

CLAYS FARM

Tree Survey Report and Arboricultural Impact Assessment



JSL3904_770
Tree Survey and
Arboricultural Impact
Assessment
-
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TREE SURVEY AND ARBORICULTURAL IMPACT ASSESSMENT

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1 INTRODUCTION

- 1.1 This Tree Survey and Arboricultural Impact Assessment (AIA) has been prepared by RPS on behalf of Aster Homes LTD to support the application for proposed development on land south of Maypole Lane, Yapton, Arundel, BN18 0DR.
- 1.2 A tree survey of the application area was carried out by RPS on the 14th January 2021 in accordance with the requirements of BS5837:2012. Refer to Tree Constraints Plan JSL3904_700 (Appendix A). Weather conditions were dry and clear.
- 1.3 This report has been prepared in broad accordance with the requirements set out in BS5837:2010 'Trees in relation to design, demolition and construction – Recommendations.'¹
- 1.4 The purpose of this report is to:
 - Provide an assessment of the quality of the surveyed trees with reference to the categories and sub-categories listed within Table 1 - BS5837:2012.
 - Assess and quantify the arboricultural impact of the proposed development within the survey area, based on the proposed development layout.
 - Provide additional arboricultural information and advice in relation to the protection of trees throughout the development of the site.
 - Provide a Tree Protection and Removal Plan to detail the proposed protective measures to be taken in respect of the trees during development of the site.
- 1.5 The Tree Protection and Removal Plan JSL3904_700 included at Appendix B identifies the following:
 - Trees to be retained;
 - Alignment and design of protective fence;
 - Root Protection Area (RPA) of trees;
- 1.6 The Tree Protection Plan shall be made available to all relevant site operatives prior to and throughout the construction process, so they understand the scope and importance of the tree protection measures.
- 1.7 To minimise the potential for harm to occur to retained trees all works shall be carried out with regard to the Tree Protection Measures and construction techniques detailed within this report.
- 1.8 In particular the establishment of a Construction Exclusion Zone (CEZ) by erection of Tree Protection Fencing will minimise the potential for harm to occur to retained trees.

¹ British Standards Institute. British Standard (BS5837) Trees in Relation to Design, Demolition and Construction - Recommendations. 2012.

2 SITE LOCATION

- 2.1 The survey covered land south of Maypole Lane, Yapton, Arundel, BN18 0DR and currently comprises an open field with stables. The survey site is centred on OS grid reference SU97790390.
- 2.2 Arundel is a market town located in West Sussex in south east England. The site is located approximately 2 miles east of Barnham Train Station and 1.8 miles west of the River Arun. The wider environs primarily consist of open fields, residential housing and retail stores.
- 2.3 The soilscape of the area typically consists of 'Freely draining, slightly acid, loamy soils.'²

² landis.org.uk – 11.01.2021

3 SURVEY METHOLDODOLOGY

- 3.1 This report was authored by Alice Brown (Graduate Arboriculturist) of RPS group and an associate member of the Arboricultural Association and authorised by David Cox, a professional member of the Arboricultural Association and Chartered Landscape Architect of RPS Group.
- 3.2 The report and survey were carried out in general accordance with the requirements set out in BS 5837:2012 "Trees in Relation to Design, Demolition and Construction – Recommendations".
- 3.3 The tree survey involved a visual inspection from the ground of individual specimens and groups of trees in order to record their amenity value, management recommendations and dimensions. Where observed, the general condition of all the trees has been noted. The survey does not constitute a full arboricultural condition assessment involving the detailed inspection of trees in relation to their structural condition, decay, and any other physical and pathogenic defects.
- 3.4 The locations of the trees were based upon topographic survey (ENC/121020-0MM6) produced by Encompass Surveys Ltd in October 2020.
- 3.5 The survey assesses individual trees and groups of trees for quality and benefits within the context of proposed development. The quality of each tree or group of trees has been recorded by allocating it to one of four categories as described in table 3.1. These categories have been differentiated on the Tree Constraints Plan (JSL3904_700-Appendix A) by colours.
- 3.6 The survey information was recorded on the attached schedule (Appendix C) in general accordance with the guidance contained within Section 4 of BS 5837:2012 "Trees in relation to design, demolition and construction - Recommendations".
- 3.7 The information recorded includes the following-

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Table 3.1 Tree characteristics recorded during survey

Tree Ref No:	Sequential reference number of trees or groups of trees. Avenues, woodlands and hedgerows were also recorded on the tree constraints plan. # - denotes inaccessible trees (best estimates are made about the location, physical dimensions and characteristics.)			
Species	Species listed by common name, with scientific names (italic lettering).			
Height (m)	Estimated height of canopy to nearest metre.			
Branch Spread	branch spread, taken as a minimum at the four cardinal points, to derive an accurate representation of the crown			
Stem diameter @ 1.5 m (m)	Estimated diameter of trunk at 1.5 m above ground level in metres unless otherwise indicated, multi-stemmed trees being measured in accordance with Annex C: BS5837			
Existing height above ground level	To inform on ground clearance, crown/stem ratio and shading the estimated height of the first significant branch and direction of growth and canopy above ground level.			
Stem No.	Number of stems (if necessary) of individual tree.			
Life Stage	Expressed as:-	Y	(Young)	OM (Over-mature)
		SM	(Semi-mature)	V (Veteran)
		EM	(Early-mature)	D (Dead)
		M	(Mature)	
Physical Condition	Apparent condition expressed as the following categories, based upon a brief visual inspection from the ground only:-			Good Fair Poor Dead
Comments / Management Recommendations	General observations, particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect), and/or preliminary management recommendations and potential for wildlife habitats (not exhaustive).			
Estimated remaining contribution (years)	Estimated remaining contribution, in years (<10, 10+,20+,40+)			
Tree Quality Assessment Value: <u>Category</u>	Criteria grading with regards to Table 1: BS 5837:2012, expressed as:-	A (Trees/Vegetation of high quality and value) B (Vegetation of moderate quality and value) C (Trees/Vegetation of low quality and value) U* (Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years)		
	* Category U trees can have existing or potential conservation value which might be desirable to preserve.			
Tree Quality Assessment Value: <u>Sub - Category</u>	Criteria grading with regards to Table 1: BS 5837:2012, expressed as:-	1 (Trees with mainly <i>arboricultural</i> value) 2 (Trees with mainly <i>landscape</i> value) 3 (Trees with mainly <i>cultural / conservation</i> value)		

- 3.8 It is recommended that further arboricultural assessments be undertaken in order to assess the full health and safety of all trees which may possess structural or pathogenic conditions.

TREE SURVEY AND ARBORICULTURAL IMPACT ASSESSMENT

Limitations

- 3.9 The findings of this survey are not valid following adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events.
- 3.10 Trees were not climbed or inspected below ground level and inaccessible trees will have best estimates made about the location, physical dimensions and characteristics. Where direct access to trees was difficult a '#' denotes this within the Tree Survey Schedule (JSL3904_750).
- 3.11 Where the locations of trees were not highlighted in the provided topographical survey – ENC/121020-0MM6 by Encompass Surveys Ltd, they were estimated on site and highlighted within the supporting plan/s with a star - *.
- 3.12 Trees and woody vegetation were not assessed for their potential impact upon future construction issues such as foundation designs (re: NHBC chapter 4.2)³. Whilst this report may assist in assessing likely future impacts, it should not be classed as a comprehensive vegetation survey in relation to impact upon future designs.

³ NHBC. 'Chapter 4.2- Building Near Trees'. NHBC Standards 2016. 2016.

4 APPRAISAL AND RECOMMENDATIONS

Generally

- 4.1 There was much variation in the physiological and structural condition of the surveyed trees, with age ranging from young to mature.
- 4.2 The surveyed trees consist mainly of Leyland Cypress, Austrian Pine and Lombardy Poplar. The trees provide amenity to the area and provide wildlife habitats.

Surveyed Trees

- 4.3 The main lines of trees bordered the north and eastern boundaries. There was a row of Austrian Pine across the northern boundary which were prominent in the landscape. The majority of these were attractive and in good condition.
- 4.4 A row of Poplar and Willow trees were located offsite to the east. It can be noted that a number of Poplar were in poor condition, showing signs of weak wood failure and cavities.
- 4.5 The most impressive tree surveyed was an offsite Atlas Cedar. This tall tree was awarded a category A status and added much landscape value to the area.

Planning considerations

- 4.6 Trees can offer many benefits, including the provision of visual amenity, softening or complementing the effect of the built environment, and adding maturity to new developments by making places more comfortable in tangible ways e.g. contributing screening and shade, reducing wind speed and turbulence, intercepting snow and rainfall, and reducing glare.
- 4.7 New tree planting opportunities should be considered as part of any potential redevelopment; this will help to broaden the age diversity of the tree cover within the area. Sufficient space should be provided for species with significant stature to grow out into maturity.
- 4.8 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications.
- 4.9 Trees covered by a Tree Preservation Order are protected under the Town and Country Planning Act 1990 (Trees Regulation 2012) and the local authority must be consulted and permission sought for any works that may affect them.
- 4.10 TPOs: An email response from Arun District Council confirmed that there are no trees within or surrounding the survey site that are covered by a TPO (Refer to appendix E).
- 4.11 Conservation Areas: An email response from Arun District Council confirmed that the survey area does not form part of a conservation area (Refer to appendix E).
- 4.12 Ancient woodlands: A desktop investigation using the Magic Maps application confirmed that the site does not form part of an ancient woodland.

Design and Site Layout Considerations

- 4.13 A tree constraints plan defines the Root Protection Area (RPA) for each tree shown as a circle. This area may be adjusted should physical constraints or topographical features limit root activity in a particular area, however the total area should remain the same. Prior to any adjustment of the trees RPA zones the changes should be assessed by an arboriculturalist. During any site planning exercises the current and future growth potential of the trees should be considered.
- 4.14 The RPA for single stem trees broadly equates to a radius 12 times the stem diameter of the tree at 1.5m above ground level or the extent of canopy spread, whichever is the greater. For multi-stemmed, low branching trees or those with trunks with an irregular girth the point of stem diameter measurement is adjusted in consideration of these factors and in accordance with the illustrations in BS5837:2012 (Annex C).
- 4.15 The RPA should become an exclusion zone during construction works and for any development. It should be fenced-off and protected in accordance with BS5837:2012. The canopy is likewise susceptible to damage during construction work and requires similar protection.
- 4.16 No activities that result in excavations, changes in level or soil compaction should take place within the RPA of any retained trees, especially older mature trees. This would include the storage of materials, any construction work, trafficking by vehicles or even excessive trafficking by pedestrians.
- 4.17 If some form of construction has to take place within the RPA then certain measures need to be adopted to avoid disturbance or damage to the roots and to maintain moisture infiltration and gaseous diffusion into the soil.
- 4.18 The location and siting of new services near trees should consider the potential impact on and conflict with both tree roots and canopy. This should take into account the ultimate size of existing young and middle-aged trees at maturity. Conversely the impact of the tree on the activities should also be considered with regard to obstruction, shading, leaf fall and root action. These are problems that can be managed provided sufficient space is allowed for.

Services

- 4.19 Services likewise should be routed outside the existing or potential root zone of trees. Where it is unavoidable, then certain measures should be employed to avoid damage to the trees larger roots.
- 4.20 The location and siting of new facilities near trees should consider the potential impact on and conflict with both tree roots and canopy. This should take into account the ultimate size of existing young and middle-aged trees at maturity. Conversely the impact of the tree on the activities should also be considered with regard to obstruction, shading, leaf fall and root action. These are problems that can be managed provided sufficient space is allowed for.

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- 4.21 Any new services should avoid the RPAs of any retained tree. Where it is unavoidable, then the route of the services must be designed by an Engineer in consultation with an Arboriculturalist.
- 4.22 For further advice, read in full - NJUG Volume 4- "Guidance for the planning, installation and maintenance of utility services in proximity of trees". (The National Joint Utilities Group. *NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees*. 2007).⁴

Trees and Management of Health and Safety

- 4.23 It is recommended that a programme of periodic arboricultural assessments be undertaken in order to regularly assess the full health and safety of all trees both in full leaf and bare stemmed. The assessments should prioritize areas based on levels of access and presence of target (i.e. exposure of people to hazard) and accord with arboricultural advice, taking account of relevant factors (where known) that affect safety such as the age class, condition, size and species of the trees.

⁴ N.J.U.G. 4: Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. 2007

5 ARBORICULTURAL IMPACT ASSESSMENT

Introduction

- 5.1 Trees have finite energy reserves, developed each year throughout the growing season, which are utilised for biological processes such as growth and defence against pests or diseases throughout the following year.
- 5.2 Any development in proximity to trees has the potential to cause harm to those trees unless control measures are identified and acted upon; as such it is essential to consider the relationship between the proposed development and the retained trees to identify what precautions are necessary, proportionate and appropriate.
- 5.3 Development has the potential to impact upon the above ground and below ground parts of trees. Whilst some damage that can occur, such as physical damage to the trees stems and branches from machinery movements, is clearly visible the impact from other aspects of work common on development sites which can have a significant effect upon the continued health of trees are not always immediately evident.
- 5.4 Damage that is not immediately evident, but which can cause long term harm to retained trees includes things such as damage to the soil structure by compaction causing root damage and levels changes altering the water table and affecting moisture availability.
- 5.5 To minimise the potential for harm to occur to retained trees all works must be carried out with regard to the Tree Protection measures detailed within this report.
- 5.6 In general, it can be seen that, by adopting appropriate methods of working, precautionary and protective measures, significant harm to retained trees can be avoided.
- 5.7 In particular the establishment of a Construction Exclusion Zone (CEZ) by erection of Tree Protection Fencing will minimise the potential for harm to occur to retained trees.
- 5.8 The retention and protection of significant trees and vegetation will assist in assimilating the proposed development into the wider landscape and offer long term tree cover.
- 5.9 Furthermore, redevelopment of the site may offer an excellent opportunity to actively manage any retained vegetation and accordingly we recommend restorative tree works be undertaken as appropriate. This will further improve the amenity value and landscape setting of the site and increase the useful life of any retained trees.

Brief Description of Proposed Development

- 5.10 This report relates to the following:
- Residential Housing.
 - Associated works

Identified Tree Removal and Specific Works

- 5.11 In order for this development to be realised, T1 to T12 require removal. Partial removal of H1 will also be necessary.

Root Protection Areas

- 5.13 Following the erection of tree protective fencing, the majority of the proposed development will take place outside the RPAs of retained trees.
- 5.14 However, where the development does overlap with the RPAs of T49 and T56 'no-dig' design principles, in accordance with APN12 will be adopted to protect the roots (Refer to the Tree Protection and Removal Plan-JSL3904_710).

Root Protection Areas

- 5.15 Where the canopies of G2 and G3 overlap with the proposed development, crown pruning will be required.

Outline methodology within Root Protection Areas

- 5.16 All new (and existing re-routed) services shall be routed outside the existing or potential RPA of retained trees. Where it is unavoidable, then hand excavation shall be employed to avoid damage to the larger roots and the services slid through or below the root system. Ducting shall be used to carry cables. Reference shall be made to the recommendations included within Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (NJUG 4)⁵.
- 5.17 Details of Tree Protection Fencing and ground protection are detailed in the following section of this document.
- 5.18 The RPA should become an exclusion zone during construction works and for any development. It should be fenced-off and protected in accordance with BS5837:2012. The canopy is likewise susceptible to damage during construction work and requires similar protection.
- 5.19 No activities that result in excavations, changes in level or soil compaction should take place within the RPA of any retained trees, especially older mature trees. This would include the storage of materials, any construction work, trafficking by vehicles or even excessive trafficking by pedestrians.
- 5.20 The location and siting of new facilities near trees should consider the potential impact on and conflict with both tree roots and canopy. This should take into account the ultimate size of existing young and middle-aged trees at maturity. Conversely the impact of the tree/s on end user activities should also be considered with regard to obstruction, shading, leaf fall and root action. These are problems that can be managed provided sufficient space is allowed for.
- 5.21 Where works within the RPA are unavoidable works must be undertaken by hand and the soil levels should be carefully reduced by hand to avoid damage to the bark of larger roots directly beneath and adjacent to the excavation. Where these become exposed, they should be further protected from drying out. Where root pruning is unavoidable it should be made at a suitable place within the root system, avoiding damage to surrounding tissue in

⁵ <http://streetworks.org.uk/wp-content/uploads/V4-Trees-Issue-2-16-11-2007.pdf>

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accordance with BS 3998:2010⁶. Final pruning cuts shall be made at right angles to the axis of the root and the final cut wound should be smooth and as small as possible, free from ragged torn ends.

- 5.22 To minimise harm occurring as a result of the works existing hardstanding should be reused. Any necessary hard surface removal within the Root Protection Area (RPA) shall be carried out by low impact hand held pneumatic tools. Removal of the surface shall occur in strips working from the undisturbed surface, working in a retreating manner away from the retained trees. Subsequent removal of arisings / debris shall also be carried out by hand.

⁶ British Standards Institute. British Standard (BS3998) Trees Work - Recommendations. 2010.

6 TREE WORKS

Standard of Work (If required)

- 6.1 All tree works shall be carried out in accordance with BS3998:2010 and latest arboricultural best practice.
- 6.2 All tree work shall be carried out by suitably qualified, competent and insured arboricultural contractors in accordance with Arboricultural Association Standard Conditions of Contract and Specifications for Tree Works (2008) Edition and BS 3998:2010 Tree Work.
- 6.3 All green and woody waste generated by the tree works shall be removed from site and disposed of in an environmentally sustainable manner.
- 6.4 When a branch is removed at its point of attachment, injury of the wood and bark of the parent stem or branch above the cut shall be avoided. If a branch collar is visible, the final cut shall be just outside it and care shall be taken to avoid tearing retained wood and bark when the cut is made. Preliminary cuts shall be made, if necessary, so as to remove weight, before a final cut is made. Care shall be taken to prevent falling branches from harming other parts of the tree (including its roots), its surroundings, people or property. Heavy branches shall be removed in sections and, where necessary, shall be lowered with ropes.
- 6.5 Prior to the commencement of any tree works an appropriate risk assessment shall be produced to describe the measures required to fulfil the statutory safety obligations. It shall aim to identify and prioritise the necessary control measures and precautions.
- 6.6 Following the works, it is recommended that the trees are monitored on a regular basis to ensure their ongoing vitality and health. These inspections shall be completed by a suitably qualified and experienced person.

Timing of Works

- 6.7 Any tree works required shall be completed prior to any construction and enabling works on the site.

7 TREE PROTECTION MEASURES

Construction Exclusion Zone

- 7.1 The protective fence line defines the Construction Exclusion Zone (CEZ) and the fencing shall not be moved or taken down at any time. Within the Construction Exclusion Zone there must be no mechanical digging or scraping; no alteration to existing ground levels including soil stripping; no earthworks; and no handling or discharge of any chemical substance, concrete washings or of any fuels.
- 7.2 Furthermore vehicular or pedestrian access and the storage of any materials is prohibited within the Construction Exclusion Zone.
- 7.3 Additionally no materials that may contaminate the soil such as concrete mixings, diesel oil and vehicle washings shall be discharged within 10m of the stem of any tree and no fires shall be lit within 10m of the maximum extent of a trees crown.

Tree Protection Fencing

- 7.4 The tree protection fence shall be erected as shown on the Tree Protection and Removal Plan (JSL3904_710) included with is report.
- 7.5 The fence line shown is the minimum required and the length of the fence shall be extended or adjusted on site as agreed with the Arboricultural Consultant to ensure satisfactory protection of all retained trees and RPAs.
- 7.6 Where proposed (permanent) construction site-hoarding provides the same level of protection to the retained trees and RPAs as the proposed tree protection fence, subject to agreement with the Arboricultural Consultant, the hoarding may serve as the tree protection fence. Notwithstanding, depending on the form and alignment of the construction site-hoarding it may be necessary to provide additional tree protection fence to ensure adequate protection of retained trees and RPAs as shown on the Tree Protection Plan.
- 7.7 Unless otherwise agreed in writing with the Arboricultural Consultant and/or LPA Tree Officer, the fencing system to be utilised shall be in accordance with Appendix B and compliant with BS5837:2012.
- 7.8 Once the protective barrier is in place it must remain in situ throughout the course of the development until the completion of development, other than to facilitate agreed tree removal; see below.
- 7.9 Where necessary, tree protection fencing may be temporarily re-aligned in order to facilitate tree removal. Fencing is to be re-instated immediately following removal in a manner that encompasses the remaining trees and their respective RPAs.
- 7.10 During tree removal, no wheeled or tracked machinery is to enter the area previously encompassed by tree protective fencing as shown in the Tree Protection and Removal Plan.
- 7.11 Copies of the Tree Protection and Removal Plan shall be placed in the site office for reference by all site staff.
- 7.12 Signs detailing the purpose of the protective barrier shall be attached to the barriers at 10m intervals. Such signs should be weatherproof and shall be substantially in the form of the

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specimen provided at Appendix G. Signs must be replaced as necessary should they be removed or become illegible.

- 7.13 Following erection of the protective barriers and prior to commencement of the development it is recommended that an inspection of the site, by either the Council's Tree Officer or the Arboricultural Consultant, is arranged to confirm fencing has been installed in accordance with the Tree Protection and Removal Plan and that any relevant arboreal conditions attached to the planning consent have been met.

Site Compounds and Materials Stores

- 7.14 Activities related to the establishment of a temporary site compound have the potential to impact upon retained trees by various means. In particular the storage and mixing of chemicals and materials such as concrete can have a damaging effect on tree health if precautions are not taken.
- 7.15 To prevent harm occurring to trees, provision for materials storage, deliveries and other related activities shall be made available in areas away from retained trees.
- 7.16 Under no circumstances shall materials or plant be stored beneath the canopy or within or abutting the Root Protection Zone of any retained trees/hedges, whether fenced or not.

Reporting

- 7.17 Should any arboricultural issues become apparent during the works the site manager should immediately contact the Arboricultural Consultant or the Council's Tree Officer for advice upon how to proceed.

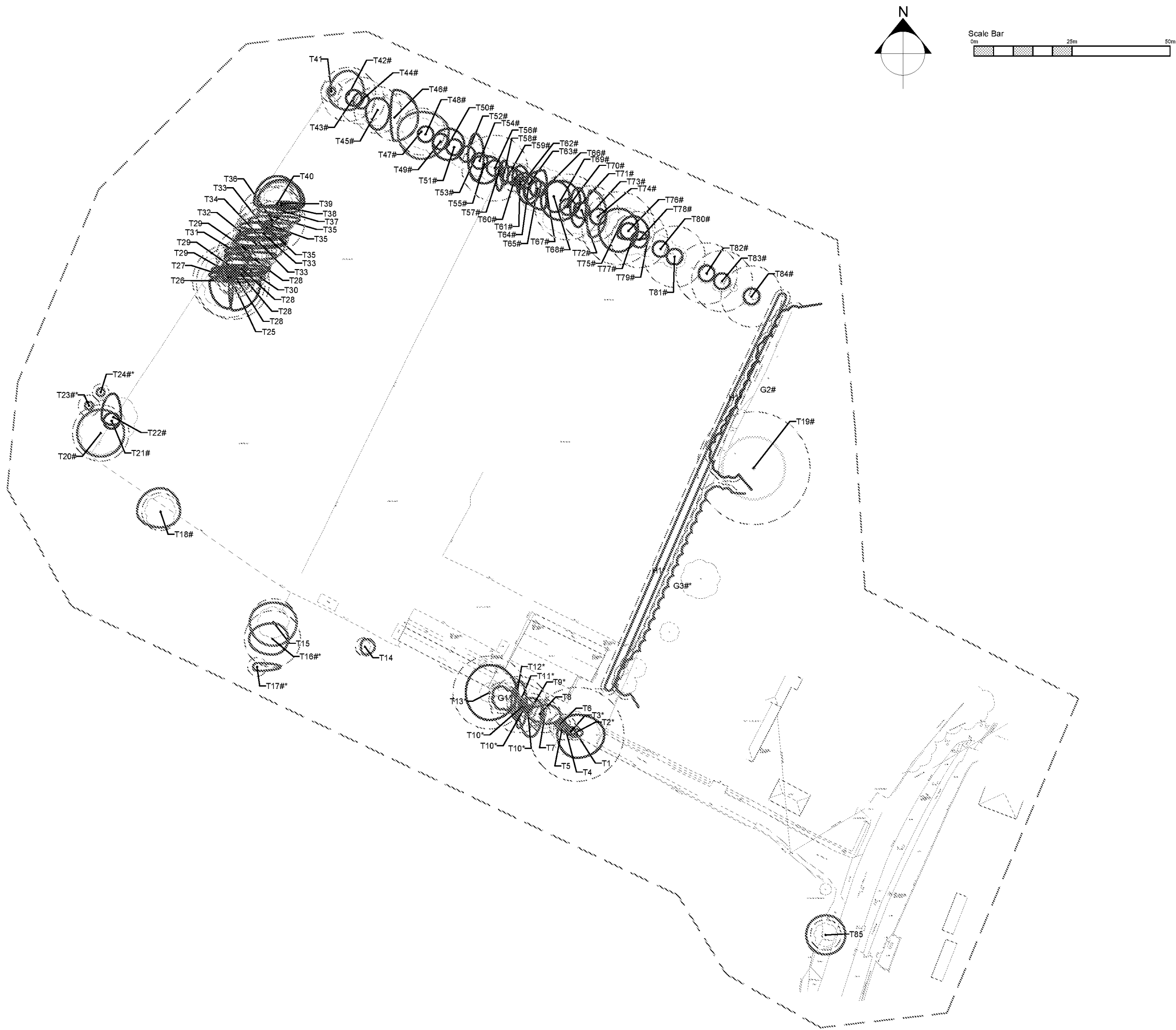
8 CONCLUSION

- 8.1 A comprehensive tree survey has been completed on the site and its immediate surroundings. The survey was completed in accordance with BS5837:2012.
- 8.2 In order for this development to be realised, T1 to T12 and partial removal of H1 requires removal.
- 8.3 Where the development overlaps with the RPAs of T49 and T56 'no-dig' design principles, in accordance with APN12 will be adopted to protect the roots.
- 8.4 From an arboreal perspective, subject to the satisfactory implementation of the recommendations contained within report, it is considered that the proposed scheme has no arboricultural impacts.

APPENDICES

Appendix A

Tree Constraints Plan JSL3904_700



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Notes

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2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.

3. Where applicable Ordnance Survey (c) Crown Copyright 2020. All rights reserved. Licence number 0100031873

Key

Survey boundary.

Tree with numbered reference. Canopy spread and BS5837:2012 tree quality category as shown below.

Tree (location estimated) with numbered reference. Canopy spread and BS5837:2012 tree quality category.

Tree off-site with numbered reference. Canopy spread and BS5837:2012 tree quality category.

Vegetation group with numbered reference. Canopy extents and BS5837:2012 tree quality category as shown below.

Hedge with numbered reference. Width and BS5837:2012 tree quality category as shown below.

BS 5837:2012 Tree Quality Categories - Table 1

Category A - High quality

Category B - Moderate quality

Category C - Low quality

Category U - Unsuitable for retention

Root protection area (RPA) Calculated in accordance with Section 4.6 - BS5837:2012

- NOTES:**
- Refer to RPS Tree Survey Report & Schedule for further details.
 - Survey based on a visual inspection from the ground and is not intended as a full arboricultural inspection.
 - Plan produced in accordance with recommendations set out in BS 5837:2012 - 'Trees in Relation to design, demolition and construction'.
 - Due to the legal protection afforded to breeding birds, vegetation removal should not take place during the bird nesting period, generally, although not restricted to, March - August inclusive.
 - Survey based upon topographic survey produced by Encompass Surveys in October 2020.

A	Minor Amends	AB	DC	Feb 2021
Rev	Description	By	CB	Date



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Client **Aster Homes Ltd**

Project **Clays Farm Yapton**

Title **Tree Constraints Plan**

Status **For Information** Drawn By **AB** PM/Checked by **DC**

Job Ref **JSL3904** Scale @ A3 **1:1000** Date Created **January 2021**

RPS Drawing / Figure Number **700** Rev **A**

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Appendix B

Tree Survey Schedule JSL3904_750

Tree Survey Schedule

Site Clays Farm
 Project schedule ref: JSL3904_750
 Drawing reference: JSL3904_700
 Survey date: 07/01/2021

Surveyor: A Brown
 Status: For Information
 Revision: A
 Notes:



Ref no.	Species	Height (m)	Crown spread (m)				Stem dia. (m)	Stem no. at 1.5m	Height of crown clearance (m)	Dir/ height	Age class	Structural condition	Physiological condition	General observations Management recommendations	Estimated remaining contribution (years)	Tree Quality Category (BS5837)
			N	E	S	W										
T1	Cupressocyparis x leylandii Leyland Cypress	12.0	5.0	7.0	6.0	5.0	1.00	1.00	2.00	S	M	G	G	Prominent tree on end of row with easterly bias. Stem occlusions.	40+	B2
T2*	Cupressocyparis x leylandii Leyland Cypress	6.0	1.0	2.0	1.0	1.0	0.15	1.00	1.50	S	Y	F	G	Tree with easterly bias. Lots of ivy.	10+	C2
T3*	Cupressocyparis x leylandii Leyland Cypress	5.0	1.0	1.0	1.0	1.0	0.15	1.00	2.00	E	Y	P	P	Dead. Leans eastwards.	<10	U
T4	Cupressocyparis x leylandii Leyland Cypress	6.0	1.0	1.0	1.0	1.0	0.17 0.2	2.00	3.00	S	Y	F	G	Tree which bifurcates at 0.2m. Limited inspection due to large amounts of ivy	10+	C2
T5	Cupressocyparis x leylandii Leyland Cypress	10.0	2.0	1.0	1.0	1.0	0.1 0.25	2.00	6.00	W	SM	G	G	Tree which bifurcates at 0.3m. Ivy present.	20+	C2
T6	Cupressocyparis x leylandii Leyland Cypress	6.0	1.0	1.0	1.0	1.0	0.23	1.00	2.00	N	SM	G	G	Topped tree with ivy.	20+	C2
T7	Cupressocyparis x leylandii Leyland Cypress	11.0	3.0	4.0	2.0	1.0	0.14 0.18 0.2 0.2	4.00	1.50	N	SM	F	G	Tree which leans southwards. Stem occlusions.	20+	C2
T8	Cupressocyparis x leylandii Leyland Cypress	9.0	2.0	1.0	2.0	3.0	0.12 0.18	2.00	3.00	W	Y	F	F	Tree which leans southwards. Previous pruning. Some stem damage.	10+	C2
T9*	Cupressocyparis x leylandii Leyland Cypress	11.0	3.0	3.0	7.0	3.0	0.35	1.00	0.20	S	SM	F	F	Cypress leaning southwards. Wide crown which overhangs stables.	20+	C2
T10*	3 Cupressocyparis x leylandii Leyland Cypress	8.0	1.0	1.0	1.0	1.0	0.20	1.00	2.50	S	SM	F	F	Topped trees.	20+	C2
T11*	Cupressocyparis x leylandii Leyland Cypress	12.0	6.0	2.0	6.0	1.0	0.25 0.35 0.4	3.00	1.50	S	EM	G	G	Tree which trifurcates at 1m. Stands out.	40+	C2
T12*	Cupressocyparis x leylandii Leyland Cypress	6.5	4.0	1.0	4.0	1.0	0.13 0.13	2.00	3.00	S	Y	G	G	Topped tree. Bifurcates at 0.3m.	10+	C2

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Tree Survey Schedule

Site Clays Farm
 Project schedule ref: JSL3904_750
 Drawing reference: JSL3904_700
 Survey date: 07/01/2021

Surveyor: A Brown
 Status: For Information
 Revision: A
 Notes:



Ref. no.	Species	Height (m)	Crown spread (m)				Stem dia. (m)	Stem no. at 1.5m	Height of crown clearance (m)	Dir/ height	Age class	Structural condition	Physiological condition	General observations Management recommendations	Estimated remaining contribution (years)	Tree Quality Category (BS5837)
T13*	Cupressocyparis x leylandii Leyland Cypress	12.0	7.0	7.0	7.0	6.0	0.5 0.6	2.00	1.00	E	M	G	G	Tree on end of row. Wide crown.	40+	B2
T14	Crataegus monogyna Common Hawthorn	7.0	2.0	2.5	2.0	1.0	0.13 0.15	1.00	0.50	S	Y	F	F	Small tree which bifurcates at 1m. Deadwood.	10+	C2
T15	Cupressocyparis x leylandii Leyland Cypress	14.0	5.0	6.0	6.0	6.0	0.50	1.00	1.00	S	EM	G	G	Declining, non-native tree. .	40+	C2
T16#*	Cupressocyparis x leylandii Leyland Cypress	10.0	4.0	4.0	4.0	6.0	0.60	1.00	1.00	N	M	G	G	Declining, non-native tree. .	40+	C2
T17#*	Crataegus monogyna Common Hawthorn	6.0	1.0	6.0	1.0	1.0	0.20	1.00	1.00	W	Y	G	G	Tree adjacent to the tall conifers. Westerly bias.	10+	C2
T18#	Crataegus monogyna Common Hawthorn	7.0	6.0	5.0	4.0	6.0	0.15 0.15 0.2 0.27	4.00	1.00	S	SM	G	G	Hawthorn behind fence.	20+	C2
T19#*	Cedrus atlantica Atlas Cedar	14.0	8.0	8.0	8.0	8.0	1.20	1.00	5.00	E	M	G	G	Very attractive, tall tree. Prominent in landscape.	40+	A2
T20#	Populus nigra 'Italica' Lombarby Poplar	9.0	6.0	6.0	6.0	6.0	0.60	1.00	1.00	S	M	G	G	Tree which bifurcates at 2m.	40+	C2
T21#	Populus nigra 'Italica' Lombarby Poplar	10.0	2.0	2.0	2.0	2.0	0.60	1.00	4.00	S	M	P	P	Poplar with weak wood failure.	<10	U
T22#	Populus nigra 'Italica' Lombarby Poplar	10.0	6.0	2.0	2.0	3.0	0.70	1.00	3.00	W	M	F	F	Poplar with weak wood failure. Deadwood.	<10	U
T23#*	Crataegus monogyna Common Hawthorn	5.5	1.0	1.0	1.0	1.0	0.16 0.17	2.00	0.50	W	Y	F	F	Tree which bifurcates at 0.3m.	10+	C2

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Tree Survey Schedule

Site: Clays Farm
 Project schedule ref: JSL3904_750
 Drawing reference: JSL3904_700
 Survey date: 07/01/2021

Surveyor: A Brown
 Status: For Information
 Revision: A
 Notes:



Ref. no.	Species	Height (m)	Crown spread (m)				Stem dia. (m)	Stem no. at 1.5m	Height of crown clearance (m)	Dir/ height	Age class	Structural condition	Physiological condition	General observations Management recommendations	Estimated remaining contribution (years)	Tree Quality Category (BS5837)
			N	E	S	W										
T24#*	Crataegus monogyna Common Hawthorn	6.0	1.0	1.0	1.0	1.0	0.12 0.13	2.00	0.50	W	Y	F	F	Tree which bifurcates at 0.5m.	10+	C2
T25	Pinus nigra Austrian Pine	13.0	1.0	7.0	7.0	1.0	0.77	1.00	2.00	E	M	G	G	Attractive tree on end of row.	40+	B2
T26	Pinus nigra Austrian Pine	13.0	1.0	1.0	7.0	5.0	0.78	1.00	2.00	N	M	G	G	Attractive tree on end of row.	40+	B2
T27	Pinus nigra Austrian Pine	13.0	1.0	1.0	1.0	2.0	0.30	1.00	7.00	E	SM	G	G	Attractive tree in row.	20+	B2
T28	4 Pinus nigra Austrian Pine	13.0	1.0	7.0	1.0	6.0	0.40	1.00	2.00	E	EM	G	G	Attractive tree in row. Easterly bias.	40+	B2
T29	3 Pinus nigra Austrian Pine	13.0	1.0	1.0	1.0	6.0	0.40	1.00	2.00	W	EM	G	G	Attractive tree in row. Westerly bias.	40+	B2
T30	Pinus nigra Austrian Pine	13.0	2.0	7.0	1.0	5.0	0.57	1.00	2.00	W	EM	G	G	Attractive tree in row.	40+	B2
T31	Pinus nigra Austrian Pine	13.0	2.0	1.0	4.0	5.0	0.59	1.00	2.00	W	M	G	F	Attractive tree in row. Branch falling off.	40+	B2
T32	Pinus nigra Austrian Pine	11.0	3.0	7.0	1.0	6.0	0.44	1.00	2.00	E	EM	G	G	Attractive tree in row. Easterly bias.	40+	B2
T33	3 Pinus nigra Austrian Pine	13.0	1.0	7.0	1.0	6.0	0.55	1.00	2.00	E	EM	G	G	Attractive pines.	40+	B2
T34	Pinus nigra Austrian Pine	13.0	1.0	7.0	1.0	6.0	0.57	1.00	2.00	E	M	G	G	Attractive tree in row.	40+	B2
T35	3 Pinus nigra Austrian Pine	13.0	1.0	1.0	1.0	1.0	0.35	1.00	7.00	E	SM	G	G	Attractive pines.	40+	B2

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Tree Survey Schedule

Site Clays Farm
 Project schedule ref: JSL3904_750
 Drawing reference: JSL3904_700
 Survey date: 07/01/2021

Surveyor: A Brown
 Status: For Information
 Revision: A
 Notes:



Ref no.	Species	Height (m)	Crown spread (m)				Stem dia. (m)	Stem no. at 1.5m	Height of crown clearance (m)	Dir/ height	Age class	Structural condition	Physiological condition	General observations Management recommendations	Estimated remaining contribution (years)	Tree Quality Category (BS5837)
			N	E	S	W										
T36	Pinus nigra Austrian Pine	13.0	1.0	7.0	1.0	6.0	0.70	1.00	2.00	E	M	G	G	Attractive tree in row.	40+	B2
T37	Pinus nigra Austrian Pine	13.0	1.0	6.0	1.0	5.0	0.50	1.00	2.00	E	EM	G	G	Attractive tree in row. Bifurcates at 6m.	40+	B2
T38	Pinus nigra Austrian Pine	13.0	1.0	6.0	1.0	1.0	0.50	1.00	2.00	E	EM	G	G	Attractive tree in row. Bifurcates at 7m.	40+	B2
T39	Pinus nigra Austrian Pine	13.0	6.0	6.0	1.0	6.0	0.45	1.00	2.50	N	EM	G	G	Attractive tree on end of row. Northerly bias.	40+	B2
T40	Pinus nigra Austrian Pine	13.0	7.0	6.0	1.0	6.0	0.45	1.00	2.50	W	EM	G	G	Attractive tree in row. North-west bias. Some deadwood.	40+	B2
T41#	Crataegus monogyna Common Hawthorn	6.0	1.0	1.0	1.0	1.0	0.11 0.13 0.14	2.00	0.50	Y	EM	G	G	Tree adjacent fence.	10+	C2
T42#	Salix fragilis Crack Willow	10.0	6.0	4.0	4.0	5.0	0.4 0.4	2.00	0.50	S	EM	P	F	Tree within row. Branch falling off. Collective landscape value.	20+	C2
T43#	Populus nigra 'Italica' Lombarby Poplar	10.0	2.0	2.0	2.0	2.0	0.80	1.00	4.00	W	EM	P	P	Poplar in row which bifurcates at 3m. Previously topped. Weak wood failure.	<10	U
T44#	Salix fragilis Crack Willow	7.5	2.0	2.0	2.0	2.0	0.50	1.00	3.00	E	EM	F	F	Willow in row which bifurcates at 3m. One steam deadwood.. Collective landscape value.	40+	B2
T45#	Salix fragilis Crack Willow	10.0	3.0	3.0	5.0	3.0	0.50	1.00	1.50	S	EM	F	G	Tree in row leaning southwards. Stem damage. Collective landscape value.	40+	B2
T46#	Salix fragilis Crack Willow	9.0	7.0	6.0	6.0	1.0	0.50	1.00	0.00	N	EM	F	G	Tree in row with branches hanging off. Collective landscape value.	40+	B2
T47#	Salix fragilis Crack Willow	8.0	5.0	7.0	7.0	6.0	0.50	1.00	2.00	W	EM	F	G	Willow within row. Collective landscape value.	40+	C2

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Tree Survey Schedule

Site Clays Farm
 Project schedule ref: JSL3904_750
 Drawing reference: JSL3904_700
 Survey date: 07/01/2021

Surveyor: A Brown
 Status: For Information
 Revision: A
 Notes:



Ref no.	Species	Height (m)	Crown spread (m)				Stem dia. (m)	Stem no. at 1.5m	Height of crown clearance (m)	Dir/ height	Age class	Structural condition	Physiological condition	General observations Management recommendations	Estimated remaining contribution (years)	Tree Quality Category (BS5837)
			N	E	S	W										
T48#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	1.10	1.00	7.00	W	M	P	P	Tree in row which bifurcates at 5m. Stem cavity at base. Weak wood failure.	<10	U
T49#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.70	1.00	6.00	W	EM	P	P	Tree in row. Stem cavity at base. Weak wood failure. Fungal bracts.	<10	U
T50#	Salix fragilis Crack Willow	8.0	4.0	4.0	4.0	4.0	0.60	1.00	2.00	S	M	P	P	Willow in row with with large stem cavity.	<10	U
T51#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.65	1.00	7.00	N	M	P	P	Tall tree in row. Weak wood failure. Fungal bracts.	<10	U
T52#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.65	1.00	6.00	N	M	P	P	Tall tree in row. Weak wood failure.	<10	U
T53#	Salix fragilis Crack Willow	7.0	6.0	2.0	6.0	2.0	0.45	1.00	2.50	N	EM	F	F	Willow leaning northwards within row. Epicormic growth. Stem occlusions. Collective landscape value.	40+	B2
T54#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.75	1.00	4.00	N	M	P	P	Tall tree in row. Weak wood failure. Deadwood.	<10	U
T55#	Salix fragilis Crack Willow	6.0	2.0	4.0	5.0	4.0	0.60	1.00	2.00	S	M	P	P	Willow in row with with large stem cavity.	<10	U
T56#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.70	1.00	6.00	N	M	F	F	Attractive tree in row. Previously been reduced in height and has regenerated vigorously. Collective landscape value.	40+	B2
T57#	Salix fragilis Crack Willow	6.0	1.0	1.0	5.0	1.0	0.45	1.00	1.50	S	EM	P	P	Willow in row with with southerly bias and weak wood failure.	<10	U
T58#	Salix fragilis Crack Willow	7.0	3.0	1.0	3.0	1.0	0.35	1.00	2.00	N	EM	P	P	Willow in row with with northerly bias and large stem cavity.	<10	U
T59#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.65	1.00	8.00	N	M	P	P	Tall tree in row. Weak wood failure.	<10	U

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Tree Survey Schedule

Site Clays Farm
 Project schedule ref: JSL3904_750
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 Survey date: 07/01/2021

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 Notes:



Ref. no.	Species	Height (m)	Crown spread (m)				Stem dia. (m)	Stem no. at 1.5m	Height of crown clearance (m)	Dir/ height	Age class	Structural condition	Physiological condition	General observations Management recommendations	Estimated remaining contribution (years)	Tree Quality Category (BS5837)
			N	E	S	W										
T60#	Salix fragilis Crack Willow	8.0	2.0	2.0	2.0	2.0	0.30	1.00	4.00	S	SM	F	F	Attractive tree in row. Collective landscape value.	20+	B2
T61#	Salix fragilis Crack Willow	7.0	3.0	2.0	2.0	2.0	0.30	1.00	4.00	N	SM	P	P	Willow in row leaning northwards. weak wood failure.	<10	U
T62#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.73	1.00	7.00	N	M	P	P	Tall tree in row which bifurcates at 6m. Weak wood failure.	<10	U
T63#	Salix fragilis Crack Willow	6.0	2.0	3.0	5.0	3.0	0.35	1.00	2.00	S	SM	P	P	Willow within row showing major wood failure.	<10	U
T64#	Crataegus monogyna Common Hawthorn	8.0	3.0	2.0	3.0	1.0	0.20	1.00	3.00	N	SM	P	P	Small Hawthorn adjacent T63.	<10	C2
T65#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.65	1.00	8.00	N	M	P	P	Tall tree in row. Weak wood failure.	<10	U
T66#	Salix fragilis Crack Willow	10.0	5.0	1.0	5.0	5.0	0.60	1.00	2.00	N	M	F	F	Attractive tree in row. Collective landscape value.	40+	C2
T67#	Populus nigra 'Italica' Lombarby Poplar	7.0	0.0	0.0	0.0	0.0	0.50	1.00	-	-	EM	P	P	Dead.	<10	U
T68#	Salix fragilis Crack Willow	6.0	4.0	4.0	4.0	2.0	0.35	1.00	0.10	E	SM	P	P	Dead.	<10	U
T69#	Populus nigra 'Italica' Lombarby Poplar	10.0	5.0	5.0	5.0	5.0	0.50	1.00	1.00	S	EM	P	P	Tree in row. Weak wood failure. Large stem occlusion.	<10	U
T70#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.70	1.00	9.00	N	M	F	F	Attractive tree in row. Bifurcates at 7m. Stem occlusions. Lots of ivy. Collective landscape value.	40+	B2
T71#	Populus nigra 'Italica' Lombarby Poplar	10.0	5.0	2.0	5.0	2.0	0.65	1.00	2.00	S	M	P	P	Tree in row. Weak wood failure.	<10	U

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Tree Survey Schedule

Site Clays Farm
 Project schedule ref: JSL3904_750
 Drawing reference: JSL3904_700
 Survey date: 07/01/2021

Surveyor: A Brown
 Status: For Information
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 Notes:



Ref. no.	Species	Height (m)	Crown spread (m)				Stem dia. (m)	Stem no. at 1.5m	Height of crown clearance (m)	Dir/ height	Age class	Structural condition	Physiological condition	General observations Management recommendations	Estimated remaining contribution (years)	Tree Quality Category (BS5837)
			N	E	S	W										
T72#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.65	1.00	9.00	N	M	P	P	Tall tree in row. Weak wood failure. Ivy.	<10	U
T73#	Salix fragilis Crack Willow	10.0	6.0	4.0	6.0	1.0	0.60	1.00	3.00	N	M	F	F	Tree within row. Small cavity at base.	<10	C2
T74#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.65	1.00	8.00	N	M	P	P	Tall tree in row which bifurcates at 6m. Weak wood failure.	<10	U
T75#	Salix fragilis Crack Willow	10.0	5.0	5.0	6.0	5.0	0.5 0.6	2.00	2.00	N	M	G	G	Willow in row. Bifurcates at 1.5m. Lots of ivy. Limited inspection. Attractive tree in row. Collective landscape value.	40+	B2
T76#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.50	1.00	6.00	N	EM	P	P	Tall tree in row which bifurcates at 0.3m. Weak wood failure.	<10	U
T77#	Populus nigra 'Italica' Lombarby Poplar	6.0	5.0	4.0	1.0	4.0	0.12 0.15	2.00	3.00	N	SM	P	P	Tree in row which bifurcates at 6m. Weak wood failure.	<10	U
T78#	Populus nigra 'Italica' Lombarby Poplar	11.0	2.0	2.0	2.0	2.0	0.60	1.00	6.00	N	M	F	F	Tall tree in row. Weak wood failure.	40+	B2
T79#	Populus nigra 'Italica' Lombarby Poplar	0.0	0.0	0.0	0.0	0.0	0.50	1.00	0.00	-	EM	P	P	Fallen tree.	<10	U
T80#	Populus nigra 'Italica' Lombarby Poplar	10.0	2.0	2.0	2.0	2.0	0.60	1.00	8.00	N	M	P	P	Tall tree in row. Weak wood failure. Lots of ivy. Limited inspection.	<10	U
T81#	Populus nigra 'Italica' Lombarby Poplar	10.0	2.0	2.0	2.0	2.0	0.65	1.00	4.00	N	M	F	F	Attractive tree in row. Bifurcates at 0.7m. Previously been reduced in height and has regenerated vigorously. Collective landscape value.	40+	B2
T82#	Populus nigra 'Italica' Lombarby Poplar	10.0	2.0	2.0	2.0	2.0	0.65	1.00	3.00	N	M	F	F	Attractive tree in row. Bifurcates at 3m. Previously been reduced in height and has regenerated vigorously. Collective landscape value. Limited inspection.	40+	B2
T83#	Populus nigra 'Italica' Lombarby Poplar	10.0	2.0	2.0	2.0	2.0	0.65	1.00	3.00	N	M	F	F	Attractive tree in row. Collective landscape value. Bifurcates at 4m. Previously been reduced in height and has regenerated vigorously. Limited inspection.	40+	B2

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Tree Survey Schedule

Site: Clays Farm
 Project schedule ref: JSL3904_750
 Drawing reference: JSL3904_700
 Survey date: 07/01/2021

Surveyor: A Brown
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 Notes:

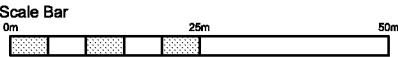
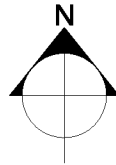
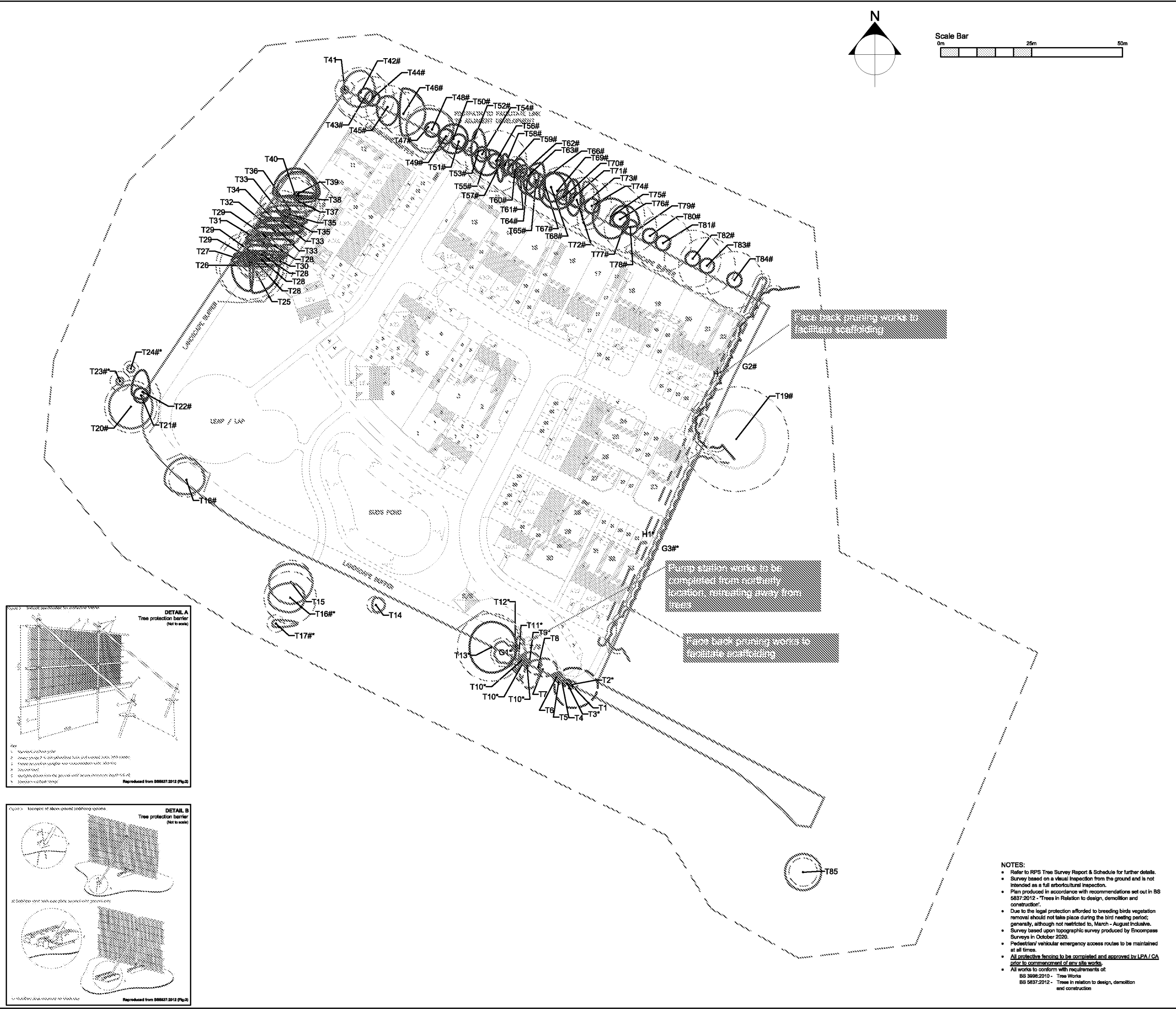


Ref. no.	Species	Height (m)	Crown spread (m)				Stem dia. (m)	Stem no. at 1.5m	Height of crown clearance (m)	Dir/ height	Age class	Structural condition	Physiological condition	General observations Management recommendations	Estimated remaining contribution (years)	Tree Quality Category (BS5837)
			N	E	S	W										
T84#	Populus nigra 'Italica' Lombarby Poplar	10.0	2.0	2.0	2.0	2.0	0.65	1.00	3.00	N	M	F	F	Attractive tree in row. Bifurcates at 5m. Previously been reduced in height and has regenerated vigorously. Collective landscape value. Limited inspection.	40+	C2
T85	Crataegus monogyna Common Hawthorn	8.0	5.0	5.0	5.0	5.0	0.1 0.17 0.18 0.2	4.00	2.00	W	SM	F	F	Four-stemmed tree.	20+	C2
G1*	Thuja plicata Western Red Cedar	11.0	See Plan				-	-	2.00	-	Y-SM	G	G	Row of Y-SM trees.	20+	C2
G2#	Mixed species, Quercus robur Pedunculate Oak, Common Ash Fraxinus excelsior, Crataegus monogyna Common Hawthorn	8.0	See Plan				-	-	1.00	-	Y-SM	G	G	Group of attractive trees. Limited inspection.	20+	B2
G3#*	Mixed species, Prunus avium Wild Cherry, Betula pendula Silver Birch		See Plan				-	-	1.00	-	Y-SM	G	G	Group of Y-SM attractive offsite trees. Limited inspection.	20+	C2
H1*	Hedge plants, Hedera helix Common Ivy, Prunus lusitanica portuguese Laurel	4.0	See Plan				-	-	0.00	-	Y	F	F	Hedge across eastern boundary.	10+	C2

Note: This survey is based on a brief visual inspection from the ground.
 It is not intended as a full arboricultural inspection.
 # - Indicates estimated tree. * - Indicates off site tree.

Appendix C

Tree Protection and Removal Plan JSL3904_710



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Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.
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Key

- Tree with numbered reference. Canopy spread and BS5837:2012 tree quality category as shown below.
- Tree (location estimated) with numbered reference. Canopy spread and BS5837:2012 tree quality category.
- Tree off-site with numbered reference. Canopy spread and BS5837:2012 tree quality category.
- Vegetation group with numbered reference. Canopy extents and BS5837:2012 tree quality category as shown below.
- Hedge with numbered reference. Width and BS5837:2012 tree quality category as shown below.

BS 5837:2012 Tree Quality Categories - Table 1

- Category A - High quality
- Category B - Moderate quality
- Category C - Low quality
- Category U - Unsuitable for retention

- Root protection area (RPA) Calculated in accordance with Section 4.6 - BS5837:2012
- Above ground construction requiring "No-dig" design principles in accordance with APN12.
- Vegetation group or hedge to be removed with numbered reference. Canopy spread and BS5837:2012 tree quality category.
- Tree to be removed with numbered reference. Canopy spread and BS5837:2012 tree quality category.
- Temporary protective fencing in accordance with Section 6.2 - BS5837:2012. See inset details for example barriers.

Rev	Description	By	CB	Date



Lakesbury House, Hillingbury Road, Chandlers Ford, Hampshire SO53 5SS
T: 02380 810 440 E: rpsso@rpsgroup.com

Client **Aster Homes Ltd**

Project **Clays Farm Yapton**

Title **Tree Protection and Removal Plan**

Status **For Planning** Drawn By **AB** PM/Checked by **DC**

Job Ref **JSL3904** Scale @ A3 **1:1000** Date Created **February 2021**

RPS Drawing / Figure Number **710** Rev **-**

rpsgroup.com

NOTES:

- Refer to RPS Tree Survey Report & Schedule for further details.
- Survey based on a visual inspection of the ground and is not intended as a full arboricultural inspection.
- Plan produced in accordance with recommendations set out in BS 5837:2012 - "Trees in Relation to design, demolition and construction".
- Due to the legal protection afforded to breeding birds vegetation removal should not take place during the bird nesting period; generally, although not restricted to, March - August inclusive.
- Survey based upon topographic survey produced by Encompass Surveys in October 2020.
- Pedestrian/vehicular emergency access routes to be maintained at all times.
- All protective fencing to be completed and approved by LPA/CA prior to commencement of any site works.
- All works to conform with requirements of:
BS 3998:2010 - Tree Works
BS 5837:2012 - Trees in relation to design, demolition and construction

Appendix D

Arboricultural site register

(Example template only)

ARBORICULTURAL SITE REPORT

PROJECT: <i>XXX, XX Street, XXX Town</i>	SITE CONTACT: <i>Mr XXX</i>	REPORT NO: <i>001</i>
INSPECTION COMPLETED BY: <i>Mr XXX</i>	DATE AND TIME: <i>XXX</i>	SHEET: <i>X OF X</i>

1.1 IT EM	LOCATION	NOTES / RECOMMENDATIONS	ACTION
1	<i>E.g. Adjacent to T999, north of building</i>	<i>E.g. Damaged fence, materials spilled into RPA, further inspection requirements, damage to tree</i>	<i>E.g. Reinstate fencing, make good levels with topsoil</i>
2			
3			

CIRCULATION:
Mr XXX
Mr XXX

Appendix E

Email response from Arun District Council

Thank you for your recent application received on 22nd January 2021.

On checking our records, I can confirm that the trees are not the subject of a Tree Preservation Order or within a designated Conservation Area. However, you are advised to also undertake your own research of the planning records to ensure that there are no conditions on any previous planning permissions which restrict tree surgery being carried out to trees on the site. Some planning applications can be viewed on line but otherwise you will need to come into the office and check the microfished planning records, unfortunately at this time we are restricted from entering the offices.

If there are no planning conditions relating to trees on the site, a formal notification to the Local Planning Authority may not be required prior to the commencement of any surgery.

Please note this letter only relates to whether or not formal consent may be required from Arun District Council as the Local Planning Authority. If the land is not in your ownership you must get the permission of the land owner before carrying out any work. If the trees are located on Council owned land such as a Park or Council Estate you will need to seek consent from the relevant department before commencing any work. If the land is privately owned and you do not know the owner, the Land Registry may be able to advise you, their contact number is 02392 768888.

I trust this information is of assistance to you.

Yours sincerely

Kathryn Welch
Planning Officer, Planning Department



Arun District Council, Civic Centre, Mulrovers Rd, Littlehampton, West Sussex, BN17 5LF
www.arun.gov.uk

To register to receive notification of planning applications in your area please go to
www.arun.gov.uk/planning

Appendix F

Example Tree Protection Barriers (BS5837:2012 Fig 2 & 3)

Figure 2 Default specification for protective barrier

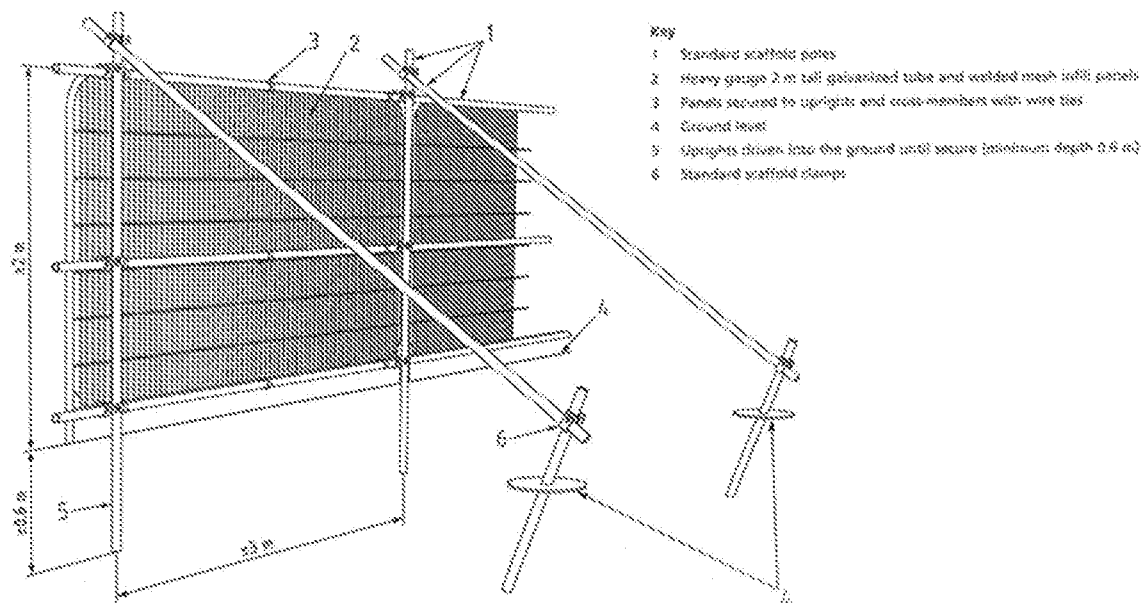
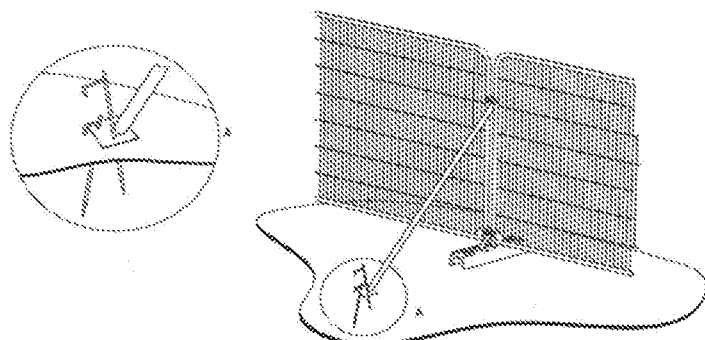
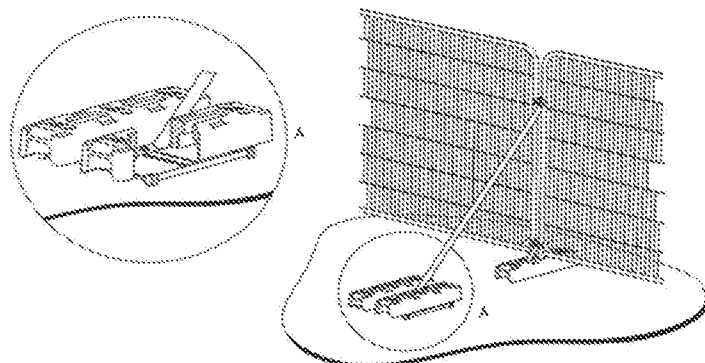


Figure 3 Examples of above-ground stabilizing systems



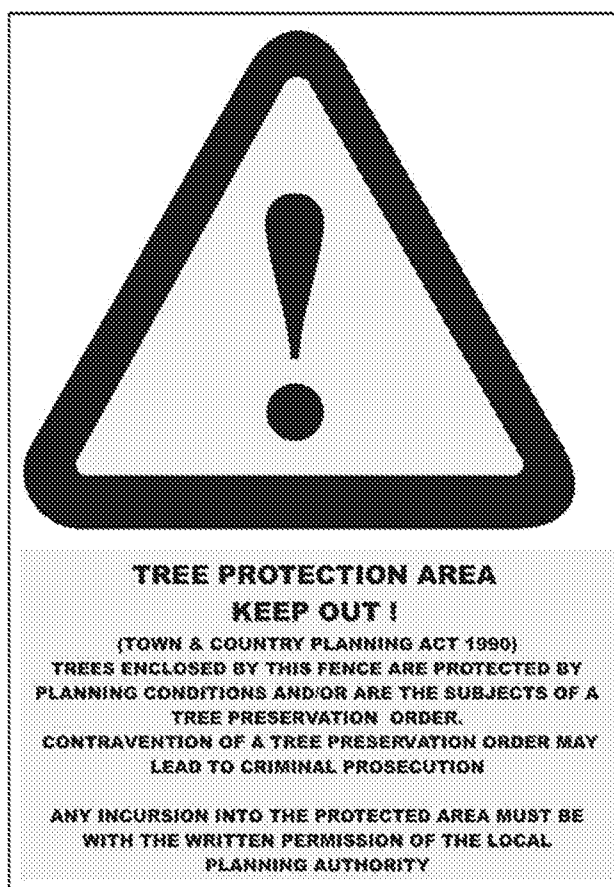
a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

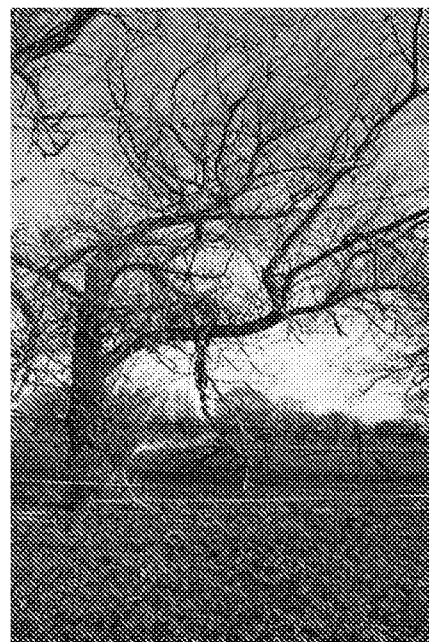
Appendix G

Construction Exclusion Zone (CEZ) Signage



Appendix H

Site Photographs



Appendix I

Arboricultural Glossary

Age-class - A general classification of the tree into either - young, semi-mature, early mature, mature, over-mature, or veteran.

Apical Bud/Shoot – The apical bud, also known as the leading shoot, is responsible for shoot extension and is dominant.

Apical Dominance – A singular, leading shoot remains dominant.

Arboreal - In connection with, or in relation to, trees.

Arboriculturalist – Person who has, through relevant education, training and experience, gained recognised qualifications and expertise in the field of trees in relation to construction.

Arboricultural Implications Assessment (AIA) – Study, undertaken by an arboriculturalist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

Arboricultural Method Statement (AMS) – Methodology for the implementation of any aspect of development that has the potential to result in the loss of or damage to a tree. Note The AMS is likely to include details of an on-site tree protection monitoring regime.

Asymmetric crown- Crowns that have a morphological bias in a particular direction. This can give the tree an aesthetically unfavourable appearance, but can also subject the tree to uneven wind- loading forces and potentially result in failure.

Basal – Referring to the bottom part of a tree's stem.

Basifugal mortality – A natural process seen in trees in an advanced life stage whereby the trees extremities die back and the inner crown expresses new growth, in order to conserve energy reserves.

Bifurcated - A growth characteristic, where two stems of similar size grow from the same point. Can create an inherent weakness.

Branch union/junction - The point at which a branch joins a larger stem. Can be a point of weakness, especially in certain species.

Brown Rot- Decay caused by certain species of fungus which results in the affected wood becoming brittle and liable to suddenly 'break out', especially if in key structural areas.

Buttress flares – Extensions of the basal stem of a tree that provide additional structural support. See reaction wood.

Bifurcated- A growth characteristic, where two or more stems of similar size grow from the same point. Can create an inherent weakness.

Cable braces – Cable braces used to support the crown of a tree, reduce impacts caused by wind- throw oscillation.

Canker – A clearly defined area of dead and sunken or malformed bark, caused by bacteria or fungi. Can have a bearing on structural integrity of infected limb(s) depending on size and location.

Central leader- See apical dominance.

Chalara ash dieback- A disease affecting ash trees caused by the fungus *Hymenoscyphus fraxineus*. Usually fatal, the disease causes leaf loss and crown dieback in infected trees. It was first confirmed in Britain in 2012.

Chlorosis- yellowing of leaves which can be caused by a range of factors, often an indicator of nutrient deficiency.

Compaction - The compressing & hardening of soil around tree root systems, due to vehicular/pedestrian use etc. Loss of pore space between soil granules limits water movement and gaseous exchange, and inhibits root growth.

Companion shelter- Shelter provided by neighbouring trees in groups to one another, factors such as wind throw are reduced due to supporting branches and interlocking root systems. Removing individual trees on the peripheries of such groups can expose neighbouring trees to environmental factors they have not previously been subjected to and can lead to individual failure.

Competent person – Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached

Note 1 A competent person understands the hazards and the methods to be implemented to eliminate or reduce the risks that can arise. For example, when on site, a competent person is able to recognise at all times whether it is safe to proceed.

Note 2 A competent person is able to advise on the best means by which the recommendations of this British Standard may be implemented.

Condition – Assessment based on a visual and professional view giving consideration to many factors such as tree health, structural integrity and suitability of its position.

Conservation dead- wooding- Removal of deadwood using 'coronet cuts' that mimic the way a branch would naturally break off, maximising deadwood habitat availability for invertebrates.

Coppice - The method of managing trees by cutting the stems at between 1.0 inch and 1.0 foot from the ground level on a regular cycle, the cut stumps of the trees or shrubs are allowed to re-grow many new stems.

Crown spread - Gives distances between extreme limits of the crown and the stem, usually along the four compass points. Helps to show crown symmetry.

Crown Reduction – The removal of branch ends to reduce the extreme limits of a trees branch spread and height.

Crown Thin – The removal of selected branches within the crown to thin the internal branch structure.

D.B.H. - 'Diameter at Breast Height', an industry standard to gauge tree stem size and development. Within arboriculture, breast height is taken to be 1.5m above ground level.

Dieback - The reduction in crown vigour and extension growth progressing to death of distal parts; often associated with decline.

Epicormic growth - New growth from dormant buds that can often form tenuous attachments. Although some species readily form such shoots, it can be an indication of stress.

Form - A general assessment of the shape and position of the tree within its environment.

Hanger – Term used to describe a branch that has become detached and is being supported by other branches. Can be a hazard to persons and property below.

Hazard Beam – After the loss of a distal part, a limb concentrates growth upwards creating adverse end weights that can render the limb susceptible to failure. .

Included bark – Growth characteristic usually caused when two or more stems/branches growing in close proximity 'fuse' together entrapping the bark from when the parts were separate in the middle, creating a structural weakness.

Invertebrate tower – Pollarding of a (usually dead) tree to a safe height that leaves part of the main stem as a deadwood habitat for invertebrate species.

Occlusion/Occluded – Normally used to describe the overgrowth of a wound. Also, immovable foreign objects in contact with a tree part can become encased or 'occluded' by the tree as it grows incrementally.

Pathogen - An agent that causes disease, especially a living microorganism such as a bacterium or fungus.

Phototropic growth – Growth responding to a light stimulus i.e. the sun. This can influence the form of a tree, particularly where other factors e.g. buildings or other trees, affect the amount/ direction light is received.

Pollard – The removal and subsequent regular re-removal of the crown of a tree above animal browsing height. Can be an effective method of controlling the size of trees in urban areas. This is ideally begun in the trees early stages and maintained throughout its life.

Reaction wood - Essentially additional wood laid down by the tree to compensate for structural defects such as cavities.

Rhizosphere - The rhizosphere is the narrow region of soil that is directly influenced by root secretions and associated soil microorganisms. In particular, mycorrhizal fungi form a symbiotic relationship with trees and assist in the assimilation of phosphates essential to the trees health.

Ring barking/Girdling – the removal of bark around the entire circumference of a stem or branch, causing the death of all distal parts.

Root Protection Area (RPA) – Layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m².

Scaffold limbs - The main structural branches within the crown.

Tree protection plan – scale drawing prepared by an arboriculturalist showing the finalised layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement (AMS), which can be shown graphically.

U.L.E – 'Useful Life Expectancy' is an estimate based on currently known factors of the possible remaining life of the tree as an asset. AKA 'Estimated remaining contribution'.

Veteran tree – Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Vigour - A general classification, as to the present and future potential growth and development of a tree. A comment regarding the health status of the tree specific to its species.

White Rot - A type of decay caused by certain species of fungi which results in the affected wood becoming flexible with little compressive strength.