

REPORT ON TREES IN RELATION TO A PROPOSED DEVELOPMENT ON LAND AT DAN Y GRAIG, PONTWALBY, GLYNNEATH SA11 5LG



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EXECUTIVE SUMMARY

This report accompanies an application for outline planning permission with all matters reserved for three residential units on land at Dan y Graig.

Two trees require removal to facilitate the proposed development; the loss of these trees will not significantly impact local amenity or landscape character.

A landscape scheme, including new tree planting, is recommended to mitigate the loss of the two trees and provide a resilient, more sustainable tree population, helping to ensure the development has a positive impact on local amenity, canopy cover and landscape character.

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1 INTRODUCTION

1.1 **Instruction:** Anna Cheney instructed me to survey trees on land Dan Y Graig, where a development is proposed. The purpose of the survey is to provide the following information to accompany an application for outline planning permission with all matters reserved:

- A schedule of relevant trees, including basic data and a quality assessment.
- An assessment of the proposed development's impact on trees and any resulting impact on local amenity and landscape character.
- An arboricultural method statement dealing with the protection and management of trees to be retained and integrated into the proposed development.

1.2 **Proposed development:** The proposed development is for three new residential properties=.

1.3 **Information provided:** Anna Cheney provided the following information-

- Dan y Graig photos.pdf
- Draft layout[32].pdf
- TOPOGRAPHICAL SURVEY AT PONT WALBY 01.pdf
- TOPOGRAPHICAL SURVEY AT PONT WALBY 2D.dwg
- TOPOGRAPHICAL SURVEY AT PONT WALBY 3D.dwg

1.4 **Relevant guidance:** The British Standard 5837:2012 *Trees in relation to design, demolition and construction - Recommendations* provides a framework for considering trees in the planning process. It gives guidance on categorising the qualities of trees to enable decisions to be made as to which trees are appropriate for retention within the development. It then advises on options for protecting retained trees during all phases of the development.

1.4.1 **Tree quality categorisation:** The quality of the surveyed trees was categorised using the TreeABC field sheet, Appendix 2.

1.5 Limitations: The following limitations apply-

- 1.5.1 The survey of the trees was of a preliminary nature, and only defects visible from the ground have been identified. Each tree may not have been inspected closely because of access difficulties.
- 1.5.2 Where there is restricted access to the base of a tree, its attributes are assessed from the nearest point of access and dimensions estimated.
- 1.5.3 Where dense ivy is present on a tree, its condition is assessed from what can be seen from the ground. A separate note is recorded if further investigations are required.

1.6 Report printing: This report has been issued as a single PDF file. The TPP may need to be printed separately when printing this report, considering any difference in its size and orientation to the report's standard A4 format.

2 TREE SURVEY

- 2.1 **Site visit:** I surveyed the trees on 6th April 2022; the area surveyed is shown in Figure 1, outlined in red.
- 2.2 **Site description:** The site is a parcel of land near the south side of the A465 in Pontwalby, Glynneath; it is accessed off Glan Gwrelych near the Pontwalby viaduct through a field gate at the end of a short section of concrete surfaced track (Figure 4). Inside the gate, the track becomes unsurfaced compacted stone and slopes downwards west to east to a relatively level rough grass area alongside the Nant Gwrelych (Figure 9). South of the track, the ground slopes steeply upward to the base of the viaduct.

Figure 1: survey area

Image: Apple Maps



2.3 The trees: The site's most significant trees are mature and maturing native broadleaf species located on the north side of the concrete section of the track, along the steep slope, south of the stone track, and along the site's north boundary. The trees along the south slope and north boundary weren't included in the topographical survey; their positions on the tree protection plan are therefore indicative. For ease, these trees were surveyed as groups, with the dimensions of the largest tree within each group used to inform the tree constraints plan.

2.3.1 Root morphology: The root spread of the trees on the south side of the site are likely to have been influenced by the concrete and compacted stone track located within their root protection areas. During the track's construction, the trees will have suffered root severance and damage, and post-construction, the compacted soil and sub-base will have created hostile rooting conditions. Therefore, it is likely that the roots of trees adjacent to the track have exploited the relatively undisturbed ground away from the track, where conditions are more favourable. Along the north boundary, root spread is impeded by the steep terrain and adjacent streams; increased root spread southward is therefore likely.

2.4 Site photographs:

Figure 2: Site entrance looking northeast at G1 and T2



Figure 3: Site entrance looking south



Figure 4: T3, looking northeast



Figure 5: Tear-out wound on T3, looking west



Figure 6: T4, looking east



Figure 7: T5, looking east



Figure 8: T6 & G8, looking northwest



Figure 9: North section of G7, looking west



Figure 10: South section of G7, looking north



Figure 11: Wooded slope on the south boundary



2.5 Legislative protection: By email dated 9th February 2022, Anna Cheney informed me the site's trees are subject to a tree preservation order (TPO 2021 No (4) rear of 8 Glan Gwrelch, Pontwalby. W1 – Mixed deciduous woodland).

2.6 Soil assessment: The site's soil was assessed by desktop analysis using the Soilsclapes website, www.landis.org.uk/soilsclapes/, which identified 'Slowly permeable wet very acid upland soils with a peaty surface'. The identified soil poses no obvious constraint to natural tree root development but does limit species selection for any proposed new tree planting. This soil type "will exhibit varying intermediate degrees of shrinkage with change in moisture content." (Biddle, 1998¹). This soil assessment is a guide only, and the project engineer should undertake detailed on-site soil analysis to inform foundation designs.

¹ Biddle P 1998, *Tree root damage to buildings*, Willowmead Publishing Ltd, Wantage

2.7 Tree schedule:

Tree No.	Species	Height (m)	Stem dia. (mm)	Maturity	Crown spread (m)				Low branches	Cat	Notes & <u>Work recommendations</u>
					N	E	S	W			
T1	Lime	15	250 [9]	Mature	6	6	6.5	4.5	No	A1	Understorey of Hazel (4m north) and an ash (5m south). Road edge 1m from bases on the west side. Waste ground/garden on the east side.
T2	Willow	17	600 400 [2]	Mature	6	5.5	5	6.5	No	C1	Cavity on the south stem, opening on the south (50mm x 75mm at 1m)- potential bat roost feature (PRF). Tight branch union on the north stem at 1.2m with pronounced reaction wood. Two snapped branches propped in the crown at 8m (75mm diameter and 6m long)
T3	Lime	24	1000 [1]	Mature	7	8	6.5	8.5	No	B	Previous stem failure on northeast side at 2m. Resulting in a 'tear' wound to ground level. Exposed wood intact; fruit bodies of <i>Kretzschmaria deusta</i> present.
T4	Willow	15.5	480 [1]	Mature	6	6.5	5	4	No	B	Remove to facilitate the proposed development.
T5	Leyland cypress	15	150 [5]	Mature	2	2	3	2	No	C2	Tree not plotted on the topo survey.
T6	Willow	17	400 400 250 [3]	Mature	5	8	8	6.5	No	B	-
G7	Oak Ash Leyland cypress Birch	22	1000 [1]	Mature	6	6	6	6	No	B	Trees not plotted on the topo survey. Oak and birch are categorised as B; Ash is categorised as 3, and Leyland cypress is categorised as C2. Re-coppice ash tree to facilitate the proposed development.
G8	Ash Birch Willow	18	400 [1]	Maturing	5	5	5	5	No	B	Trees not plotted on the topo survey.

2.8 Schedule of root protection areas:

Tree No.	Species	Mean stem dia.* (mm)	BS5837:2012 Root protection area, RPA, (m ²)	Minimum radial protection distance from the base of the tree, (m)		Justification for RPA modification	Position of protective barrier
				BS5837:2012	Modified		
T1	Lime	-	-	-	-	-	Tree outside working area
T2	Willow	721	235	9	No	Influence of existing concrete track on root spread on south side of tree	Edge of concrete track on the south side of the tree

T3	Lime	1000	452	12	No	Influence of existing concrete track on root spread on south side of tree	Edge of concrete track on the south side of the tree
T5	Leyland cypress	-	-	-	-	-	Tree outside working area
T6	Willow	618	173	7.42	No	-	12m south of tree base
G7	Oak Leyland cypress Birch	1000	452	12	Yes	Increased on the east side to compensate for the reduced rooting area on the west side	See CEZ on TPP
G8	Ash Birch Willow	400	72	4.8	Yes	Increased on the south side to compensate for the reduced rooting area on the north side	4m north of proposed units

**The mean stem diameter is the stem diameter of a single-stemmed tree or combined stem diameter of a multi-stemmed tree being retained in the proposed development.*

3 ARBORICULTURAL IMPACT ASSESSMENT

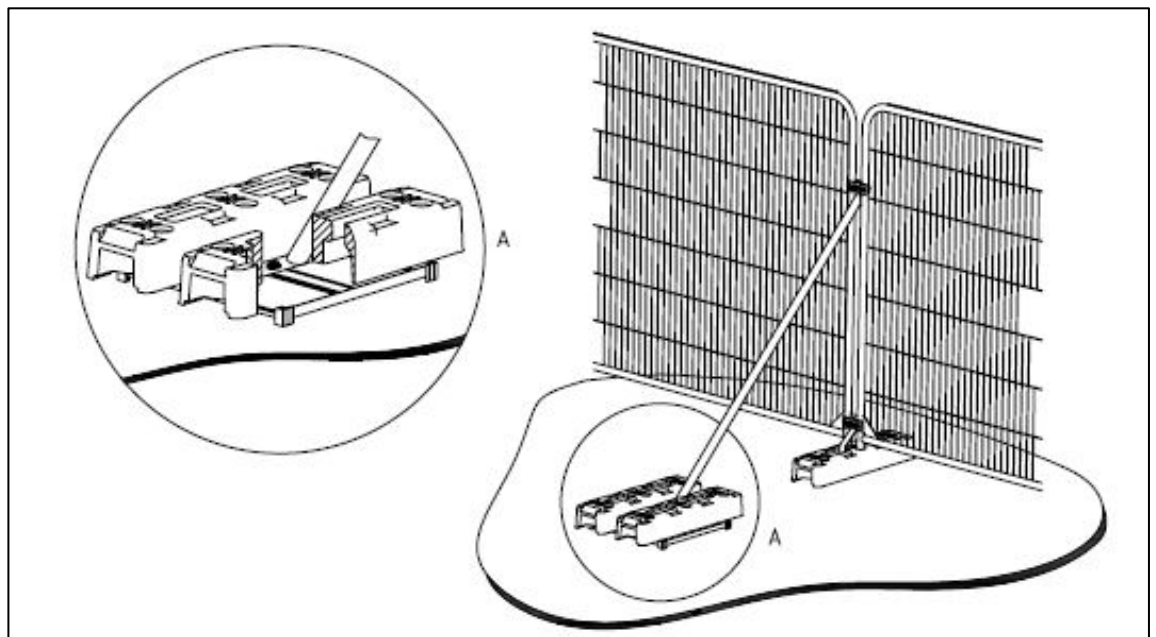
Please note: The arboricultural impact assessment is based on the site layout proposals provided at the time of writing and may be invalidated by any alterations made after this date.

		Issue	Comments		Impact	
Design	Tree losses	Category A	No losses are proposed.			
		Category B	The proposed development requires the removal of T4. The tree is internal to the site and has little amenity value; new planting can mitigate its loss.			
		Category C	The proposed development requires the removal of an ash within G7. The tree is low quality, and its loss can be mitigated by new tree planting.			
		Category U	No losses are proposed.			
	Damage to retained trees	Structures in RPA	No new structures are proposed within the RPA of retained trees.			
		Services in RPA	No services are proposed within the RPA of retained trees.			
		Ground-level changes	No ground-level changes are proposed within the RPA of retained trees.			
		Excessive pruning	No excessive pruning is required.			
Construction	Potentially damaging construction activities	Demolition	No demolition is required.			
		Site access	The existing site access can accommodate construction traffic.			
		Cabins & welfare units	The site has sufficient space to locate cabins and welfare facilities outside the RPA of retained trees.			
		Contractor parking	The site has sufficient space to accommodate contractor parking outside the RPA of retained trees. Off-site parking is also available.			
		Storage	The site has limited space for storage; however, the proposed development is small scale, and materials can be ordered for delivery as needed.			
		Workspace	The site has sufficient workspace to complete the proposed development without encroaching the RPAs of retained trees.			
End-use	Future pressure for tree removals or excessive pruning	Risk	Actual	Due to the presence of a wood degrading fungal pathogen, the structural and physiological condition of T3 will require periodic checks and risk assessment. The extant TPO allows the LPA to condition new planting if safety work becomes necessary.		
			Perceived	Mature trees on raised ground to the south and west have the potential to dominate the proposed residences, raising safety concerns. The extant TPO will help to ensure no unnecessary tree work is carried out.		
		Damage	Roots	Root activity is highly unlikely to affect the proposed buildings. Root activity has the potential to damage the site's access track. Localised track repairs will prevent any damage from becoming a significant issue.		
			Branches	Branch growth will not affect the proposed buildings.		
		Shade	Buildings	The front of the proposed buildings will be shaded by trees along the south slope for parts of the day. The shading impact can be mitigated by locating the house's main living areas at the back of the building, where there is a more open aspect. Increased window sizes should also be considered.		
			Open space	Open spaces at the front and the back of the residences will be in shade for parts of the day. Away from the buildings, the rear gardens will be generally unshaded.		
		Seasonal nuisance		Falling debris (twigs, leaves, fruit, and flowers) has the potential to cause a seasonal nuisance. Good general housekeeping will prevent this from becoming a significant issue.		
		Conclusions on impacts on local amenity, landscape character and canopy cover				
The proposed development has a low impact on local amenity, landscape character and canopy cover.						
Recommendations						
A landscape scheme, including new tree planting, to mitigate the loss of the two trees. The scheme should aim to increase the site's species diversity, age-range and climate change resilience to result in the development making a positive contribution to the enhancement and sustainability of local canopy cover, amenity and landscape character.						
Colour key = Impact before mitigation						
	No impact- acceptable, no mitigation required				Low- broadly acceptable, mitigation optional	
	Moderate- tolerable, mitigation required				High impact- intolerable; reconsider proposals	

4 ARBORICULTURAL METHOD STATEMENT

- 4.1 **Note:** A copy of this arboricultural method statement and the accompanying tree protection plan must be available on site for the duration of development activities.
- 4.2 **Protective barriers:** The protective barrier specified below is considered fit for purpose, taking into account the nature of adjacent activities and the value of the trees.
- 4.2.1 **Barrier specification:** 2m tall welded mesh panels on rubber or concrete feet, as shown in Figure 12. The fence panels should be joined together using a minimum of two anti-tamper couplers installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1m and should be uniform throughout the fence. The panels should be supported on the inner side by stabiliser struts mounted on a block tray.

Figure 12: Barrier–Heras fencing panels



- 4.2.2 **Signage:** Attached to the protective barrier fencing at various locations will be laminated copies of the sign shown in Figure 13. Copies of this sign are available for download at: <https://www.treeconsultants.wales/about/resources/category/11-trees-and-development.html>

Figure 13: Signs to be attached to protective barriers



4.3 Responsibility: Responsibility for tree-related issues is detailed below.

4.3.1 General site management: The Main Contractor's responsibility is to ensure the details of this arboricultural method statement and any agreed amendments are known and understood by all site personnel. Copies of the agreed documents will be available on site, and the site manager will brief all personnel who could impact trees on the specific tree protection requirements as part of the site induction procedures.

4.3.2 Arboricultural supervision: TreeConsultants.Wales will be the Arboricultural Consultant supervising the protection of trees for this project.

4.3.3 The key contacts: Details of those responsible for tree-related issues for this project are provided below.

Key contacts		
Role	Name	Contact details
LPA Arboricultural Officer	Nick Thomas Port Talbot County Borough Council	01639 686 387
Arboricultural Consultant	Paul Cleaver TreeConsultants.Wales	01437 899 888
Architect	TBC	-
Main Contractor	TBC	-

4.4 **Construction phasing:** A preliminary programme of construction phasing and arboricultural input is set out below.

Construction phasing		
Phase		
1	PRE-COMMENCEMENT	
	Activity	Arboricultural input
	Tree work	Liaison with tree work contractor, as required, to confirm the specification of permitted works
	Installation of tree protection barriers	Liaison with the contractor to confirm the specification and extent of the required barrier
2	CONSTRUCTION	
	Activity	Arboricultural input
	Upgrade of the existing stone track	- Remain as the point of contact to advise on any arboricultural issues that may arise - Collection of photographic evidence to discharge any tree protection conditions attached to the planning consent
	Construction of three homes	
3	LANDSCAPING & FINAL TIDY UP	
	Activity	Arboricultural input
	Landscaping / making good	Liaison with contractors, as required
	Removal of tree protection barriers	Liaison with contractors, as required

Note: The precise order and timing of some of the above operations may change due to site operating requirements, but all operations that can affect trees will remain under arboricultural supervision.

4.5 **Tree work:** The proposed tree works are set out in the Notes & Work recommendations column of the tree schedule, section 2.7. The trees to be removed are highlighted with red text in the schedule and shown on the plan with a red crown fill. The following points should also be noted before carrying out any work:

4.5.1 **Implementation of works:** All tree works must be carried out with regard to BS 3998 Recommendations for Tree Work as modified by more recent research. *It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. The Arboricultural Association's register of Contractors is available free from The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL; phone 01242 522152; website <http://www.trees.org.uk/>*

- 4.5.2 **Statutory wildlife obligations:** The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit trees. These provisions cover all tree work operations, and advice from an ecologist must be obtained before undertaking any work that might constitute an offence.
- 4.5.3 **Stumps:** Stumps to be removed within the RPAs of retained trees must be ground out with a stump grinder to minimise any disturbance unless otherwise authorised by the appointed arboricultural consultant.
- 4.6 **Precautionary areas:** No precautionary areas are required for the proposed development.
- 4.7 **Precautions outside RPAs:** Any risk to trees from activities outside RPAs, but close enough to have a knock-on impact, will be assessed daily by the Main Contractor, and appropriate precautions to reduce the risk shall be implemented.
- 4.7.1 **Prevention of soil contamination:** All cement mixing and washing points for equipment will be outside RPAs. Where the contours of the site create a risk of polluted water or toxic liquids running into RPAs, a precautionary measure of using heavy-duty plastic sheeting and sandbags with the ability to contain accidental spillages will be put in place to prevent contamination. Contaminated mixer and tool wash water shall be decanted into a sealed container and transported off site for appropriate disposal.
- 4.7.2 **Burning of waste:** No fires will be lit on site within 3m of root protection areas due to the danger of scorching leaves and branches of overhanging trees.
- 4.8 **Installation of new services:** The installation of new services within the RPA of any retained trees is not proposed.



Tree schedule explanatory notes

1	2	3	4	5	6	7	8	9
Tree No.	Species	Height (m)	Stem dia. (mm)	Maturity	Crown spread (m)	Low branches	Cat.	Notes & <u>Work recommendations</u>
					N E S W			

Note: Trees in red text require removal to implement the proposed design or for good arboricultural management.

- Tree No.:** The tree number is a unique identifier assigned to a relevant tree feature. Tree number prefixes are abbreviations describing the nature of the tree feature:

 - T** = Individual tree
 - G** = Tree group
 - H** = Hedgerow
 - W** = Woodland
 - S** = Stump
- Species:** Species identification is based on visual observations. Where there are more than one species in a group, only the most frequent are noted, and not all the species present may be listed.
- Height:** Height is estimated to provide an indication of the size of the tree.
- Stem diameter:** Stem/trunk diameter is estimated or measured and recorded in 2.5cm increments as advised in BS 5837 Table D1. It is measured with a diameter tape unless access is restricted, direct measurement is not possible because of ivy on the trunk, or the tree is assessed as poor quality. The point of measurement and the adjustments for stem variations are advised in Figure C1 of BS 5837. For multi-stemmed trees, the number of significant tree stems is provided in square brackets.
- Maturity:** In the context of site development, maturity provides a simplistic indication of a tree's ability to tolerate and adapt to disturbances in its growing environment and its potential for further growth. For this report, 'young' indicates a potential to significantly increase in size and a high ability to adapt to change, 'maturing' indicates some potential to increase in size and some

ability to adapt to change, and 'mature' indicates little potential to increase in size and limited ability to adapt to change.

- 6 **Crown spreads:** The crown spread, measured from the centre of the trunk to the tips of the live lateral branches and rounded up to the nearest half metre for dimensions up to 10m and the nearest whole metre for measurements over 10m, N= north, E= east, S= south, and W=west.
- 7 **Low branches:** Any low branches that would not be feasible for removal during normal management and therefore need to be considered as a design constraint.
- 8 **Cat:** Tree retention category awarded according to the criteria detailed on the TreeABC field sheet provided in Appendix 2. Our assessment automatically considered tree physiological/structural condition (BS 5837, 4.4.2.5h), and so these are not listed separately in the schedule.
- 9 **Notes and Work recommendations:** Only relevant features relating to physiological or structural condition and low branches that may help clarify the categorisation are noted. If there are no notes, then the presumption should be that no relevant features were observed. Work recommendations are made where management is considered necessary or prudent.

TreeABC field sheet (Version 16.03-UK)

Ancient/veteran: Each tree is assessed by a visual check. If it is a veteran/ancient tree, then it is automatically categorised as A2, and not subjected to any of the category U, C or B considerations.

Category U (unsuitable for retention): Any remaining trees that are unsuitable for retention because they are dead; in irreversible decline; and/or have irreparable structural conditions; and/or are causing severe structural damage or inconvenience, are categorised as U.

Category C (low quality): Any remaining trees are systematically reviewed to decide if they fit into any of the four C subcategory groups listed below.

Category B (moderate quality): Any remaining trees are automatically category B, with the possibility of being promoted to category A.

Category A (high quality): If a category B tree is already large, or has the potential to become so, it can be promoted to category A, at the discretion of the assessor.

Category C: Low quality trees not worthy of being a material constraint

C	Size and legal exemptions: Trees that are too small to be important or unlikely to be suitable for legal protection	
	1	Size: Young or insignificant small tree
	2	Legal exemptions: Trees unlikely to be suitable for legal protection, e.g. a maintained urban hedge, shrubs, etc
	Deteriorating health/condition: Trees that are likely to be removed within 10 years because of deteriorating health and/or structural condition	
	3	Health: Deteriorating health with little realistic prospect of recovery
	4	Crown instability: Deteriorating structural conditions where an increasing risk of failure can be temporarily addressed by reasonable intervention, e.g. storm damage, cavities, decay, included bark, wounds, excessive imbalance, etc
	5	Root instability: Deteriorating whole tree stability through poor anchorage, increased exposure to weather, etc
	Excessive nuisance: Trees that are likely to be removed within 10 years because of unacceptable impact on people	
	6	Inconvenience: Ongoing and increasing inconvenience to residents to the extent that a TPO appeal is likely to result in tree removal, e.g. dominance, debris, interference, etc
	7	Damage: Ongoing and increasing structural damage to property to the extent that a TPO appeal is likely to result in tree removal, e.g. severe damage to surfacing and structures, etc
	Good management: Trees that are likely to be removed within 10 years through responsible management of the tree population	
	8	No future potential: Poor condition or location with no realistic potential for recovery or improvement, e.g. dominated by adjacent trees or buildings, poor architectural framework, etc
	9	Benefit nearby trees: Removal would benefit better adjacent trees, e.g. relieve physical interference, suppression, etc
	10	Maintenance costs: Unacceptably high maintenance costs, e.g. structural conditions requiring high levels of regular pruning, etc

NOTE: Although C trees are not worthy of influencing new designs, urgent removal is not essential and they could be retained in the short term, if appropriate.

Categories B and A: Moderate and high quality trees suitable for retention for more than 10 years, and worthy of being a material constraint

B	All trees that are not categories U or C that can be retained with minimal or limited intervention
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NOTE: Category B trees that are already large, or have the potential to become so, with minimal or limited intervention, can be promoted to category A1, at the discretion of the assessor. Veteran/ancient trees are automatically category A2. Although all category A and B trees are sufficiently important to be material constraints, category A trees are at the top of the categorisation hierarchy and should be given the most weight in any selection process.

A	1	Single category B trees or small groups which, at the discretion of the assessor, have been promoted to category A because they are already large, or have the potential to become large
	2	Veteran/ancient tree

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Further explanation of this enhancement of the BS 5837 method can be found at www.TreeAZ.com.

Arboricultural impact assessment (AIA)	An evaluation of the probable direct and indirect effects of the proposed design on the trees, and vice versa, and where necessary, recommends mitigation.
Arboricultural method statement (AMS)	Details of protective and precautionary measures needed to protect the retained trees from potentially damaging construction activities.
Construction exclusion zone (CEZ)	An area based on the root protection area where access is prohibited for the duration of construction activities on site. Access to the CEZ is prevented by installing fencing or installing ground protection to allow limited access while protecting the rooting environment below.
Coppice	A technique where trees are cut to ground level and allowed to resprout from the stump.
Epicormic growth	Shoots arising from latent buds or adventitious buds.
Monolith	In arboriculture, the term is used to describe a tree reduced to its main stem (i.e. without branches), sometimes left on felling a dead or dying tree in appropriate contexts.
Precautionary area	An area within RPAs where limited construction activities are permitted subject to specific precautions that minimise the activity's impact on the tree's rooting environment.
Root protection area (RPA)	"The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where protection of the roots and soil structure is treated as a priority." <i>BS 5837:2012 Trees in relation to design, demolition and construction- Recommendations.</i>
Tree protection plan (TPP)	A drawing based on the finalised proposed site layout depicting the retained trees and the measures for protecting the trees and landscape.



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