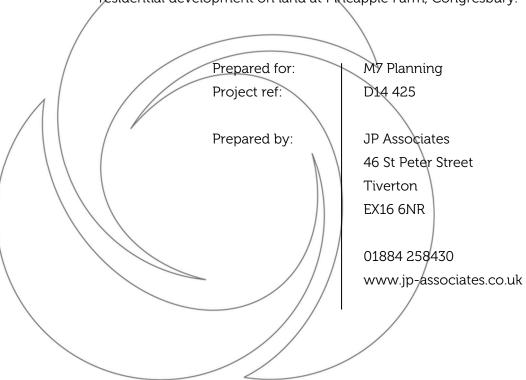
Land at Pineapple Farm, Congresbury:

Arboricultural information

Arboricultural constraints report Ref; D14 425 02

Arboricultural impact assessment Ref; D14 425 P3

Arboricultural information produced to support M7 Planning's outline application for residential development on land at Pineapple Farm, Congresbury.

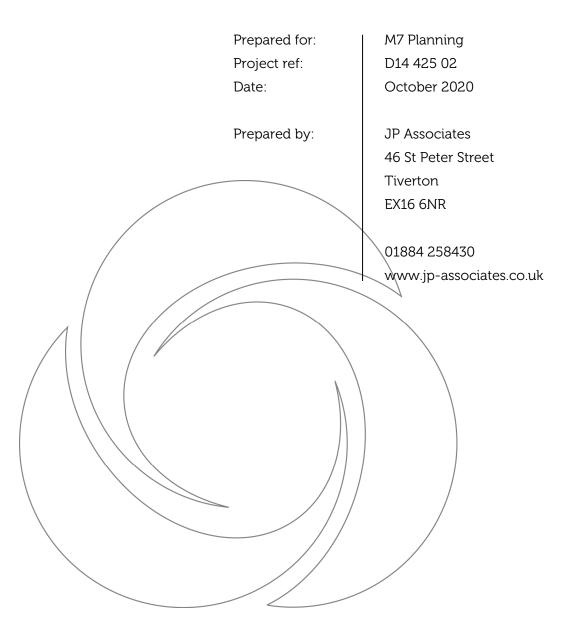






Pineapple Farm:

Arboricultural constraints report





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1 Introduction

1.1 Instructions

Instructions were received from M7 Planning to undertake a survey of the trees and

hedges at an area of land at Pineapple Farm, Congresbury to comply with British Standard

5837: 2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'

(BS 5837) and to submit a report detailing the general condition of the principal trees.

For more general background information on BS 5837 please refer to our 'Introduction to

BS 5837' available on our website www.jp-associates.co.uk or through the office.

1.2 Third party liability

The limit of JP Associates' indemnity over any matter arising out of this report extends

only to the instructing client, namely M7 Planning. JP Associates cannot be held liable for

any third party claim that arises following or out of this report. This report remains the

intellectual property of JP Associates.

1.3 Subsidence risk

This report is primarily concerned with the condition of the existing trees and hedges and

the application of current guidance for their retention. Any discussion of soil

characteristics is presented only where this may have a direct effect on tree or root

growth. The report does not seek to address subsidence risk: queries over subsidence

should be resolved through a separate, specialist report.

2 Site overview

2.1 The site is located on the eastern side of Congresbury and is accessed off Mulberry

Road, along a short agricultural track. The site is currently a grass agricultural field that is

broadly flat and level.

2.2 The site is bounded by private residential properties and agricultural land to the

north; by agricultural land to the east; by the private residential properties on Mulberry

Road to the south and by private residential properties on Park Road to the west.

2.3 There are two Public Rights of Way (PROW) that cross the site; adjacent to the

eastern boundary and from the north-west corner to the south-east corner.

- 2.4 All of the site's tree cover is located within the various boundary hedges. The most significant trees are the A category veteran ash in the south-west corner and the A category traditional crack willow coppice stools in the north-east corner.
- 2.5 There are also significant and off-site trees growing along the southern, eastern and northern boundaries and within off-site private gardens.
- 2.6 Any development proposals will need to reflect the constraints indicated on the appended arboricultural constraints plan.

3 Assessment of principal trees

- 3.1 The trees on the site vary in species, form and condition and there are specimens that fall into three of the four categories in BS 5837.
 - A category trees (shown in green on the appended plans) are the most significant, of high quality and value.
 - B category trees (shown in blue on the appended plans) are of moderate quality and value.
 - C category trees (shown in grey on the appended plans) are of low quality and value.
 - U category trees are either dead or unlikely to survive beyond the short term, irrespective of any development proposals. There are no U category trees on this site.
- 3.1.1 According to BS 5837, the Local Planning Authority (LPA) should regard A, B and C category trees as a material consideration in the development process. However, given that it also defines C category trees as low value and of little arboricultural merit, this report regards only A and B category trees as significant.
- 3.2 BS 5837 requires that significant trees should be further identified according to their particular merits. Trees can be identified as being of significance as arboricultural specimens (sub-division 1), for their importance within the landscape (sub-division 2) or as having a high ecological, historical or cultural value (sub-division 3). The Standard makes clear that no one sub-division is any more important than another: they simply explain why a tree has been identified as significant.

3.3 The most significant A category trees are the veteran ash, T5 in the south-west corner and the group of crack willow coppice stools, G13, in the north-east corner. As A

category specimens, these trees are very important features of the local landscape and

complex ecological habitats that should be retained within any proposals and located in a

position where they have sufficient space to develop without any impact on or from

adjacent development.

3.3.1 The willow coppice stools are traditional features of the Somerset levels that

provided a source of wood fuel in an area that is not so suitable to provide large quantities

of fire wood. The stools would have been coppiced on a regular basis though, as the

demand and supply of domestic fuel has changed, the traditional management of willow

coppice stools has largely ceased. Unfortunately, willow timber is rather brittle and over-

mature, unmanaged coppice stools tend to collapse. In order to ensure that the stools can

remain as long-term features of the landscape the stools should now be re-coppiced.

3.4 Other significant trees include the ash, T2, at the end of the old agricultural track

off Mulberry Road and the group of ash on the southern boundary, G4. As these trees are

likely to be in shared ownership any tree work will be limited to managing the growth that

extends over the boundary. As the trees are located on the southern boundary, their

amenity constraint areas extended someway in to the site. Any adjacent development

proposals will need to reflect the constraint areas.

3.5 It is understood that the proposals are likely to include the provision of a

landscape/wildlife corridor around the outside of the site. This will automatically push the

development further from the trees so that there is unlikely to be any incursion in to the

Root Protection Areas (RPAs).

3.6 The hedges are for the most part, regularly managed either as agricultural hedges,

H10 and H14 or as residential hedges, H3, H7, H9 (off-site) and H15. The residential hedges

are managed in a variety of styles and include various, fences, structures and planting.

3.6.1 The boundary hedges should continue to be managed during any development so

that there are in good general order and can act as appropriate features of any approved

residential development.

4 Tree retention

4.1 While BS 5837 gives guidance on the issues that should be considered during the

design of any development proposals, it does not give specific recommendations on the

retention of any particular trees or categories of tree. However, best practice suggests that

A category trees will usually be retained within any development proposals, B category

should be retained and C category could be retained but are of limited arboricultural or

landscape merit and should not be kept where they would significantly constrain

development proposals. U category trees will usually be felled as part of any development.

4.2 Decisions on tree retention are made by the project design team in response to

many different constraints. This initial report seeks to help the decision making process by

giving guidance that is informed by accepted best practice.

5 Constraints background

5.1 Where retained trees may affect planned development, BS 5837 stipulates that the

associated constraints should be taken into account in the development proposals.

5.2 There are two categories of constraints. Amenity constraints seek to protect the

amenity interests of future residents by ensuring a satisfactory relationship between the

proposed development and retained trees. These are the above-ground constraints and

relate to the canopy and stem. Tree protection measures seek to ensure that the trees can

be retained with a sufficient rooting environment to sustain them safely and healthily.

These are the below-ground constraints and relate to the root system.

5.2.1 Both types of constraint should be considered when detailing the measures

necessary to secure sustainable and harmonious retention. BS 5837 suggests that the

constraint information is then used by the project design team to inform their layouts.

5.3 A constraints study needs to consider not just the significant on-site trees but also

any off-site on adjacent neighbouring land (over which the development has no control)

that are sufficiently close to the site boundary that they may affect the developable area.

5.4 A constraints plan that conforms to BS 5837 is appended to this report. The plan

indicates amenity areas and root protection areas (RPAs) for the significant trees. If C or U

category trees are also retained, appropriate amenity areas and RPAs will need to be

observed.

6 Amenity constraints

6.1 Retained trees may affect future residents in terms of daylight shading and

physical presence. The constraints plan shows two different amenity considerations for

significant trees: the shadow length area (the grey area to the north of the tree) and the

amenity separation distance (the tan circular area centred on the main stem). Collectively

they form the amenity constraints.

6.2 Daylight shading is perhaps the main amenity issue. The average daily pattern of

shadows (calculated from May to September) can be plotted and is presented as the

shadow length area. The north-west point of the area equates to 9am, the north point to

12pm, the north-east to 3pm and the east to 6pm. BS 5837 suggests an area with a radius

equal to the expected mature height of the tree as an appropriate shadow clearance zone.

However, it is generally accepted by professional arboriculturists that this guidance falls

short of accurately representing the shaded area.

6.2.1 The shadow length area represents the area of the site that would be affected by

a structure obscuring the passage of the sun: in the case of a building this would be a

completely shaded area. However, tree canopies are not solid and varying amounts of

light will pass through the crown creating levels of shade. How much light depends on the

species, the tree's condition and any previous management.

6.2.2 The project designers may need to consider daylight issues within the indicated

area: internal building configuration and window size, location and design can all help

overcome potential shading/daylight problems.

6.3 The amenity separation distance between the retained trees and any proposed

housing will need to be considered and may need to be reflected in the layout design. If a

new building is located too close to retained trees its outlook may become oppressive.

Factors such as the tree's canopy density and condition, the topography and orientation of

the site and the nature of the development proposals all need to be considered.

6.3.1 There are two standards commonly used in calculating amenity separation

distances: two-thirds mature tree height (used in this report) and mature canopy spread

plus five metres. Both usually give similar figures.

6.4 As well as protecting the interests of residents, the amenity areas also serve to protect retained trees from unnecessary pressure to be either felled or undergo remedial

surgery once the new buildings are occupied.

6.5 Non-habitable 'structures', such as garages, service buildings, roads and hard

surfaced areas, can be constructed without restriction within the amenity areas - as long

as there is no disturbance, construction activity or alteration of the existing ground level

within the root protection areas (RPAs).

7 Tree and hedge protection measures

7.1 BS 5837 states that all retained trees should be protected by a barrier. The

appended tree survey schedule indicates the minimum RPA for each tree (calculated from

the formula given in BS 5837).

7.2 BS 5837 specifies the minimum RPA in m² rather than as a radial distance from the

tree. The minimum RPA is shown as a circle (of the appropriate area) on the arboricultural

constraints plan. Where the project arboriculturist considers that rooting is likely to be

asymmetrical, the RPA is based on likely root spread (i.e. not circular).

7.3 RPAs of retained trees are designed to protect the trees' root systems and provide

sufficient rooting environment to allow the trees to continue to thrive. The RPAs represent

a definite constraint by prohibiting groundwork, construction, development or storage

activity within the designated area.

7.4 The RPA indicated on the constraints plan should be regarded as a notional barrier

position. The precise final barrier location will be shown on a tree protection plan (TPP)

which will be based on the final layout.

7.5 BS 5837 allows for the project arboriculturist to slightly alter the location of the

protection barriers to fit in with the development proposals. These areas are shown on the

TPP as construction exclusion zones (CEZs). CEZs should also include any other areas of

the site set aside for tree planting or strategic landscaping.

7.6 The protection barriers used should be appropriate for the scale of development

activity and sufficiently robust to protect the trees and hedges from the expected level of

groundwork, construction or demolition activity.

7.7 In some situations, where development is taking place on previously developed

land, it may be necessary to demolish the existing buildings and remove areas of hard

surfacing. Any trees intended to be retained should be protected during the demolition

works. The barriers may need to be moved following demolition to the location indicated

on the TPP before starting any groundwork or construction activity.

7.8 The TPP will also show the routes of all services, drains and sewers and the

locations of all site facilities, storage areas, cement mixing areas and car parks.

7.9 The CEZs should be regarded as sacrosanct areas, within which there should be no

groundwork, construction or development activity, no materials stored, fires lit or other

activities undertaken that could be harmful or injurious to the trees or their root systems.

7.10 While CEZs should be regarded as 'no-go' areas, BS 5837 states that, in certain

circumstances, the protection measures can include ground protection techniques. These

measures are designed to protect the underlying roots, while allowing the area to be used

for other 'light' purposes - for example, scaffolding for a garage built immediately next to

the CEZ could be partially located within it.

7.11 All specified and approved tree and hedge work should be completed and the

protection barriers erected before any construction or groundwork begins and before

installation of the site offices, compound facilities and storage and yard areas.

7.12 The protection barriers should remain in place until the practical completion of the

development. Work within, removal or alteration of the protection barriers should not be

undertaken without consulting the project arboriculturist and with the prior written

consent of the LPA.

7.13 Any level changes within the RPAs may have a detrimental effect on any trees to

be retained. Further arboricultural advice must be sought if there are going to be any level

changes within the RPA as presented on the arboricultural constraints plan.

8 Soil assessment/site history

8.1 A full soil assessment is carried out as part of the ground investigation works

commissioned to inform both the architectural design and detailed engineering/design

work. As well as being an important part of the arboricultural assessment of a site, the

existing soil and ground conditions may also have implications for new planting proposals

specified as part of the proposed landscape or tree planting schemes.

8.2 The soil type and previous land use is discussed in this report in relation only to

the distribution, depth and density of tree roots and where this may have implications for

the tree protection measures needed to sustain retained trees and hedges, or where the

soil type and land use may affect the species choice for new tree planting.

8.3 The soil type and ground conditions are a particular factor in sites where the

ground is heavy or the soil has a high clay content as heavier clay soils are more

susceptible to compaction-related root damage.

8.4 The implications of the soil type and the potential impact on retained trees should

be considered by the arboricultural consultant and the design team during the design

process (the AIA), so that the tree protection arrangements specified in the TPP and AMS

will reflect the implications of soil type.

8.5 The soil at the site has been classified as a deep quaternary (relatively recent)

clayey loam to silty loam over a parent material of marine/estuarine clay/silt, according to

the UK Soil Observatory's (UKSO) on line mapping tool. As is typical for the Somerset

Levels the land appears to be quite 'heavy'.

8.6 The site is currently managed as agricultural land that appears to be broadly fertile

and productive, so it should be suitable to support a broad range of plants planted either

as part of any revised landscape scheme, or planted as part of any future garden

management

8.7 The agricultural management may have led to some minor compaction at the

gateways or close to trees but this will be relatively minor and localised.

9 Tree work details

9.1

In addition to the work discussed above and that suggested in the appended tree

survey schedule, removal of dead, diseased or defective branches of retained trees may

need to be carried out in the interests of good arboricultural management and to protect

the safety of the immediate area.

9.2 The retained trees may also need to be crown lifted to allow access, the

construction of any approved development, or the erection of fences. Where necessary,

heavy infestations of ivy should be controlled by clearing a lower section of the trunk.

9.3 A regular inspection of all retained trees should be undertaken to fulfil a

landowner's duty of care obligations. Further inspections may be necessary after heavy

storms or prolonged periods of bad weather.

9.4 If required a schedule detailing the work necessary for each tree may be included

in the tree protection plan and/or method statements, in line with the approved proposals.

All tree works should be carried out in accordance with BS 3998: 2010 Tree Work -

Recommendations.

10 Ecology and wildlife

10.1 In accordance with the Wildlife and Countryside Act 1981, Conservation of

Habitats and Species Regulations 2010 and Countryside and Rights of Way Act 2000, the

timing and type of tree or hedge work operations must be considered to avoid disturbing

any nesting or breeding birds or bat roosts. It is an offence (subject to certain exceptions)

to intentionally kill, injure, or take any wild animal listed. The laws prohibit interference

with places used for shelter or protection, or intentionally disturbing animals occupying

such places.

10.2 Non-urgent major tree work and hedge cutting should not be undertaken during

the peak bird nesting season, which is considered to be from March to August. If work has

to be undertaken during this period, detailed watching briefs should be carried out to

ensure that there are no resident nesting birds that could be disturbed.

- 10.3 All species of bats and their roosts are protected under the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2010. Deliberately capturing, disturbing, injuring or killing bats is prohibited. Damaging or destroying their breeding sites and resting places - roosts - is also prohibited.
- 10.3.1 Where bats are thought to be present, advice should be sought from a licensed bat specialist. If necessary relevant licences should be obtained before carrying out any major tree work or hedge cutting.
- 10.4 A complex development may require an ecologist to assess any potential ecological impact. The ecologist's report may include recommendations that influence the tree work and its timing.

Survey/Date issued:	8 October 2020	
Prepared by:	Jeremy Peirce (MICFor, MArborA)	Zery Pira
rrepared by.	Director	Sugge

TREE SURVEY KEY

Further information can be obtained from BS 5837: 2012 'Trees in relation to design, demolition $\boldsymbol{\vartheta}$

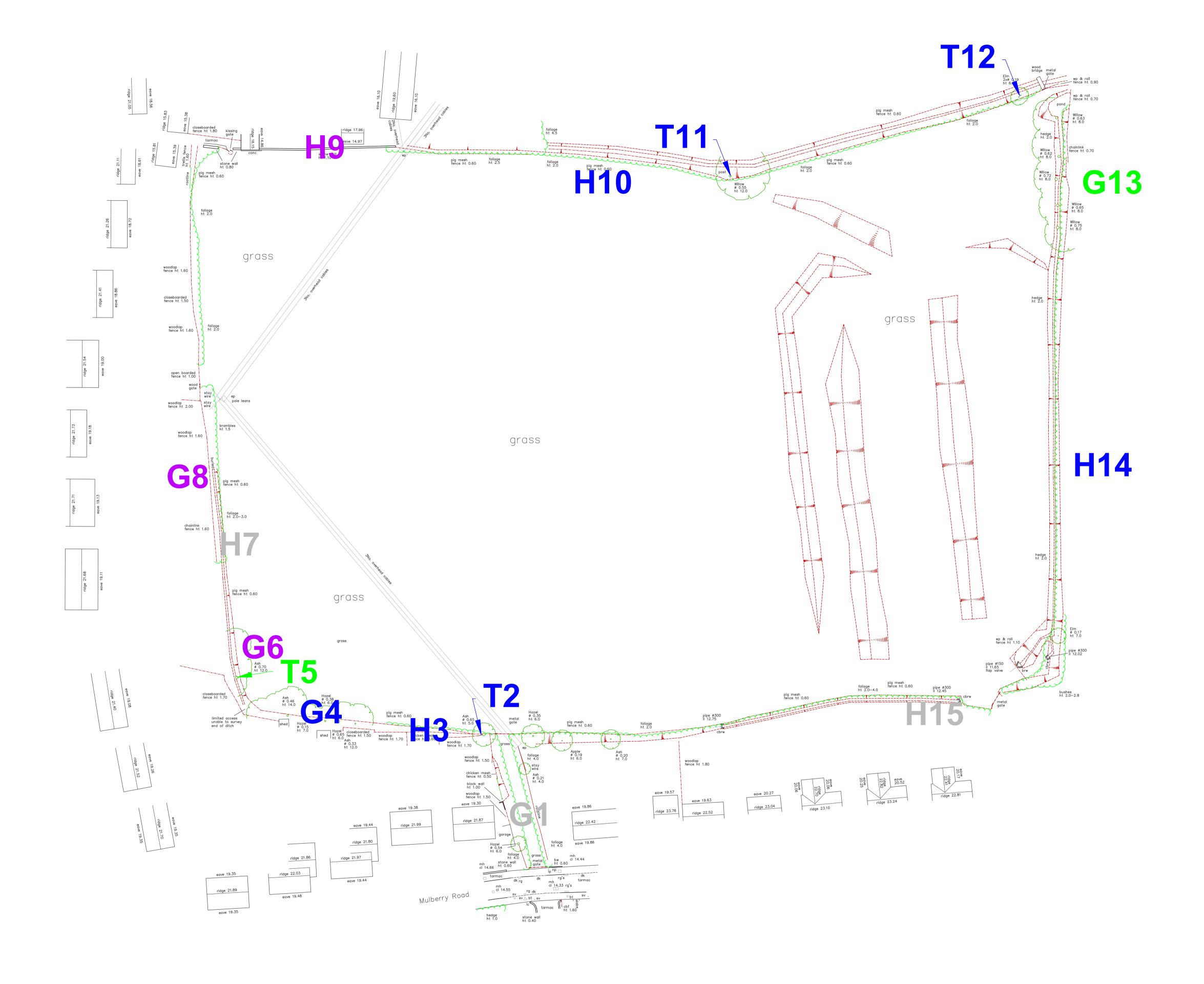
construction – Recommendations'; on which this survey is based. **Abbreviations:** Av - average figure; OS - off-site; * - est. reading; MS – multi-stemmed; SS – single-stemmed; TS – twin-stemmed

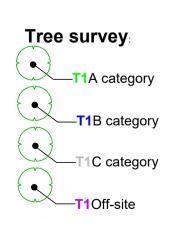
Tree ref	Each surveyed feature is assigned a number that corresponds to any report, discussion and (attached) plans T Individual specimen G A group of two or more specimens that should be regarded as a single unit
	H Linear group of specimens that form a hedge W A larger group or area of trees that should be regarded as a single woodland unit.
Species	The accepted common name for the species.
Height	A measurement of the existing height, in metres.
Diameter	The diameter of the stem or stems (given in mm) taken from a height of 1.5m or as per BS 5837, rounded to the nearest 25mm.
Age	An assessment of the tree's age: Young Within first ten years of its life. S Mat Reached age of reproduction, early stage of development. E MAT Mature form but not yet full size. Mat Crown has reached full dimensions. O Mat A tree that has exceeded its expected life span. Vet A tree that should not be assessed in terms of an expected life span but as a self-contained ecological feature.
Crown spread	An approximate radial measurement, in metres, of the existing crown spread, taken for the four cardinal compass points.
Crown clearance	Height of crown clearance above ground, in metres.
Physiological condition	An assessment of the tree's physiological condition: Good, Normal, Declining or Dead
Structural condition	An assessment of the tree's structural condition: Good, Adapted or Poor
ERC	Estimated remaining contribution of the tree(s) in years. (<10yrs, 10-20yrs, 20-40yrs, 40yrs+)
Category	An assessment of the tree's categorisation as specified in BS 5837: U Trees that cannot be retained longer than 10 years due to condition, usually removed as part of the development proposals <u>but</u> may have ecological values A Trees of high value & a life expectancy of 40 years+ B Trees of moderate quality & a life expectancy of at least of 20-40 years C Trees of low quality & a life expectancy of 10-20 years.
Comments	Any pertinent comments on or concerning the tree including any broad wildlife habitat considerations.
RPAm ²	The tree's (theoretical) root protection area, in m ² , calculated from the formula given in BS 5837
Radial RPA	Radius that defines a circle of the same area as the RPA
Please note	BS 5837 suggests that significant trees are also sub-categorised: 1

BS 5837 Schedule

Site: Pineapple Farm Client/Ref: D14 425 Surveyor: JPP Date: 8/10/20 Weather: Cloudy

	Species	Height	Stem Dia			Crown Spread (m)	Crown	Condition	Condition	ERC			RPA	Radial
Tree Ref		(m)		SS/MS	Age					(est remaining contribution	Cat	Notes/ Recommended Work		RPA
	(common name)	Ext/Mat	(mm)			N E S W	Clear (m)	Physiological	Structural	yrs)			(m2)	(m)
G1	Mixed	11	100	MS	EMAT	Av 2	0	Typical	Typical	10+	С	Hedge growth either side of farm access track, recently flailed	Protect a	as hedge
T2	Ash	12	600	SS	МАТ	Av 2.5	2	Typical	Typical	20+	В3	Developing veteran, growing at end of track, likely off-site, regularly pollarded to contain size	163	7.2
Н3	Mixed	1.5	50	MS	SMAT	Av 1.5	0	Typical	Typical	20+	B2	Mixed species managed boundary hedge. Includes various fences and boundary treatments	Protect a	as hedge
G4	Ash	16	500	SS	EMAT	Av 7	2	Typical	Typical	20+	B2	Boundary tree group growing within hedge, likely in shared ownership, restirct management to growth encroaching over site. Monitor for ADB	113	6
T5	Ash	15	800	SS	MAT	Av 6	3	Poor	Poor	20+	А3	Veteran tree groing on site side of boundary ditch, upper crown declining, hollow trunk	289	9.6
G6	Ash, hazel, elm	To 15	450	SS	EMAT	Av 6	1	Typical	Typical	20+	Off site	Off-sitye group on far side of boundary ditch	92	5.4
Н7	Mixed	1.3	50	MS	SMAT	AV 1.3	0	Typical	Typical	10+	С	Mixed species boundary hedge, includes a variety of fences and boundary treatements	Protect a	as hedge
G8	Mixed	15	300	SS	EMAT	Av 5	1	Good	Typical	20+	Off site	Mixed species off-site rear garden trees. Not close enough to boundary to constitue a constraint	41	3.6
Н9	Hornbeam	5	75	MS	МАТ	Av 1.5	0	Good	Good	20+	Off site	Off-site formal hornbeam hedge growing above boundary wall	Protect a	as hedge
H10	Mixed	2	50	MS	EMAT	Av 2	0	Typical	Typical	20+	B2	Manged agricultural hedge, continue regular management. Site level higher than off-site field	Protect a	as hedge
T11	Ash	16	700	SS	MAT	Av 6.5	3	Good	Typical	20+	В3	Developing veteran, growing within boundary hedge, likely to be in shared ownership	222	8.4
T12	Field maple	12	150	MS	SMAT	Av 3.5	0	Good	Typical	20+	B2	Developing tree slightly taller than adjacent hedge growth	10	1.8
G13	Crack willow	16	800	SS	МАТ	Av 9	1.5	Good	Poor	40+	А3	Traditional veteran Somerset Levels pollarded willow group. Repollard current growth to protect pollard stool and reduce encroacment over site	289	9.6
H14	Mixed	2	50	MS	EMAT	Av 2	0	Typical	Typical	20+	B2	Manged agricultural hedge, continue regular management.	Protect a	as hedge
H15	Mixed	1.5	50	MS	SMAT	Av 1.5	0	Typical	Typical	10+	С	Mixed species partially managed hedge, ditch with growth on both sides	Protect a	as hedge



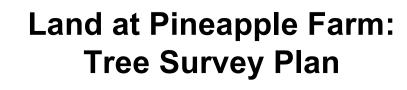




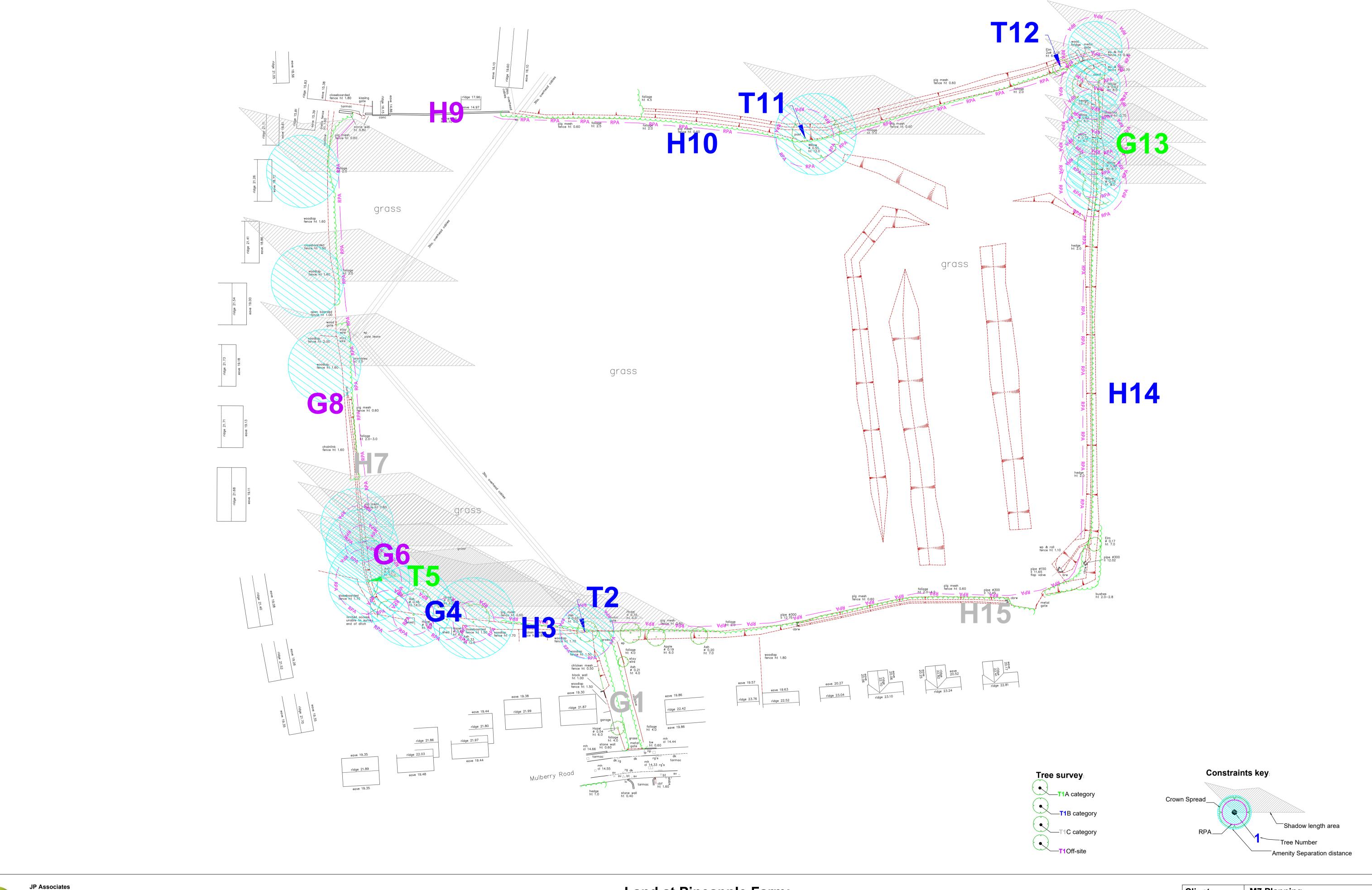
Tree Nos. refer to tree survey schedule

Please refer to JP Associates report D14 425 02 dated October 2020

Given scale accurate @ A1



Client:	M7 Planning
Plan Ref:	D14 425 P1
Drawn by:	JPP
Date: 10/20	Scale : 1:500





Client:	M7 Planning
Plan Ref:	D14 425 P2
Drawn by:	JPP
Date: 10/20	Scale: 1:500

Arboricultural Impact Assessment (AIA) Notes:

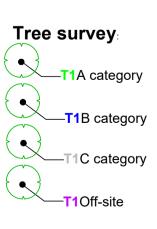
A; As a general note, the amenity constraints associated with large significant (A, B or off-site trees) along a southern boundary will affect the adjacent site area. The impact of the amenity constraints will need to be reflected in the layout of any adjacent development proposals. As the layout is currently in a Masterplan or framework format, it isn't possible to highlight particular plots that may be affected. As a further general rule, the principal living areas of plots adjacent to the southern boundary should be kept outside the indicated amenity separation distance (cyan hatched areas) and should reflect the indicated shadow areas (grey hatched areas).

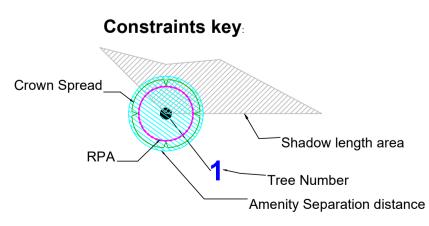
B; T5 is an on-site, veteran ash (located on the site-side of the boundary ditch); veteran trees are specimens that have developed to the point where they should be regarded as significant and complex ecological habitats in their own right. Veteran trees are also afforded additional protection and status under the NPPF and as such they should be retained in areas where they can continue to develop without impact on or from adjacent development. As the current layout is in Masterplan format, it doesn't include any specific detail. However, as the indicated development area is inside the tree's amenity separation distance, any subsequent layouts should ensure that there is increased clear area around T5.

C; The presence of the indicted ecological/landscape strip around the outside of the site is likely to mean that adjacent construction is outside the Root Protection Areas (RPAs).

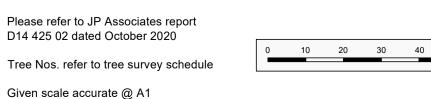
D; G13 is a group of 6 large crack willow stools. Crack willow coppice stools are a traditional feature of wetter areas - often growing adjacent to ditches, streams and rhynes (drainage ditches). Historically there were manged by periodically coppicing the branches to provide a source of fuel from areas that were not suitable to grow other sources of firewood. As the demand for wood fuel has reduced and changed over recent generations, the traditional management of willow coppice stools has now largely stopped. Unfortunately, willow timber is rather brittle and unmanaged stools often collapse when neglected. While the presence of the green corridor around the site means that the trees are unlikely to impact any adjacent plots, the trees should be re-coppiced so that the trees can remain a long-term feature of the site and the wider landscape.













Client:	M7 Planning
Plan Ref:	D14 425 P3
Drawn by:	JPP
Date: 10/20	Scale : 1:500