



HP TREE SURVEYS LTD

BS5837 (2012) Arboricultural Impact Assessment.

For

Mrs. S. Mitchell

at

**Agricultural Land adjacent to Pen Draw'r y Garth Ucha,
Llansantffraid Glyn Ceiriog, Glyn Ceiriog, Wrexham, Wales, LL20 7NE**

**Compiled and Surveyed
by**

Mr H Pimborough

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QTRA Registered

15th August 2022





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BS5837 (2012) Arboricultural Impact Assessment.

1.0 Site Address: Agricultural Land adjacent to Pen Draw'r y Garth Ucha, Llansantffraid, Glyn Ceiriog, Glyn Ceiriog, Wrexham, Wales, LL20 7NE

1.1 Site Grid Ref: SJ 19947 38404

2.0 Client: Mrs S. Mitchell

2.1 Client Address: Flat 29 Castle Street, Llangollen, LL208RU

3.0 Consulting Arborist Details

Mr H Pimborough BSc (Hons), PGCE, U.cert.F.FP, RFScert.Arb, MArborA, PTI

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3.1 Consulting Arborist Experience

Howard Pimborough is graduate of the University of Wales and Chester, a professional member of the Arboricultural Association, QTRA registered, and qualified with Lantra Professional Tree Inspection.

He has over 35 years' experience in Silviculture, Arboriculture and Environmental Management.

He has provided consultancy services (BS5837 and Tree Condition Reports) for major infrastructure projects, County and Town Councils, Development and Construction Industry, Utilities Companies, and private landowners.

4.0 Date of Survey: 22nd July 2022

4.1 Weather Conditions on date of Survey: Heavy rain and low cloud.

4.3 Site Characteristics

4.3.1 The site is an agricultural field of low-quality grassland and unpalatable (to livestock) plant species (some invasive), degrading to scrub and a woodland edge, that slopes steeply to the North.

The area is bordered to the South by a narrow access lane, to the North, a Coniferous plantation, and a broadleaf woodland. To the West a small stream and more mixed species mature woodland.

To the East, there is a residential property that is within falling distance of trees populating the site.

The site incorporates existing structures that are single storey wooden sheds and an unsurfaced access track that leads East to West.

4.4 Soil Type: A freely draining, low fertility, acidic upland Loam over rock (Mudstone).

4.5 Intended Site Use/Development

4.5.1 Light Agriculture (organic small holding), light silviculture (short and long rotation coppice).

5.0 Type of Survey: BS5837 (2012) Arboricultural Impact Assessment.

5.1 The purpose of the report is to accompany a planning application to the Local Planning Authority. It identifies the constraints that the trees on site are subject to in regard to the proposed development. It also assesses the impact that the proposals will have on the trees on site, providing guidance on how any development can be achieved by minimising the potential for any detrimental impact to any of the retained trees on site.

5.2 The survey undertaken is a phase 1 Visual Tree Assessment. It identifies **above ground** level major structural defects, pathogenic fungi and diseases in trees and groups of trees that might increase the risk of tree failure in whole or part.

5.3 Observation to exposure, site conditions, and soils (no in-depth soil investigations have been undertaken and should not be inferred) are also noted, though effects on tree stock are theoretical, due to the complex relationship between trees and their immediate environment.

5.4 It is important to note, that particularly in the case of certain tree fungi and diseases, their presence might not be apparent due to the season the tree has been inspected on.

5.5 All surveys are time limited and limited by major weather events (Trees should be reinspected after storms or extreme weather), this is primarily because the influence of abiotic factors (e.g., construction activity, drought), mammalian activity (e.g., Deer and Squirrel bark stripping), fungal pathogens, diseases and sometimes structural defects can occur after the initial inspection within a relatively short time.

6.0 Exceptions or Limits of Survey

6.1 From the development plans submitted, this report and survey identifies preliminary constraints and protection to retained trees on site. At the time of survey some development has occurred in the form of an unsurfaced access track and single storey wooden non-residential structures.

6.2 Trees below 75mm in diameter have not been recorded.

6.3 Ground vegetation and site factors limited access to certain trees. For the safety of the surveyor, estimates may be submitted, particularly T024 Sessile Oak (*Quercus petraea*) where a large diameter windthrow Ash is hung up at height. In these instances, an accurate estimation of dbh (diameter at breast height) has been recorded, tree heights and crown spreads are accurate within tolerances and measured by a calibrated laser clinometer.

6.4 Tree rooting characteristics and soils are both enormously variable, as are their interactions. This makes attempts to quantify subsidence risk assessment impossible. No survey has been made to assess subsidence risk potential nor should any such survey be inferred.

6.5 Where trees are extensively ivy clad this was recorded in the survey schedule. It is not possible to ascertain the presence of cavities or other defects beneath the ivy and, therefore, ivy should be removed, and a re-inspection carried out (if present).

6.6 Only trees within the boundaries of the land owned by the client have been surveyed and inspected.

6.7 No formal check has been made to establish whether any of the trees on site are afforded any degree of statutory protection from Tree Preservation Orders or Conservation Areas.

6.8 A preliminary check for statutory land designations i.e., Sites of Special Scientific Interest, Special Areas of Conservation etc has been made. No statutory protections have been found but the landowner should check with Natural Resources Wales for up-to-date advice.

6.1 Third Party Trees.

6.1.1 The site is bordered by woodland on the North and West and have not been inspected for physiological condition and should not be inferred. However, advice shall be given to ensure their general protection.

6.1.2 It is recognised that under common law, trees may be interpreted as ‘trespassers’ and landowners have certain limited rights to maintain encroachment to their property. However, protections under the Town and Country Planning Act 1990 (Tree Preservation and Conservation Areas) must be observed and override that right. Regardless of the scale of encroachment, the landowner, in maintaining their boundary must consult with their local planning authority to identify statutory tree protections and formally notify the Local Authority and the tree owner(s) of their intention. **No works should be undertaken without formal approval.**

7.0 Measurements and Identification of Surveyed Trees (Limitations or Methodology)

7.1 All tree diameters have been measured with an approved, serviceable dbh (diameter at breast height) tape to the specifications according to BS5837 (2012).

7.2 Tree heights have been measured with a calibrated Laser clinometer. However, available distances to ensure accuracy have been restricted due to the terrain and compact nature of the site and may influence tree height accuracy tolerances.

7.3 Where possible Individual Trees of significance have been tagged with an approved numbered tree tag for ease of identification and to help continued management of retained trees. Groups are not tagged.

7.4 Single trees of significance are designated with the prefix ‘T’ have been tagged with an approved numbered tree tag (where possible) for ease of identification and to help continued management of retained trees.

7.5 Trees growing in close proximity to each other provide a sheltering effect and optimise their structure accordingly, suggested tree risk mitigation must therefore be in consideration of the entire group i.e. If one tree is felled due to defects, a consideration to remove all must be made. Trees considered as ‘groups’ are designated with the prefix ‘G.’ Trees regarded as groups are stratified by similar age class, species, and or physiological condition. Individuals that have significant defects or value are identified individually.

7.5.1 Tree group root protection areas are based on a sample tree, that is being the most dominant representative of the group in general. Understorey is noted and is included in the group if present and were above 75mm in diameter.

7.6 Trees plotted via GPS (global positioning) have a tolerance of up to 3m accuracy and less under dense canopy.

8.0 Trees and the Law

8.1 Tree Preservation Orders and Conservation Areas

8.1.1 TPOs are administered by your local Council in its role as the Local Planning Authority (LPA) and are made to protect trees that provide a significant amenity benefit to the area.

8.1.2. All species of tree can be protected (but not hedges, bushes or shrubs), and a TPO can protect anything from a single tree to all trees within a defined area or woodland – but no species is automatically protected by a TPO.

8.1.3 A TPO makes it a criminal offence to cut down, top, lop, uproot, wilfully damage, or wilfully destroy a tree protected by that order, or to cause or permit such actions, without the authority’s permission. Anyone found guilty of such an offence is liable to prosecution, and an unlimited fine can be imposed for destroying or removing a protected tree without consent from the LPA.

8.4 To make an application to carry out works to a protected tree the client will need to complete an application form and submit it to the LPA.

8.5 If a tree in a Conservation Area the client must give six weeks prior written notice to the LPA (by letter, email or on the LPA's form) of any proposed work, describing what you want to do. This gives the LPA an opportunity to consider protecting the tree with a TPO. Normal TPO procedures apply if the tree is already protected by a TPO.

8.6 The client does not need to give notice if the tree is less than 7.5 centimetres in diameter, measured 1.5 metres above the ground (or 10 centimetres if thinning to help the growth of other trees).

8.7 The landowner is strongly advised to check for conservation area or TPOs in place prior to any tree mitigation or removal works.

8.8 Tree Preservation Orders and Conservation Area Status: Not Known

8.2 Felling Licences

Tree felling on non-residential land is also controlled by the need to obtain a Felling Licence from the Natural Resources Wales before felling more than 5m³ of timber in any calendar quarter subject to various exemptions and variations.

9.0 Special Protected Areas.

None found. (The Landowner has a duty to check with Natural Resources Wales)

10.0 Executive Summary

10.1 The development plans submitted to the surveyor in relation to area surveyed and the scale and size of the proposed and existing structures will have no impact on trees within in the survey boundary.

10.2 The existing wooden outbuildings have had no impact on any tree identified as category A or B and can be considered as essential necessary for the livestock on site.

10.3 From the survey data category A and B trees should be retained and protected from any development and incorporated into any design process. Category C trees are generally coppice and naturally regenerated scrub species of low amenity value.

10.4 Ash Dieback (*Hymenoscyphus fraxineus*) is present within all the Ash (*Fraxinus excelsior*). Ranging from Class 1 (100 to 75% live crown remaining) to Class 3 (50-25% live crown remaining). Only Ash of Class 2 or below should be retained, and their ongoing condition to be monitored.

10.5 Sessile Oaks (*Quercus petraea*) T002 (Mature) T010 and T011 are good examples of their species, particularly T002 which has a more significant amenity value and should be retained. T011 is pristine in its overall condition and should be protected from livestock and any development as its potential to become an exceptional mature tree is noted.

10.6 T12 Hazel will need to be coppiced to allow the construction of the planned greenhouse.

10.7 The access track constructed pre-survey has breached the RPA of third-party trees, however it's full impact has yet to be determined, there was no visual evidence of root damage from initial examination of the embankment.

10.8 Trees designated for retention especially Category A should be protected from livestock.

6.9 A proposed tree planting Plan has been submitted in 16.2.3 page 18.

11.0 Survey Data

Date of Survey: 22nd January 2022

Surveyor: Mr H Pimborough BSc(Hons), PGCE, U.cert.F.FP, RFScert.Arb, MArborA, PTI

Ref.	Other Reference	Common	Botanical	Structure	Num. Stems	Height (m)	DBH (mm)	Crown Spread (m)				Canopy Height (m)	Lowest Significant Branch (m) + Cardinal point	Life Stage	Condition	BS 5837 Retention Category	Root Protection Area m² and (Nominal Radius m)	Tree Condition and Management (Recommendations)
								North	South	East	West							
G006	Not tagged	Sycamore x3	<i>Acer pseudoplatanus</i> x3	Group	3	10	500	4	6	6	7	3	4 E	Early Mature	Good	B1	340 (6)	Minor decay pocket, riparian zone tree, Bryophytes, minor deadwood over 25mm. (Retain)
G009	Not tagged	Common Ash Goat Willow x2	<i>Fraxinus excelsior</i> <i>Salix caprea</i> x2	Group	3	7	120	2	4	4	3	2	3 E	Young	Fair	C1	18 (1.4)	Ash dieback class 2, multi stem coppice.
G015	Not tagged	Common Hawthorn x20	<i>Crataegus monogyna</i> x20	Group	20	6	180	3	3	3	3	0.25	0.5 S	Mature	Good	C1	304 (2.2)	Area of lapsed coppice. (Manage as coppice)
G017	Not tagged	Sessile Oak x5 Hawthorn x7 Hazel x5 Silver Birch x2	<i>Quercus petraea</i> x5 <i>Crataegus sp.</i> x7 <i>Corylus avellana</i> x5 <i>Betula pendula</i> x2	Group	19	12	200	3	3	3	3	5	5 S	Semi Mature	Fair	C1	361 (2.4)	Drawn, lapsed coppice, weak unions. (Manage as Coppice)
G018	Not tagged	Common Ash x3	<i>Fraxinus excelsior</i> x3	Group	3	20	550	6	6	6	6	8	5 S	Mature	Poor	C1	410 (6.6)	Ash dieback, class 2, advanced basal decay, leaning towards target, undermined South aspect. Lapsed coppice, (Removal recommended)
G019	Not tagged	Common Ash x10 Common Hawthorn x10 Rowan x2 Silver Birch x3 Hazel x15 Sessile Oak x3	<i>Fraxinus excelsior</i> x10 <i>Crataegus monogyna</i> x10 <i>Sorbus aucuparia</i> x2 <i>Betula pendula</i> x3 <i>Corylus avellana</i> x15 <i>Quercus petraea</i> x3	Group	43	19	250	3	3	3	3	4	4 S	Early Mature	Fair	C1	1215 (3.0)	Ash dieback class 3, drawn, basal wounds, lapsed coppice, area of coppice with standards. (Manage as coppice Hazel, fell class 3 ADB Ash)

Ref.	Other Reference	Common	Botanical	Structure	Num. Stems	Height (m)	DBH (mm)	Crown Spread (m)				Canopy Height (m)	Lowest Significant Branch (m) + Cardinal point	Life Stage	Condition	BS 5837 Retention Category	Root Protection Area m² and (Nominal Radius m)	Tree Condition and Management (Recommendations)
								North	South	East	West							
G022	Not tagged	Hazel x12 Sessile Oak x5 Hybrid Larch Common Ash x10 Common Hawthorn x10 Silver Birch x10	<i>Corylus avellana</i> x12 <i>Quercus petraea</i> x5 <i>Larix x eurolepis</i> <i>Fraxinus excelsior</i> x10 <i>Crataegus monogyna</i> x10 <i>Betula pendula</i> x10	Group	48	17	300	4	4	4	4	4	4 N	Early Mature	Fair	C1	1953 (3.6)	Ash is Early mature and dominant species. Ash dieback class 3, drawn hazel and hawthorn lapsed coppice understorey, remaining trees semi mature., windthrow effecting Hazel coppice. (Fell Class 3 Ash Dieback and coppice Hazel)
T001	Not tagged	Common Ash	<i>Fraxinus excelsior</i>	Tree	1	15	370	4	4	4	4	4	4.5 W	Early Mature	Fair	C2	60 (4.4)	Ash dieback, class 1. Minor deadwood, less than 25mm in diameter Inspection limited due to vegetation. (Retain)
T002	0138	Sessile Oak	<i>Quercus petraea</i>	Tree	1	22	710	7	7	7	7	4	4 N	Mature	Good	A2	266 (9.2)	No significant observable defects, minor deadwood, restricted root area due embankment (Retain)
T003	0137	Common Hawthorn	<i>Crataegus monogyna</i>	Tree	1	6	420	4.5	4	4	4	2	2 N	Mature	Good	C2	80 (5.04)	Included unions main stem, (Retain)
T004	Not tagged	Goat Willow	<i>Salix caprea</i>	Tree	1	4	120	3	2	3.5	1	1	1 E	Young	Fair	C2	6 (1.4)	Leaning significantly towards East. Minor tree (Fell)
T005	Not tagged	Goat Willow	<i>Salix caprea</i>	Tree	1	9	420	5	4	4	4	3.5	2 E	Over Mature	Fair	C1	80 (5.04)	Windthrow, main stem decay localized. Not tagged due to location on steep bank. (Fell optional)
T007	0136	Goat Willow	<i>Salix caprea</i>	Tree	2	11	500	5	4	6	5	3.5	4 E	Mature	Fair	C1	163 (6.00)	Stems: 50, 51 Codominant main stem, decay main stem, weak union basal area, riparian zone tree. (Retain)

Ref.	Other Reference	Common	Botanical	Structure	Num. Stems	Height (m)	DBH (mm)	Crown Spread (m)				Canopy Height (m)	Lowest Significant Branch (m) + Cardinal point	Life Stage	Condition	BS 5837 Retention Category	Root Protection Area m² and (Nominal Radius m)	Tree Condition and Management (Recommendations)
								North	South	East	West							
T008	Not tagged	Common Ash	<i>Fraxinus excelsior</i>	Tree	2	25	400	7	8	6	8	4	4.5 N	Mature	Good	B1	73 (4.8)	Ash dieback class 1, bryophytes, minor deadwood less than 25mm, riparian zone tree, embankment (Retain)
T010	0135	Sessile Oak	<i>Quercus petraea</i>	Tree	1	12	530	7	8	6	6	1.2	1.7 S	Early Mature	Good	B2	129 (6.4)	Leaning towards South. No significant observable defects (Retain)
T011	0134	Sessile Oak	<i>Quercus petraea</i>	Tree	1	9	340	5	5	5	5	1.5	1.8 S	Semi Mature	Good	A2	52 (4.08)	No significant observable defects (Retain)
T012	0133	Hazel	<i>Corylus avellana</i>	Tree	10	8	150	2	2	2	2	2	2 S	Over Mature	Good	C1	467 (12.2)	Lapsed coppice, included mainstem unions. (Manage as coppice)
T013	Not tagged	Elder	<i>Sambucus nigra</i>	Tree	1	3	130	2	2	2	2	1	1 S	Mature	Good	C2	8.0 (1.6)	Minor tree, no significant observable defects (Optional)
T014	Not tagged	Common Hawthorn	<i>Crataegus monogyna</i>	Tree	15	7	100	4.5	4.5	4.5	4.5	1.2	1.4 N	Mature	Good	C1	45 (3.8)	Included unions, multi stem, lapsed coppice. (Retain and manage as coppice)
T016	0131	Common Ash	<i>Fraxinus excelsior</i>	Tree	1	13	330	4	4	4	4	7	7 N	Semi Mature	Fair	C1	72 (4.00)	Ash dieback class 2, basal decay, basal wound. (Fell tree) ,
T020	0130	Common Ash	<i>Fraxinus excelsior</i>	Tree	1	15	580	3	9	4	6	9	9 S	Mature	Fair	C1	222 (7.00)	Ash dieback class 2, asymmetrical crown to south, undermined basal area to South, minor decay pockets. (Retain and monitor condition)
T021	0129	Common Ash	<i>Fraxinus excelsior</i>	Tree	1	14	310	4	4	4	4	9	4 N	Early Mature	Poor	C1	43 (3.7)	Ash dieback class 3, basal sweep to South, adjacent hazel acting as natural brace, main stem decay at 05m from ground level, (Removal recommended)

Ref.	Other Reference	Common	Botanical	Structure	Num. Stems	Height (m)	DBH (mm)	Crown Spread (m)				Canopy Height (m)	Lowest Significant Branch (m) + Cardinal point	Life Stage	Condition	BS 5837 Retention Category	Root Protection Area m ² and (Nominal Radius m)	Tree Condition and Management (Recommendations)
								North	South	East	West							
T023	Not Tagged	Sessile Oak	<i>Quercus petraea</i>	Tree	1	25	1200	9	9	9	9	2	6 S	Over Mature	Good	B1	652 (14.4)	Significant deadwood, basal flare indicating potential internal decay (Retain)
T024	Not Tagged	Sessile Oak	<i>Quercus petraea</i>	Tree	1	25	800	4	9	9	8	6	6 S	Over Mature	Fair	B1	5.14 (12.8)	Large windthrow, Ash hung up in crown, unsafe to fully inspect until cleared, internal decay from stubbed branch, broken primary limb south aspect, broken and split branches in upper crown, significant deadwood (Conduct remedial safety works and retain)

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12.0 Initial Arboricultural Method Statement

12.1 Overall the site is dominated by low quality scrub species that has naturally regenerated. Whilst it is recognised that the low-quality trees have value in regard to client's aims, for conservation and biodiversity, they have low amenity and conservation value on a wider scale. In the groups G17, 19, and 22, the understorey Hazel and Hawthorn is suppressing the dispersed semi mature Birch and Oak. There will be minimal impact to managing as coppice the semi/early mature Hazel to allow the better-quality standard trees to emerge dominant. The Birch, Ash and Oak are very drawn (forced) due to the need to establish crown dominance and through phototropism. Thinning of the most suppressed (and with existing physiological defects) will allow the better specimens to establish.

12.2 Ash Dieback (*Hymenoscyphus fraxineus*) is present within all the Ash (*Fraxinus excelsior*). Ranging from Class 1 (100 to 75% live crown remaining) to Class 3 (50-25% live crown remaining) at the very worst. It is expected that the early mature to semi mature Ash will continue to decline making their retention limited. Certainly, within G22, Class 3 infection stage exists and will need to be felled to ensure that the safety of the site users is maintained, equally the adjacent residential property where declining trees are within falling distance. This particularly is the case with T021. It is noted that *Hymenoscyphus fraxineus* effects on Ash (*Fraxinus excelsior*) can be extremely varied, even within a small area. Trees that show good resistance to the infection should be retained where possible e.g., T001 Ash being an example. G018 Ash, though regarded a group is a lapsed, boundary tree with restricted rooting potential, undermined to the South. G018 has significant basal decay, Ash Dieback Class 3 and positioned on an old dry-stone wall. The trees are within falling distance of an adjacent residential property and for the aforementioned reasons its removal is recommended.

12.3 Sessile Oaks (*Quercus petraea*) T002 (Mature) T010 and T011 are good examples of their species, particularly T002 which has a more significant amenity value and should be retained. T011 is pristine in its overall condition and should be protected from livestock and any development as its potential to become an exceptional mature tree is noted.

12.4 T005 Goat Willow (*Salix caprea*) is partially windthrown and is at risk of blocking the stream and should be removed. However due to precautions in protecting the watercourse and riparian zone from chain oil (use bio lubricants) and removal of all timber and branches from the location is recommended. T004 is naturally regenerated from adventitious buds from a primary limb failure of T005 and is of no significance.

12.5 The most significant trees on site Sessile Oak (*Quercus petraea*) T23 and T24 are to be retained, however T24 has a large windthrown Ash (*Fraxinus excelsior*) hung up in its crown architecture. The Ash originates from the adjacent land, it is usually common courtesy that owner of the failed tree offers to clear the hazard as it poses a significant risk to use of the site. Both trees, typically of their species, exhibit signs of early senescence, large diameter deadwood and tear outs, but their locality has no implications to site usage. Their potential for veteranancy is noted.

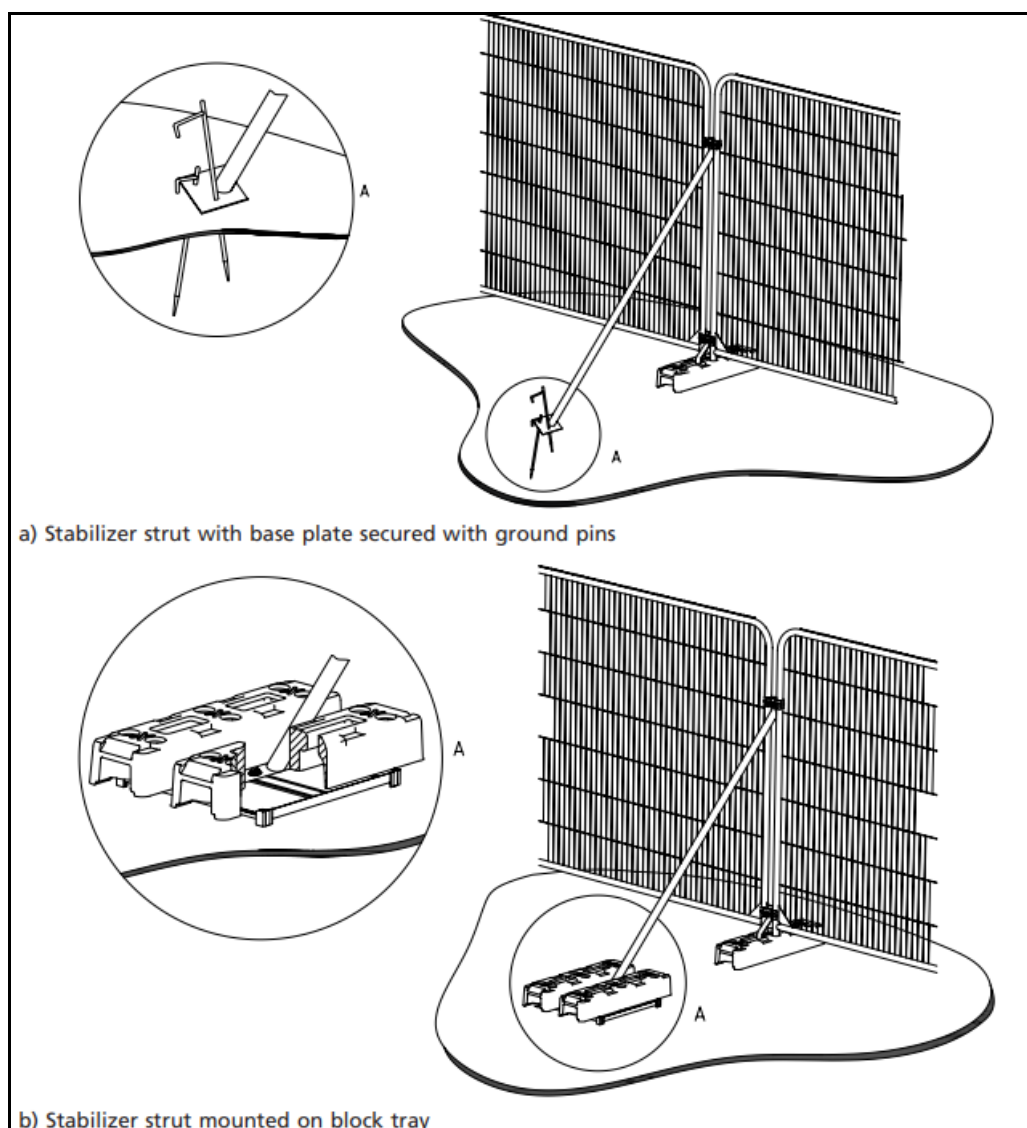
12.6 As no formal development plan has been submitted to the surveyor, it is recommended that remaining A1, A2, B2 and B1 trees are retained but their condition is monitored, as they are on or part of the wind firm woodland edges and provide shelter to the trees within the woodland (not part of the site) that are not optimised to wind exposure. The remaining C1 and C2 trees are regarded as of low amenity value or included within a desire to maintain rotational coppice for conservation purposes or remove to facilitate the growth of standards as per the intended use. The removal of C1 and C2 trees for the future construction of agricultural utility buildings will have little impact on the amenity of the general area (as it is already heavily populated by trees and woodland of higher merit and amenity).

12.7 All arboricultural works particularly the remediation of storm damage to T23 and T24 Oak shall be undertaken to **BS3998 (Tree Work Guidelines)** by approved, competent and qualified arborists.

13.0 Protection of Retained Trees (Root Protection Area, RPA)

13.1 Trees that have good health and stability are well adapted to their surroundings. Any development activity which affects the adaptation of trees to a site could be detrimental to their health, future growth and safety. Tree species differ in their ability to tolerate change, but all tend to become less tolerant after they have reached maturity or suffered previous damage or physiological stress. Planning and subsequent site management aims need to minimize the effect of change. The part of a tree most susceptible to damage is the root system, which, because it is not immediately visible, is frequently ignored. Damage to, or death of, the root system affects the health, growth, life expectancy and safety of the entire tree. The effects of such damage might only become evident several years later. Damage can be the result of a number of minor but compounding factors that accumulate over time. Materials such as uncured concrete, diesel oil and vehicle washings can all damage roots and lead to adverse impacts on the tree. (BS5837 2012)

13.2 The protected area should be regarded as sacrosanct and must be protected by rigid barriers and ground protection and should be installed prior to any construction activity. Barriers must not be removed or altered without prior recommendation by the project arboriculturist and, where necessary, subject to approval from the local planning authority. It is recognised that the site is not being proposed for extensive development and the examples given within BS5837 are not entirely appropriate in some instances, but a construction of protective barrier must similarly robust and approved by the project arboriculturist. However, if heavy plant and ground excavations are being undertaken and operating in proximity to retained trees then the example given is fit for purpose. The RPA once protected should be clearly signed and contractors briefed on their responsibilities to ensure retained trees are given protection.



13.3 The root protection distances for each identified tree within the survey boundary are included 11.0 Survey Data. In relation to groups of trees then the distance (in brackets) should be marked around the boundary of the group and the appropriate barriers installed.

13.4 Third Party Tree Protection

13.4.1 The development plan submitted to the surveyor and taking into account the sloping ground of the site a minimum Root Protection RPA distance of 6m shall be afforded to trees up 600mm in diameter to a maximum of 12m or greater for activities close to some the larger Oak on the North and West aspect.

13.5 Paved, Hard Surfaces, Utilities and Deep Excavations

From the information supplied deep excavations and trenches for utility services are not planned.

13.6 Site monitoring

Wherever trees on or adjacent to a site have been identified within the tree protection plan for protective measures, there should be a system of arboricultural site monitoring. This should extend to arboricultural supervision by the project arboriculturist whenever construction and development activity is to take place within or adjacent to any RPA of retained trees.

13.7 Site Fires

The burning of any arisings is to be actively discouraged due to the proximity of adjacent woodland. Burning of waste may constitute a breach of environmental law.

13.8 Post Development Tree Planting

The development plan submitted for tree planting is limited with existing land area and viable existing trees. Planting will be specific to establishing and maintaining native species of trees that will become prominent and have high amenity value and to reflect a NVC 10 Sessile Oak Species mix. A small-scale orchard is also proposed. (See Fig 16.2.3 Proposed Mitigation Planting)

14.0 Disclaimer.

Please note that the recommendations, comments, and observations have been made on a stated date, factors may not be observed, such as below surface ground conditions due to reasons beyond the control of the surveyor when the inspection occurred. The surveyor accepts no liability to any events arising from the advice given, or any features not observed, in this report or the client's failure to act or not to on those recommendations.

15.0 Report Submission to Client

This report and survey is based on unbiased and fair representation of the tree or trees and their condition on the site as described. All recommendations are given, are based on the knowledge, training and the experience of the surveyor identified, and is submitted in good faith.

Signed (electronically)

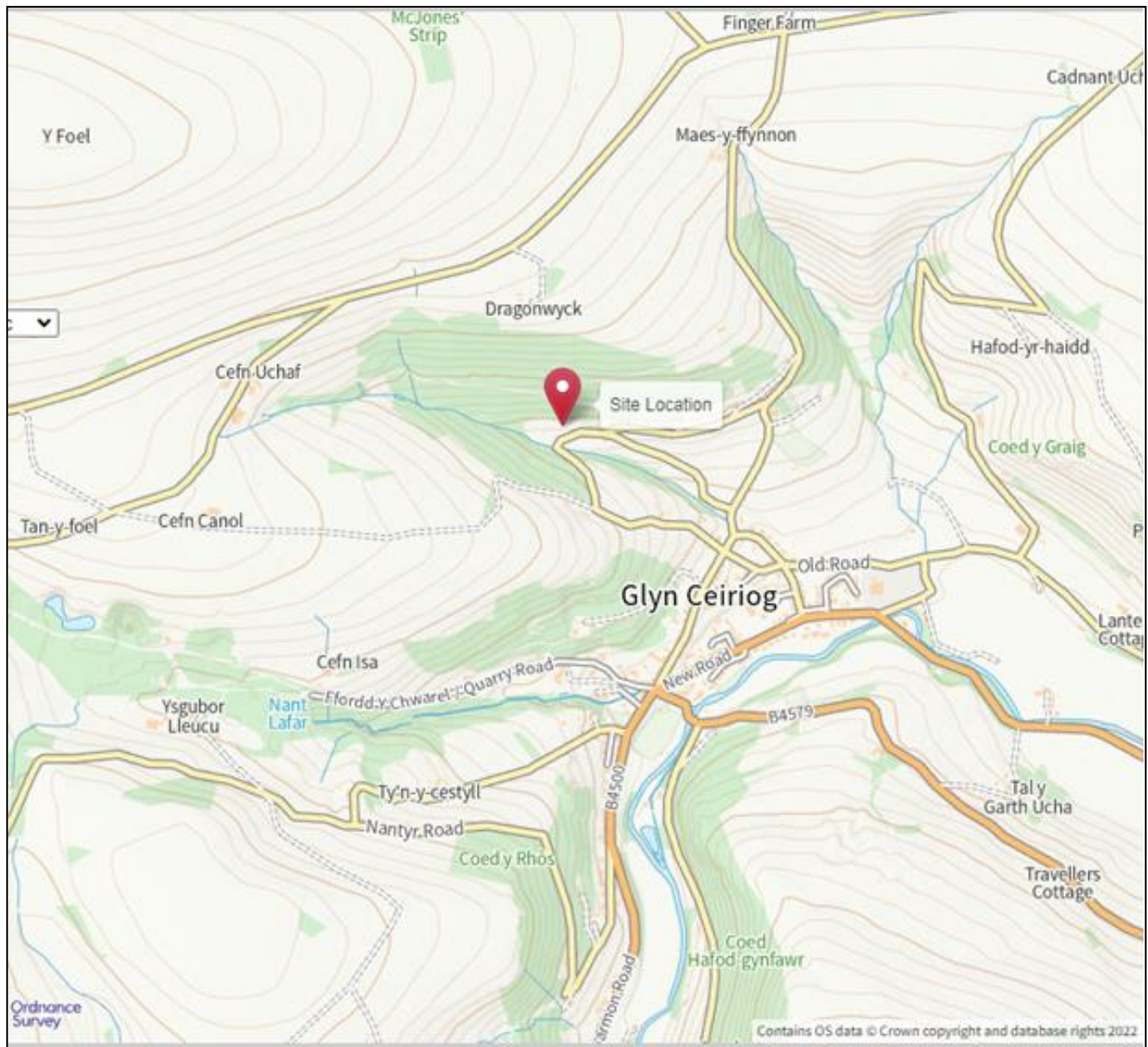
HPimborough

Mr H Pimborough BSc (Hons), PGCE, U.cert.F.FP, RFScert.Arb, MArborA, PTI
Consulting Arborist
HP Tree Surveys Limited

Date: 15.08.2022

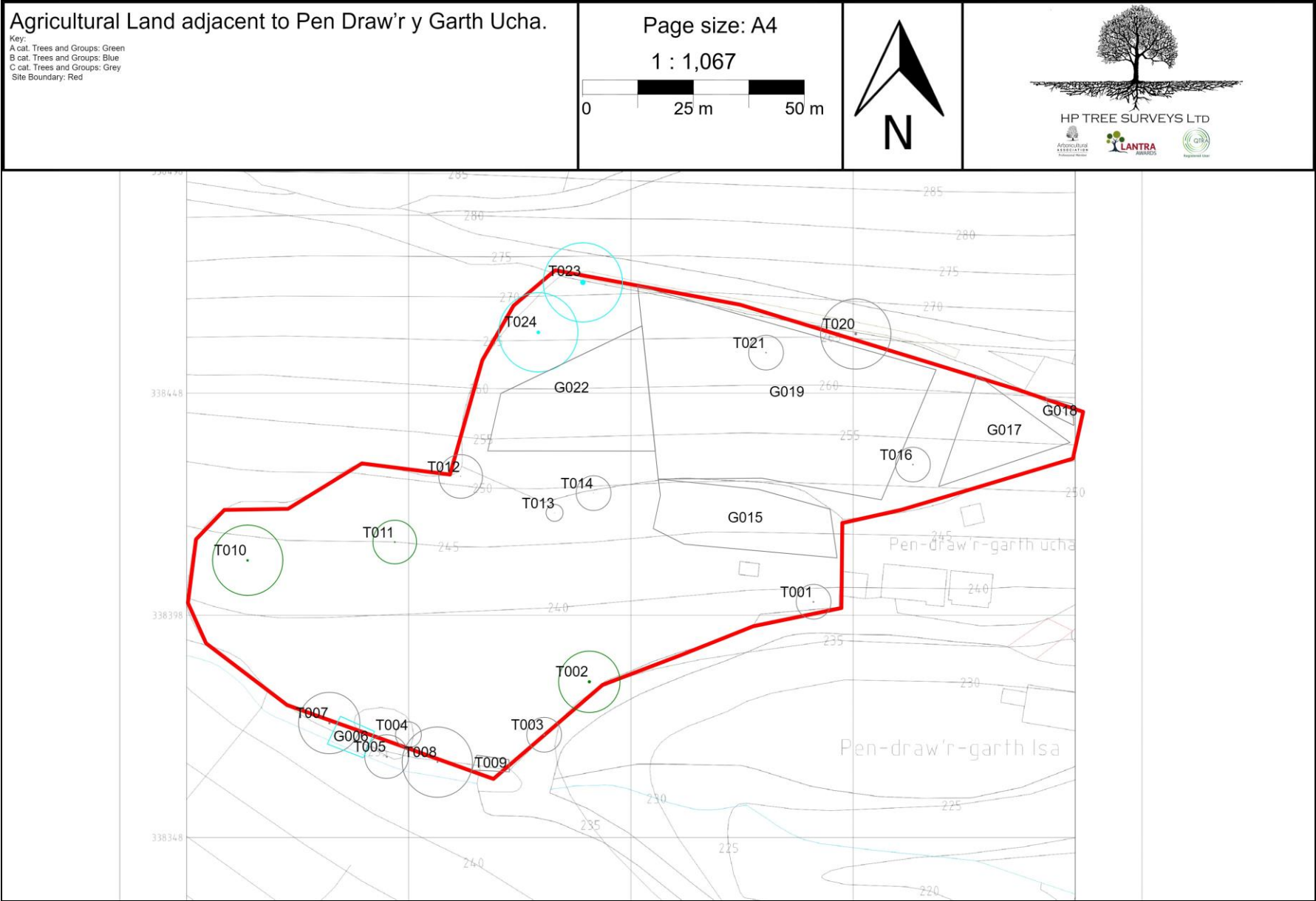
16.0 Site Maps

16.1 Site Map: Site Location: SJ 19947 38404



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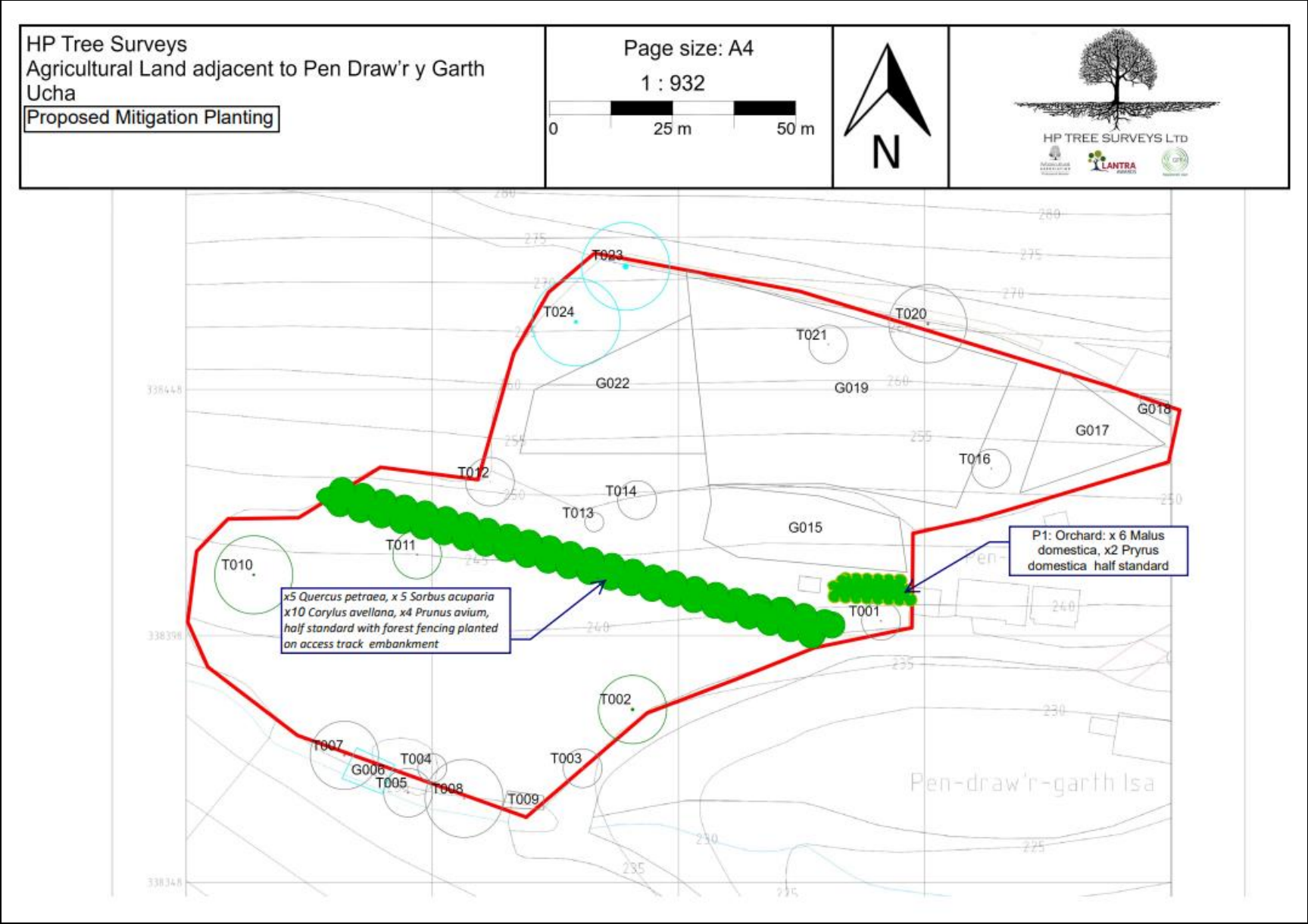
16.2 Site Map: Tree Location Plan



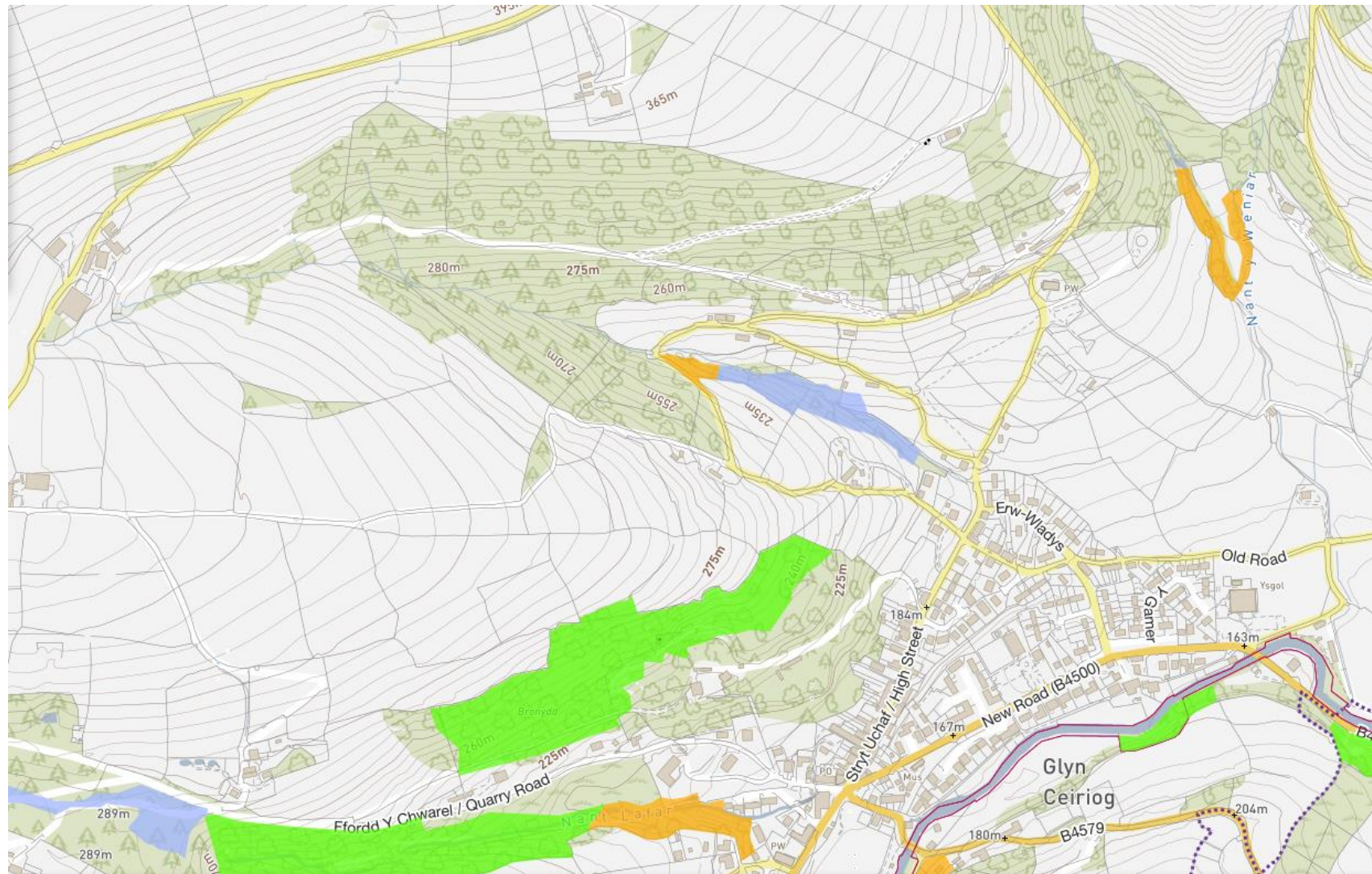
16.2.1 Proposed Site Plan



16.2.3 Mitigation Planting Proposal

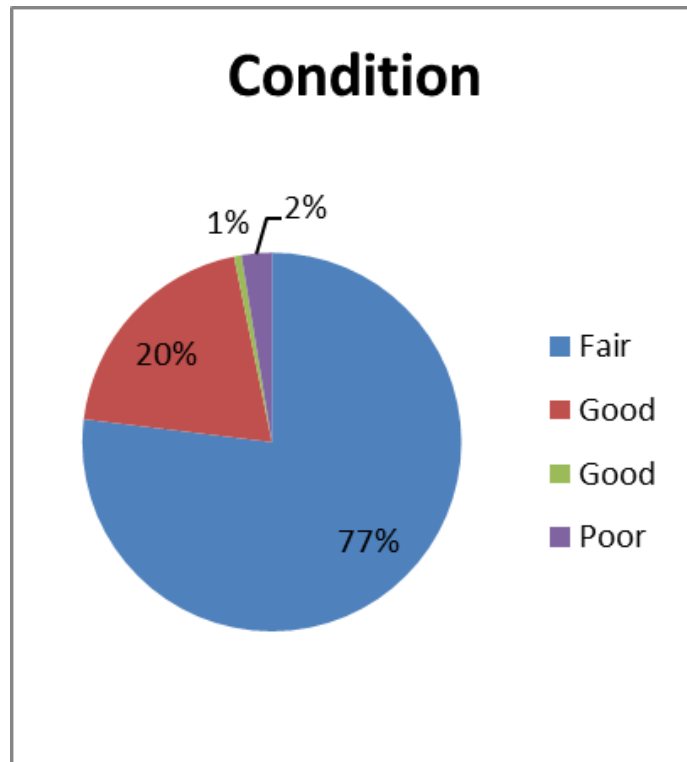


16.3 Proximity of Statutory Protected Areas and Areas of Semi Natural Ancient Woodland (Yellow and Blue – Semi Natural Ancient Woodland Designation)

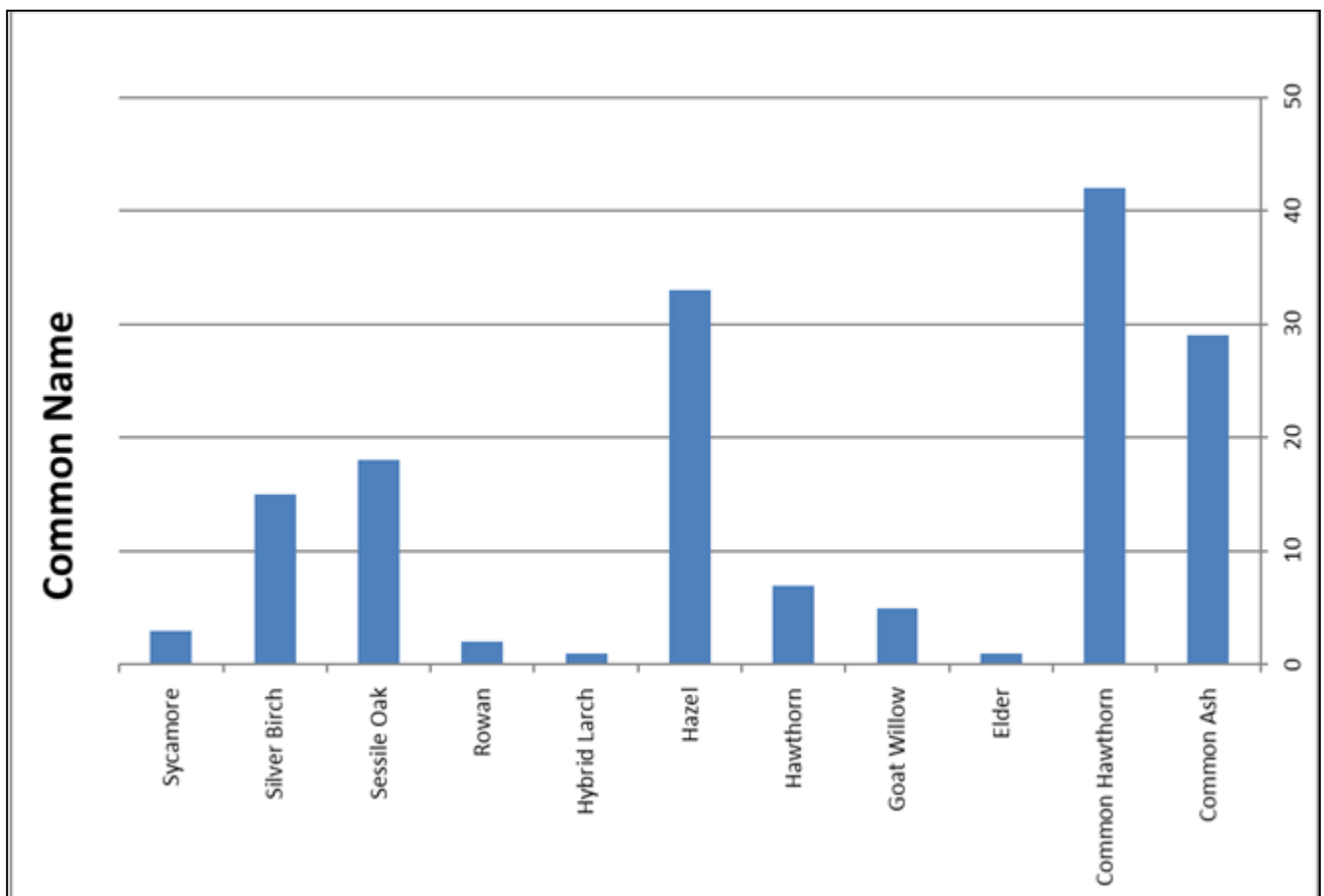


17. Survey Data Analysis

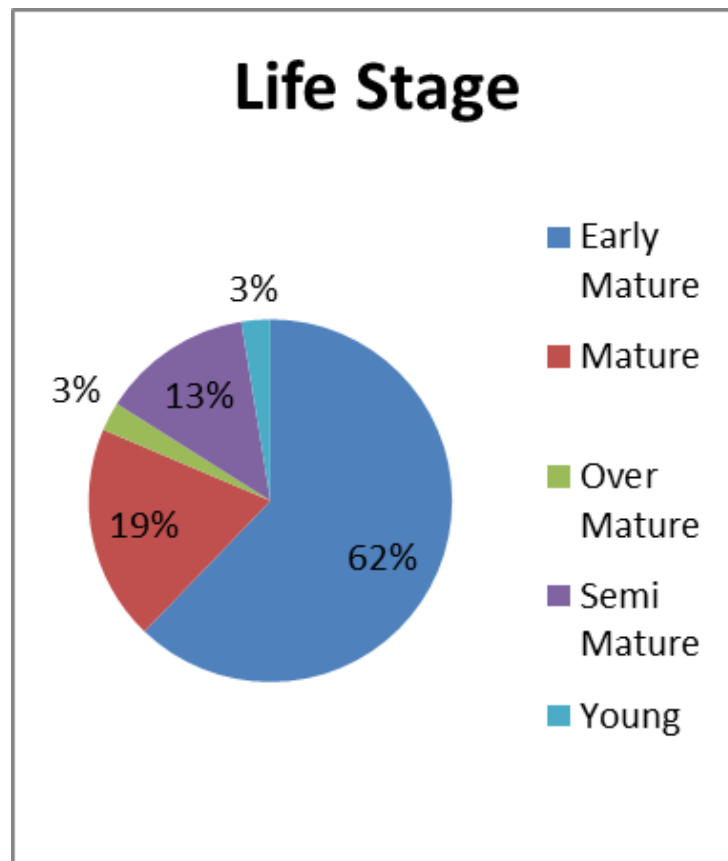
17.1 Summary of Tree Condition on Site



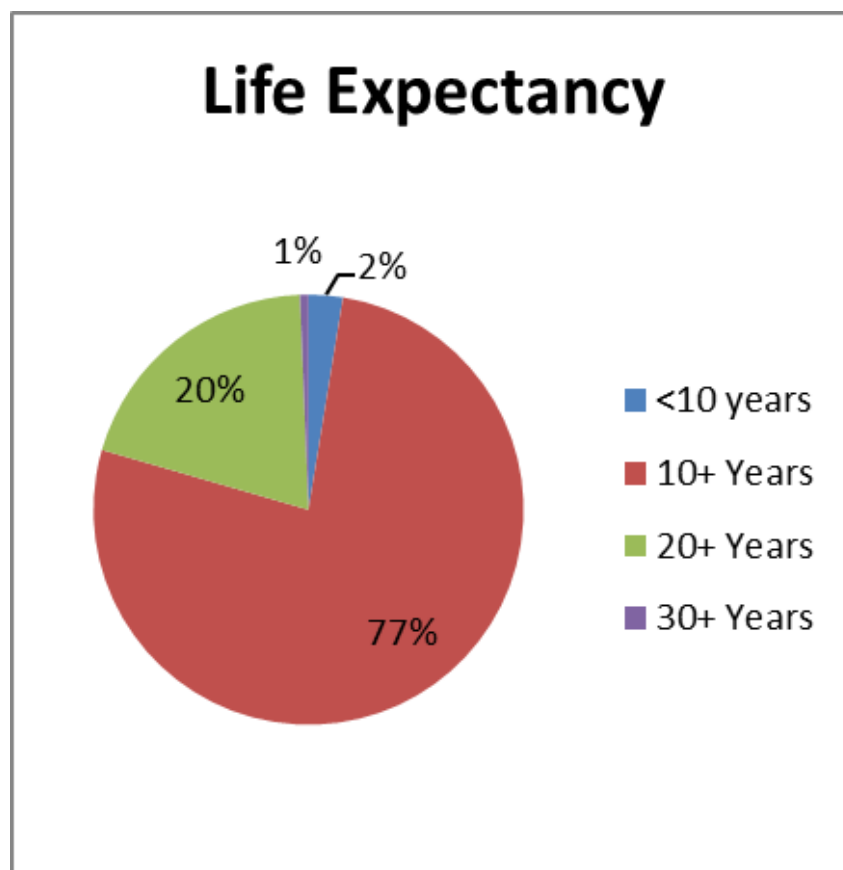
17.2 Species Composition on Site



17.3 Tree Life Stage Distribution



17.4 Age Composition of Trees on Site



18.0 BS5837 (2010) Tree Categories Guidance

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category 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	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

19.0 Glossary of Survey Terms

Tree Number

Refers to the tree as identified on site and referenced within the site plan

Tag Number

Each tree has been identified with a circular metal tag; these are placed approximately 1.8 m from ground level

Species

Common and vernacular name of the tree – Vernacular- Latin names displayed in small italics.

Height (m)

Height (in metres) of the tree from base to the tips of the crown to expected tolerances.

DBH (cm or mm BS5837)

Diameter at Breast Height (1.5m) in centimetres.

Crown Spread Radius (m)

The average crown radius (in metres) from the four cardinal points

Age Class

The appearance of at what stage of life the tree may be in (Young, Semi-Mature, Early Mature, Mature, Over Mature, Veteran).

Condition

Overall physiological condition in relation to tree structure, vigour, and vitality, including the effects of abiotic factors and pest and diseases.

Denoted by the attached key

Tree Condition	
Excellent	Tree in excellent condition with good vitality and no defects present
Good	Tree in displaying good vigour, vitality, only very minor defects
Fair	Tree showing signs of stress, minor -moderate defects present
Poor	Tree showing signs of major die back, major defects – intervention needed
Dead	Tree no longer alive
None	No target

Root protection area (RPA)

layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

20.0 Glossary of Arboricultural Terms

Abiotic

Non-living. Abiotic factors may include weather, mechanical damage from human activity, pollution etc

Apical dominance

the phenomenon whereby the main, central stem of the plant is dominant over (i.e., grows more strongly than) other side stems; on a branch the main stem of the branch is further dominant over its own side twigs.

Biotic

Pertaining to living organisms

Branch

Stem arising from a larger stem. A subdominant stem. Pith in true branches has no connection to the parent stem.

Bark

A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the phellem.

Cambium

Thin layer(s) of meristematic cells that give rise (outward) to the phloem and (inward) to the xylem, increasing stem and root diameter.

Canker

Localized diseased area on stems, roots, and branches. Often shrunken and discoloured.
canopy: collective branches and foliage of a tree or group of trees

Crown/Canopy

The main foliage bearing section of the tree, these terms are interchangeable.

Crown lifting

The removal of limbs and small branches to a specified height above ground level.

Crown thinning

The removal of a proportion of secondary branch growth throughout the crown to produce an even density of foliage around a well-balanced branch structure.

Crown reduction/shaping

A specified reduction in crown size whilst preserving, as far as possible, the natural tree shape.

Crown reduction/thinning

Reduction of the canopy volume by thinning to remove dominant branches whilst preserving, as far as possible the natural tree shape.

Deadwood

Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree. Removal of deadwood can result in the ingress of decay to otherwise sound tissues and climbing operations to access deadwood can cause significant damage to a tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard.

Dieback

The death of parts of a woody plant, starting at shoot-tips or root-tips.

Disease

A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms.

Included bark

Bark that becomes embedded in a union between branch and trunk or between codominant stems. Can cause an area of weakened structural strength.

Lever arm

A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch.

Lignin

The hard, cement-like constituent of wood cells; deposition of lignin within the matrix of cellulose microfibrils in the cell wall is termed Lignification.

Lions tailing

A term applied to a branch of a tree that has few if any side-branches except at its end and is thus liable to snap due to end loading.

Occluding tissues

A general term for the roll of wood, cambium and bark that forms around a wound on a woody plant (cf. wound wood).

Occlusion/Occlude

The process whereby a wound is progressively closed by the formation of new wood and bark around it.

Pathogen

A micro-organism which causes disease in another organism.

Reactive Growth/Reaction Wood

Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss (cf. adaptive growth).

Stem/s

The main supporting structure/s, from ground level up to the first major division into branches.

Stress

In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition, or extremes of temperature.

Stress

In mechanics, the application of a force to an object.

Taper

In stems and branches, the degree of change in girth along a given length.

Union

Branch union point where a branch originates from the trunk or another branch or fork.

Graft union Junction between root stock and scion wood. Often evident by a thickening of the trunk.

Wind exposure

The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity.

Wind pressure

The force exerted by a wind on a particular object.

Windthrow

The blowing over of a tree at its roots.

Wound wood

Wood with atypical anatomical features, formed in the vicinity of a wound.

21.0 Site Photographs



21.1 Sessile Oak T11



21.2 Sessile Oak T002



21.3 North Aspect View toward Groups G15, G19 and G 22



21.4 Coppice and Standards with Group G 19

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