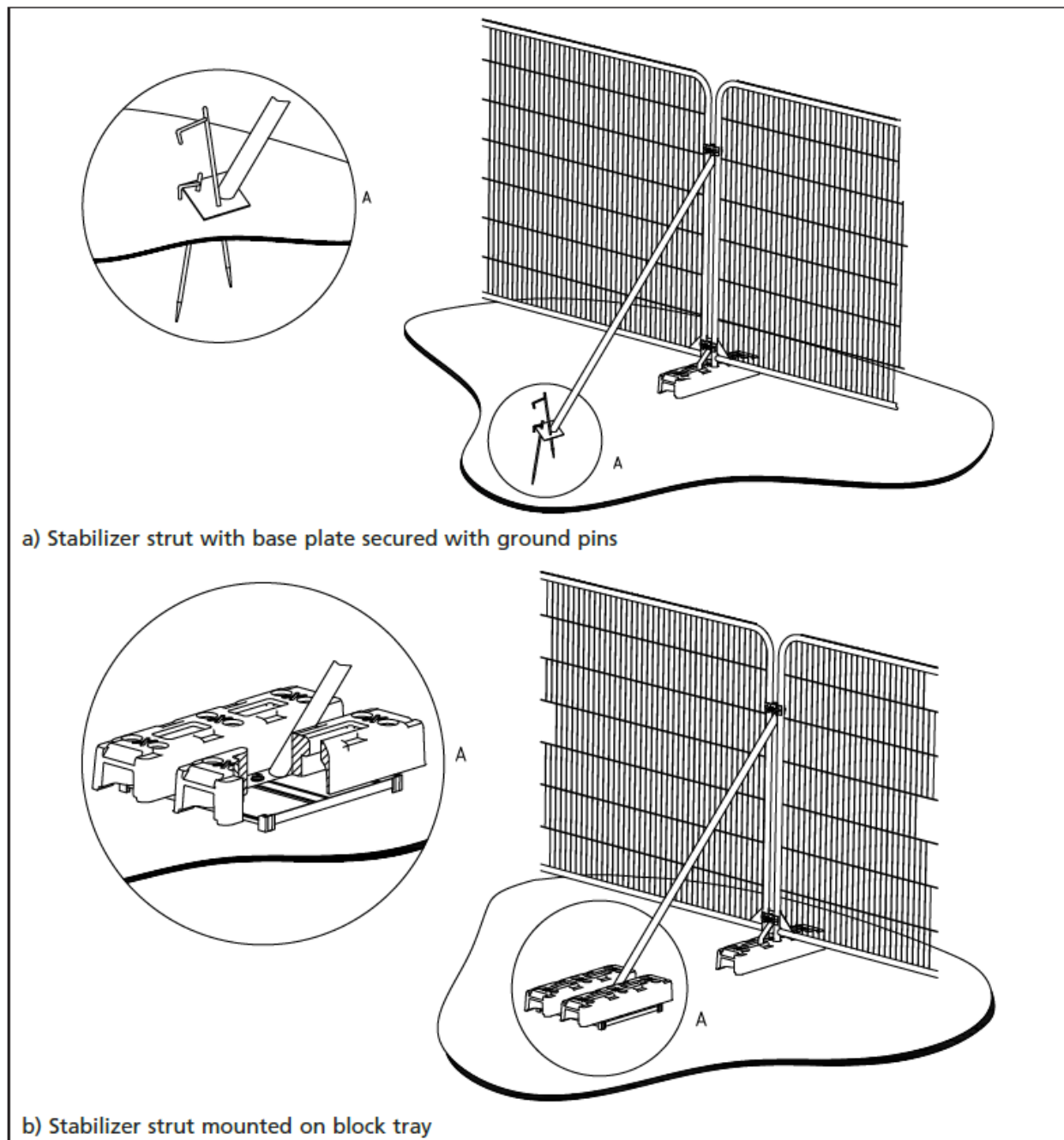
The default specification is shown above at Figure 2. Care should be taken when locating the vertical poles to avoid underground services and structural roots. Where it is not possible to drive a pole into the ground, for example on hard surfacing, figure 3 overleaf, applies.

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 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.

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Appendix 6

Draft arboricultural method statement

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**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:

[REDACTED]

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.

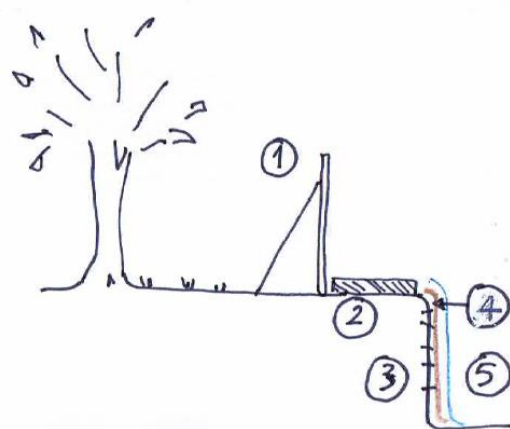
**Site and fuel storage, cement mixing and washing points:** All site storage areas, cement mixing and washing points for equipment and vehicles and fuel storage areas should be outside root protection areas unless otherwise agreed with the Local Planning Authority. No discharge of potential contaminants 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 T24:** Within the yellow 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
4. Double layer of hessian (pegged)
5. Impermeable plastic sheeting (pegged)

**Installation of drive within the root protection area of trees to be retained:** The area to which this applies is shown by blue cross hatched areas on the tree protection plan SHA 1306 TPP. 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; a suitable method is a flexible cellular confinement system (further details available on request). 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. 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 exact specification of the hard surface is a matter for the engineer and architect, however the principles are as follows overleaf:

1. Mark the area that the method statement applies to with spray paint
2. Under **arboricultural supervision** skim off the grass using a spade cutting horizontally under the turf. Remove the turf from the root protection area. The depth of the excavation will be determined by the arboriculturist, and gentle scraping by a spade will continue until the shallowest root with a diameter greater than 25mm, or a matt of fine fibrous tree roots, are encountered.
3. Immediately after an even soil grading has been achieved, a geo textile membrane will be laid flat on the surface.
4. The sub-base will be laid to a depth and specification prescribed by the engineer/architect. This could include a cellular confinement system  
  
 or a root bridge system  

5. A second geotextile layer to be laid to prevent mixing of materials
6. The no fines sand to be laid on top of the geotextile layer
7. Porous paving blocks (or similar) laid
8. 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.

9. The drive will need to be swept periodically to keep it free from dust and tree debris which would otherwise block the porosity of the parking spaces in time,

Points 1 – 4 would be carried out under arboricultural supervision.

**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 Land east of Pines Hill-Stansted Mountfitchet*' 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.

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## Appendix 7

### Tree related legislation and National Policy

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### **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 DC 16.7.21*

### **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 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.

### **National Planning Policy Framework July 2021**

#### 12. Achieving well-designed places

131. Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users

#### 15. Conserving and enhancing the natural environment

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

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

- 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 and a suitable compensation strategy exists;

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## Appendix 8

### Statement of methodology and reference material

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## Statement of methodology

Review of supplied plans and information

Site visit made by Sharon Durdant-Hollamby on 19.3.21.

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 and Conservation Area check with Uttlesford District Council on 16 July 2021, two team meetings and Defra Magic Map check.

## Received material

002.21-SK02 - Sketch Site Layout

30108NOLS-01\_02\_03

30108NOLS-04

Land at Pines Hill - Schedule of Accommodation

UTT\_14\_0151\_OP-TOPOGRAPHICAL\_SURVEY-1999540

SK08\_P2, TW Sewer Records, Preliminary Ecological Appraisal by Practical ecology version 2, 2020-

4056-004 - Minimum Council Design Guidelines with Visibility Splays

## 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

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

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## Appendix 9

### Caveats & Exclusions

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### 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 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.
11. Individual trees in W1 and G3 will need to be fully individually assessed once clearance has taken place.

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## Appendix 10

### My experience and qualifications

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## 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 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. She became President of the Institute of Chartered Foresters in May 2021.

<b>Specialties:</b>	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
<b>Professional bodies:</b>	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
<b>Qualifications:</b>	Cardiff University Law School Bond Solon Civil Expert Certificate Arboricultural Associations Technicians Certificate BSc (Hons) Geography and Landscape Studies Managing Safely IOSH (2017)
<b>Awards:</b>	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

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Appendix 11

Glossary

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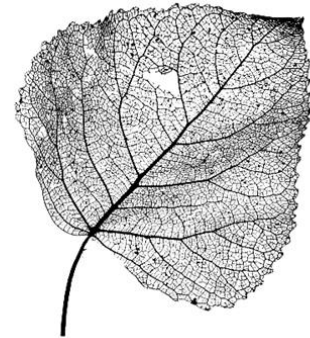
<b>Arboriculture</b>	Formerly all aspects of the culture of trees, especially for forestry. Latterly, the art and science of cultivating and managing trees as groups and individuals, primarily for amenity and other non-forestry purpose.
<b>Arboricultural method statement</b>	Methodology for the implementation 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.
<b>Arboriculturist</b>	Person who has, through relevant education, training and experience in the field of trees in relation to construction.
<b>Architecture</b>	In a tree, a term describing the pattern of branching of the crown or root system.
<b>Biochar</b>	Biochar is charcoal used as a beneficial soil amendment enabling nutrient uptake and assisting the trees defense mechanism
<b>Biodiversity</b>	The variability among all living organisms of an ecological complex.
<b>Biomechanical</b>	Pertaining to the mechanical functions and properties of living organisms, such as trees.
<b>Body language</b>	In trees, the outward display of growth responses and/or deformation in response to mechanical stresses.
<b>Branch</b>	A limb extending from the main stem or parent branch of a tree.
<b>Branch bark ridge</b>	The raised arc of bark tissues that forms the acute angle between a branch and its parent stem
<b>Branch collar</b>	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.
<b>Canker</b>	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.
<b>Canopy</b>	The topmost layer of twigs and foliage in a tree.
<b>Co-dominant</b>	In trees, a similarity between two or more stems or branches with regard to their size and their position within the canopy.
<b>Column</b>	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.
<b>Construction exclusion zone</b>	An area based on the root protection area from which access is prohibited for the duration of the project.
<b>Crown</b>	In arboriculture, the main foliage-bearing portion of a tree.
<b>Crown lifting</b>	The removal or shortening of the branches that form the lower part of the crown of a tree.
<b>Crown reduction</b>	Pruning in order to reduce the size of the crown of a tree.
<b>Crown thinning</b>	Pruning inside the crown of a tree in order to reduce its density.
<b>Defect</b>	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.
<b>Dieback</b>	The death of part of a plant, usually starting from a distal point and often progressing proximally in stages.
<b>Direct damage</b>	Direct physical damage to a structure of surface from pressure exerted by the trunk or growing roots.

<b>Ecosystem services</b>	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.
<b>Epicormic</b>	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.
<b>Failure</b>	In connection with tree hazards, a partial or total fracture within woody tissues or loss of cohesion between roots and soil.
<b>Flush cut</b>	A pruning cut close to the parent stem which removes part of the branch bark ridge.
<b>Foreseeable</b>	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.
<b>Fungi</b>	Organisms of several evolutionary origins, most of which are multicellular and grow as branched filamentous cells within dead organic matter or living organisms.
<b>Hazard</b>	A thing, a process or a potential event that has the potential to cause harm.
<b>Heartwood</b>	The dead or predominantly dead central wood of various tree species whose outer living wood, sapwood, has a finite and pre-determined lifespan.
<b>Independent in the landscape</b>	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.
<b>Level arm</b>	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.
<b>Landscape character</b>	A distinct, recognisably and consistent pattern of elements in the landscape that make one landscape different from another, rather than better or worse.
<b>Mulch</b>	Material laid down over the rooting area of a tree or other plant to help conserve moisture, suppress weeds and encourage a beneficial microflora.
<b>Mycorrhizal</b>	Pertaining to an intimate symbiotic association between plant roots and specialised fungi.
<b>PICUS</b>	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
<b>Pollard</b>	A term for a pollarded tree
<b>Pollarding</b>	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.
<b>Probability</b>	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.
<b>Resistograph</b>	



	<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>
<b>Retrenchment</b>	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.
<b>Risks</b>	The likelihood of the potential harm from a particular hazard becoming actual harm.
<b>Root protection area</b>	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> '.
<b>Root flare</b>	Thickened and expanded base of a tree stem at ground level from which buttress roots form.
<b>Rootplate</b>	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.
<b>Service</b>	In construction, any above-or below-ground structure or apparatus for utility provision.
<b>SULE</b>	Safe useful life expectancy of a tree (Barrell)
<b>Stag-headed</b>	In a tree, a state of dieback in which dead branches protrude beyond the current living crown.
<b>Stress</b>	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.
<b>Stub cut</b>	A pruning cut which is made at some length distal to the branch bark ridge.
<b>Target pruning</b>	The pruning of a twig or branch so that tissues recognisably belonging to the parent stem or branch are retained and not damaged.
<b>Targets</b>	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.
<b>Tree Preservation Order</b>	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.
<b>Tree protection plan</b>	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.
<b>Utility</b>	An undertaker by statute that has a legal right to provide customer services (e.g. communication, electricity, gas and water).

<b>Veteran tree</b>	<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).
<b>Vigour</b>	In tree assessment, an overall measure of the rate of shoot production, shoot extension or diameter growth.
<b>Vitality</b>	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.
<b>Visual Tree Assessment (VTA)</b>	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.
<b>White-rot</b>	Various kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded.
<b>Wound</b>	Injury caused to a tree by a physical force.



**Sharon Hosegood**  
ASSOCIATES

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

SITE

Land east of Pines Hill-Stansted Mountfitchet

CLIENT

Luxus Homes Ltd

**DATE: August 2021**  
**OUR REF: SHA 1306**

Sharon Hosegood Associates,

T: [REDACTED]

Registered Office: Fisher Michael Chartered Accountants, The Old Grange, Warren Estate,  
Lordship Rd, Writtle, Chelmsford, Essex CM1 3WT

Company Registration Number: 9361038 Director: Sharon M. Durdant-Hollamby