Arboricultural Report
BS5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations

Blentarn
Cadnant Park
Conwy
LL32 8PE

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Preamble

BS5837 is the British Standard for the protection and retention of trees on a proposed development site and is titled ***5837:2012 "Trees in relation to design, demolition and construction – Recommendations".***

BS5837 provides recommendations on how trees should be assessed and which of those trees should be protected during development together with how that protection will be achieved.

A BS5837 report will serve two primary purposes -

1) To help the Local Planning Authority assess the likely impacts of the development on the trees growing on and around the site and how any proposed changes may affect the character of the area.

2) To aid the developer in knowing which trees should be considered as a constraint and how the development can co-exist with those trees.

With the above in mind, this report has been commissioned for the purpose of providing an assessment of trees growing at Blentarn, Cadnant Park, Conwy and has been prepared in accordance with the guidance specified in BS5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations.*

The following report consists of three main components as prescribed in the British Standard and as detailed below.

1. The **Tree Survey** records all the relevant information required when assessing trees for retention, including any impacts the proposed development may have. In accordance with BS5837 the Tree Survey also provides details of those trees adjacent to the site which may be affected, or which are considered as growing within influencing distance of the development. However, to a certain degree information relating to neighbouring trees may be dependent on access. This section should be read in conjunction with the **Tree Survey Data Sheets** (Appendix 2) and the **Tree Location Plan**, (Appendix 8), which identifies the location of all the trees which need to be considered.

2. The **Arboricultural Impact Assessment** provides an insight into what impact any proposed development may have on the trees within and immediately adjacent to the site. The Arboricultural Impact Assessment should be read in conjunction with the **Tree Constraints Plan**, (Appendix 9). The Tree Constraints Plan shows each tree's crown spread colour coded to its retention category with the root protection area identified in grey.

3. The **Arboricultural Method Statement** provides details as to how the trees proposed for retention will be protected and managed for the duration of the development. This part of the document should be read in conjunction with the **Tree Protection Plan**,

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which clearly identifies the location of the required protective fencing and its construction together with any special construction techniques required as per the recommendations of BS5837.

The **Tree Survey**, **Impact Assessment** and **Method Statement** combine to provide the developer and the Local Planning Authority with the information required to assess the trees in their current context and the future development proposal.

Limitations

All tree inspections were made from ground level only and cannot be considered as a tree safety survey. However, where obvious defects have been seen they have been noted.

Plans within this report are based on those supplied by the client. Greenspaces Tree & Landscape Consultants Ltd take no responsibility for the accuracy of the supplied plans.

Where ivy is too dense to easily remove, measurements have been made over it. In any instances where this is the case, it is clearly stated in the Tree Data Tables.

The findings and recommendations of this report are valid for a period of 18 months from its receipt by the client.

This report and any associated documentation, including plans, remains the property of Greenspaces Tree & Landscape Consultants Ltd until paid for in full.

Where plans have been cropped to fit the report, they may not be to scale.

The plans within this report should be printed in colour if hard copies are required.

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Section 1
Tree Survey

1.1 Site description

Blentarn is situated on the west side of Cadnant Park, Conwy and is accessed via a residential driveway located between 34A and 36A Cadnant Park (the site is circled with the continuous yellow line on the Google Maps image below).

The area proposed for development comprises grassed lawn with generic shrub beds enclosed on three sides by intermittently planted common and ornamental tree species, and hedges. An area of native woodland occupies the north of the site.

The trees vary in size and age from large 20m+ mature examples in the woodland to smaller, semi-mature trees of 2-3m in height in the maintained garden area. Shrub beds have been well maintained and comprise of common generic species at various points around the gardens.

Views into the site are limited to those properties along Cadnant Park which neighbour it to the east whilst a tall cypress hedge prevents views into the site from those properties to the south.

Image from Google Maps

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The site has been well landscaped historically with a mix of both ornamental and native trees together with the previously mentioned shrub beds separating various elements and terraces of the garden. *Appendix 7 provides the locations of these shrub beds and hedges as a site plan.

*****BS5837, Sect. 4, sub-sect. 4.4.2.7 "…. *In the case of regularly maintained domestic hedges and the majority of shrub masses, it will normally be sufficient to record their height and species on the tree survey plan or note these in the schedule*…"

1.2 Tree Survey

All trees with a diameter of 75mm or greater growing on the site, and those which are growing within influencing distance of the proposed development, have been recorded using the guidance specified in Annexe C of BS5837.

Diameters and sizes have been measured using a purpose designed diameter tape or callipers, surveyor's tapes and, where appropriate, a laser measure. Where accurate measurements have not been possible, an approximate size has been given. Trees with estimated dimensions are given the abbreviation "Est." or the fact that they have been estimated has been included in the comments section of the Tree Data Tables.

A total of forty-two individually growing trees and two groups have been measured, categorised and recorded for the purpose of this report (refer to Appendix 2). The location of other vegetation such as shrub beds and hedges has been provided on the plan in Appendix 7.

Crown spread and height has been provided to the nearest full metre with diameters given millimetres. However, where access has not been possible measurements may have been estimated.

The schedule containing information for those trees on and around the site has been provided in Appendix 2 with tree locations plotted on the enclosed Tree Location Plan provided in Appendix 8.

The Tree Survey Data Sheets provided in Appendix 2 identifies the following information.

Tree No. The unique number given for each tree and used to specify trees throughout this document. The number relates to a small, circular metal tag attached to the tree at 1.5m above ground level which is used to aid identification. These numbers can also be seen on the associated plans within this report. However, the plans not only show the number but also the retention category, for example tree 7762 has been categorised as a category A tree and therefore the number on the plan is 7762A (see the following sect. 1.3 for further details on categorisation).

Species Common name given, for example oak, ash, sycamore etc., with botanical names provided where further clarification is needed.

Age Class **Y** – Young (small, newly planted and in aid of support such as stakes and ties), **IMM** – Immature (less than a third of the mature tree's dimensions), **SM** - Semi-mature (established and over a third of the mature tree's dimensions), **EM** - Early mature (over two

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thirds of the mature tree's dimensions), **M** – Mature (has reached its full growth potential), **OM** – Over mature (likely in decline or close to it).

Height measured to the nearest metre.

Crown Spread measured at the four cardinal points. Off-site trees may only have the on-site spread measured with the remaining spread being estimated.

First Branch the height of the first branch from ground level (GL) and its direction, for example 3N would signify a branch at approximately 3m above ground level on the tree's north side.

Physiological condition a brief, general description of the tree's health/vigour described as Poor, Fair or Good. Elaborated on, where necessary, in the "*Comments*" box.

Structural condition a brief, general description of the tree's structural condition described as Poor, Fair or Good. Elaborated on, where necessary, in the "*Comments*" box.

Est. Remaining Contribution as per Appendix 1; <10yrs, 10-20yrs, 20-40years, >40yrs

Comments A brief summary of any issues or benefits identified.

Category Refers to the retention category: A, B, C or U as explained further in Sect. 1.3 below and Appendix 3.

Recommendations may include works essential for the proposed development or works necessary to retain or improve a tree's health/vigour or safe useful life expectancy.

D.B.H. Diameter at breast height measured in millimetres at 1.5m above ground level (BS5837, sect. 4, sub-sect. 4.6.1)

RPA Root Protection Area given as a radius for the protection of roots around the retained tree and shown on the associated Tree Protection Plan. The calculated volumes and radius have been provided in the Tree Data Tables and follow the formula described in para. 4.6 of BS5837.

1.3 Tree categorisations explained
Trees have been categorised as per the recommendations described in Table 1 of BS5837:2012. A copy of Table 1 has been included in this report as Appendix 3.

Categories identified in Table 1 of BS5837 can be summarised as follows:

Category A (colour coded green) Trees in good physiological and structural condition which provide a substantial contribution in terms of landscape, cultural or arboricultural value and with an estimated life expectancy which exceeds 40 years.

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Category B (colour coded blue) Trees of a moderate quality and value and which have an estimated life expectancy which exceeds 20 years.

Category C (colour coded grey) Trees of a moderately low quality and/or value with a life expectancy which exceeds 10 years or trees with a diameter of 150mm or less.

Category U (colour coded red) Trees of a size which can be easily mitigated or trees which are in poor physiological and/or structural condition and/or with a life expectancy of 10 years or less.

In addition to the above, BS5837 provides sub-categories to give each tree a context for its value as follows:

1. Mainly arboricultural
2. Mainly landscape
3. Mainly cultural (including conservation benefits)

There is a total of forty-two individually recorded trees and two groups on, or within influencing distance, of the area proposed for development. These have been categorised in accordance with BS5837 (see Appendix 3) as below.

Category A	Category B	Category C	Category U
3	11	13	17

1.4 Site visit parameters
The site was visited on 21st September 2024 with the weather conditions being clear and bright with sunshine. The weather did not impair visibility, and the all the trees could be clearly seen unless otherwise stated in the tree data tables.

Trees seen to be growing within influencing distance of the development have, in accordance with BS5837:2012, been included in the survey and report.

1.5 Constraints posed by existing trees
Development can cause both long and short-term impacts to tree health and stability, particularly through inadequate protection of Root Protection Areas. However, below ground tree constraints may alter if root growth has been inhibited, for example, due to topography or drainage (BS5837 Sect. 4, Sub-Sect 4.6.3.)

The associated Tree Protection Plan provides an illustrative guide to the below ground constraints in terms root protection areas and the above ground crown spreads. The supporting Tree Protection Plan identifies the colour coded retention category of each tree as per para. 1.3 with the crown spreads colour coded to the appropriate retention category.

1.6 Associated information
Plans showing the existing and a draft proposed site layout were provided by the client prior to my site visit.

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The above mentioned plans have been checked on site and used as the base plan for those in the attached appendices. Greenspaces Tree and Landscape Consultants take no responsibility if the information on the received and reproduced plans is inaccurate.

1.7 Soil assessment
In accordance with BS5837 sect. 4.3, a soil assessment should be carried out by a competent person. Such an assessment is usually undertaken as part of the initial planning of a landscape scheme. With this in mind only a desktop study has been undertaken in terms of this report.

For the purpose of conforming to the British Standard a brief soil assessment can be found below (information obtained from Landis {www.landis.org.uk})

Soilscape 6: Freely draining slightly acid loamy soils
Texture: Loamy
Drainage: Freely draining
Fertility: Low
Carbon: Low
Drains to: Local groundwaters and rivers

The soil type described above is not thought to be an issue in terms of shrinkable clay subsidence and would be suitable for planting a range of trees and shrubs in gardens and landscaped areas.

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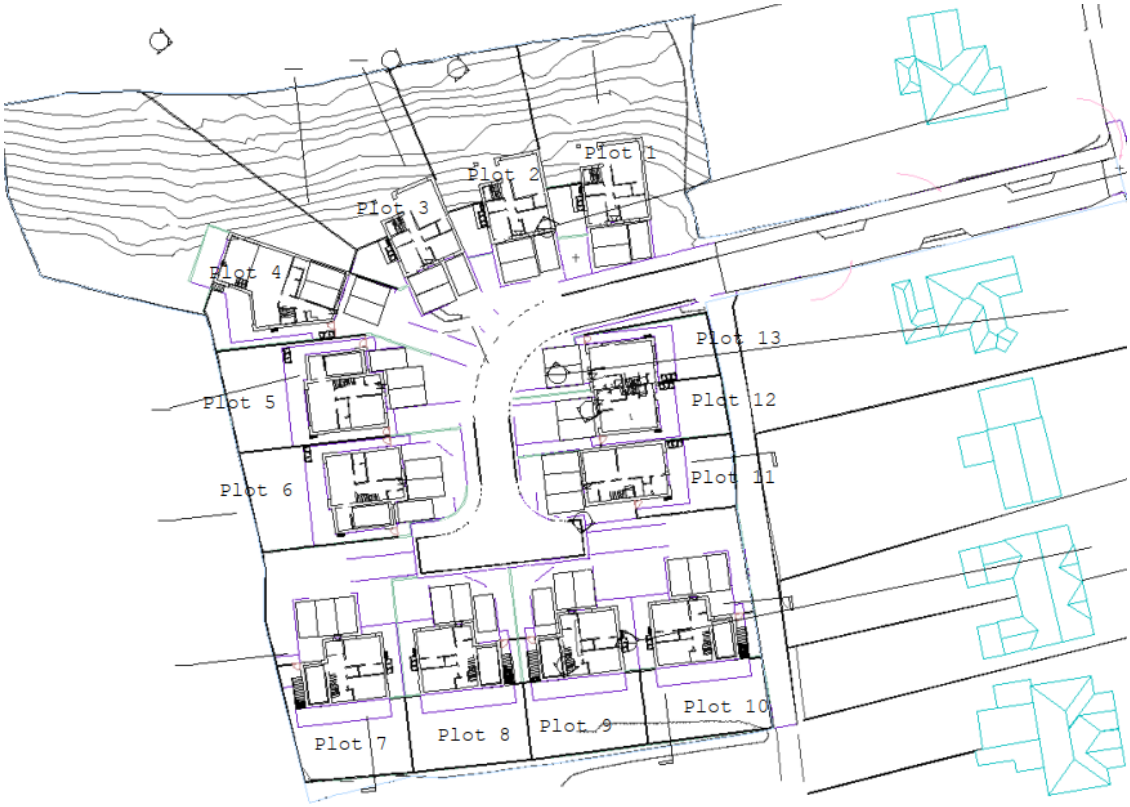
Section 2
Arboricultural Impact Assessment (AIE)

2.1 Development proposal
The proposal is to demolish the existing dwelling and introduce thirteen new houses, eleven detached and two semi-detached.

A row of four houses is proposed along the north of the site, adjacent to the existing woodland, two houses are located on the west boundary, four on the south and three on the east.

The plan below shows the general arrangement with plot numbers added to aid further descriptions throughout this report.



2.2 Predicted impact of the proposal
The layout necessitates the removal of all the ornamental trees, shrubs and hedges currently growing in the garden area.

Storm damaged and lower quality trees in the woodland at the northeast of the site are also proposed for removal. However, the higher quality woodland area remains intact.

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2.3 Trees proposed for removal
The proposal necessitates the removal of a total of thirteen individually growing trees and two groups with a further fifteen trees and one group proposed for removal regardless of development.

All the trees proposed for removal are shown below.

Category A trees proposed for removal – none

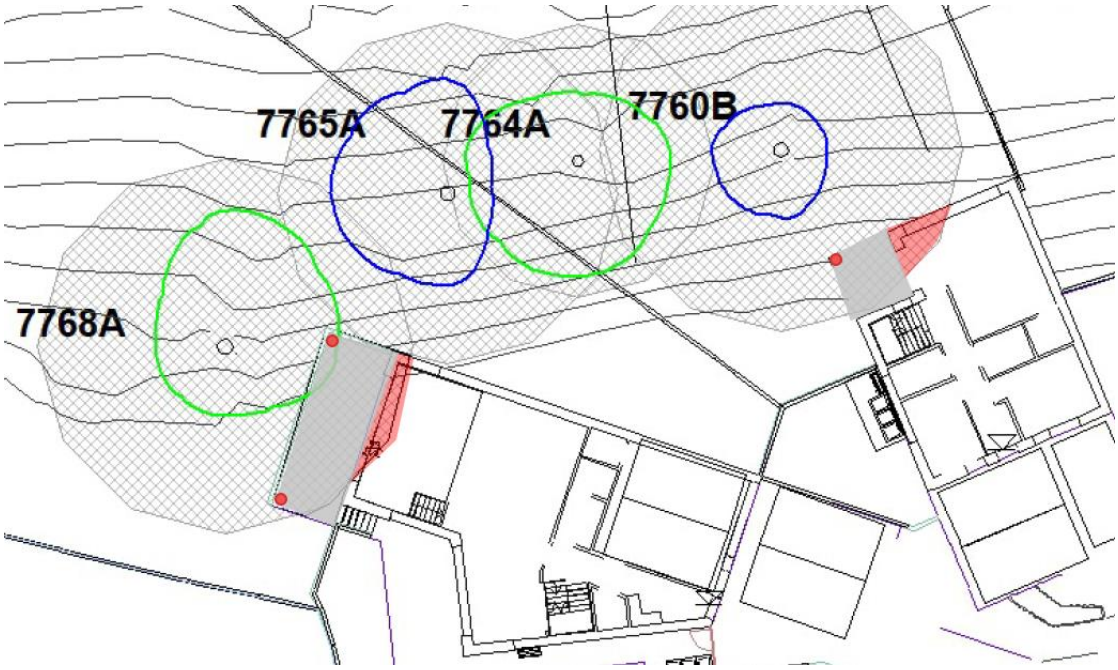
Category B trees proposed for removal – five individually growing trees and one group

Category C trees proposed for removal – eight individually growing trees are proposed for removal

Category U – fourteen individually growing trees and one group are proposed for removal

2.4 Trees to be retained with disturbance of root protection areas
Minor incursion into the root protection area of trees 7760 and 7768 is required as below (shaded red).

The grey blocked out areas on the plan extract denote balconies raised well above the ground and supported by beams of up to 200mm diameter. The location of the beams are identified by the red dots. Should consent be granted the beams will have to be hand dug to minimise disturbance.



Incursions into root protection areas are quantified on the following page.

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Tree No.	RPA (M^2)	Volume Affected (M^2)	% Affected	Can the tree be successfully retained
7760	185.3m^2	3.49m^2	1.9%	Yes – the volume is well below that recommended in BS5837*
7768	197m^2	4.56m^2	2.3%	Yes – the volume is well below that recommended in BS5837*

*BS5837:2012 para 7.4.2 Design recommendations, sub-para. 7.4.2.3 states that "*New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground*" whilst para. 5.3, sub-para. 5.3.1 states that "*…if operations within the RPA are proposed, the project arboriculturalist should; a) demonstrate that the tree9s) can remain viable and that the areas lost to encroachment can be compensated for elsewhere, contiguous with its RPA…"*

In my opinion, due to the small volumes involved, the root protection areas of trees 7760 and 7768 can be off set into the woodland without having any negative effects on the trees.

A working corridor of 1m is also proposed. This will be achieved with a raised wooden walkway to protect the root protection areas as described in Appendix 6.

2.5 Visual impacts of the tree works proposed – summary

Tree No.	Species	Category	Description of loss	Mitigation measures
7746	Cypress	U	Declining tree in a prominent location at the entrance to the site	Off-site planting proposed. Details of species, sizes and layout to be provided by applicant.
7748 & 7749	Cherry	U	Only visible from within the site, not thought to be a loss to wider landscape	
7752 - 7757	Cherry Sycamore & Elm	U	Only visible from within the site, not thought to be a loss to wider landscape	
7769	Sycamore	U	Only visible from within the site, not thought to be a loss to wider landscape	
7773 7775 7777 7778 7779 7790 7791 7794	Cherry Whitebeam Sycamore Laburnum Laburnum Cypress Willow Cypress	U	Visible from some houses on Cadnant Park, otherwise visible from within the site only	
Continued the following page				

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Tree No.	Species	Category	Description of loss	Mitigation measures
7772 7774 7780 7782 7783 7784 7785 7792	Sycamore Western red cedar Beech Whitebeam Magnolia Willow Apple Cherry	C	Visible from some houses on Cadnant Park, otherwise visible from within the site only	Off-site planting proposed. Details of species, sizes and layout to be provided by applicant.
7771	Yew	B	Ornamental, well-trimmed small tree only visible from within the site, no loss to the wider landscape	
7776 7787 7788 7789 7793	Beech Western red cedar Western red cedar Western red cedar Cherry group	B	Visible from some houses on Cadnant Park and from possible distant views	

2.6 Mitigation planting

The layout leaves little room for mitigation planting beyond adding trees in the woodland block to the north. However, mitigation planting is proposed on a site close by. Details of which will be provided with the application.

2.7 Protection of retained trees

Regardless of a tree's statutory protective status, if it is identified and agreed for retention there is a requirement for its physical protection as described in BS5837. The Arboricultural Method Statement provided in section 3 of this report gives detailed recommendations of how this protection will be achieved. Provided these recommendations are followed the development is not considered to have a detrimental effect on those trees identified for retention.

2.8 Infrastructure and utility works

All infrastructure and utility works should be carried out in accordance with the guidance provided in the document *National Joint Utilities Guides 4* and, where prescribed by the Local Planning Authority, works will be carried out under the supervision of a qualified and experienced arboriculturist. However, service runs through root protection areas should be avoided. If this is not possible then any incursion of the root protection area must be hand dug and agreed with the Local Planning Authority prior to any excavation works. This

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agreement should be in writing and may require an additional method statement from those undertaking the works.

2.9 Works within Root Protection Areas
As can be seen in para. 2.4, incursion into the root protection area of trees 7760 & 7768 is minimal, (less than 3%), and is not likely to influence the trees physiological condition or their safe useful life expectancies.

2.10 Working corridors
Working corridors will be required in the areas shaded green on the plan extract below. The working corridors are to be 1m in width and follow the construction method as described in Appendix 6 and the general notes in para. 3.9

Access for the delivery of materials will be by the existing access from Cadnant Park.

2.11 Long term tree retention and social proximity

The development is for residential use with the northern most plots being sited next to mature woodland. This will have an effect in terms of seasonal nuisance, particularly leaf fall, and percieved threat.

Loss of sunlight during the summer is not thought to be a significant consideration as shown on the plan extract left which shows shading potential at mid-day, mid-summer.

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A tree safety assessment should be undertaken and any recommended works carried out before the properties are occupied. The occupiers should be made aware that it will be there duty going forward to have the trees inspected as per their legal obligations.

Potential leaf fall issues should be clearly explained to purchases and composting of the fallen leaves within the woodland encouraged.

Provided potential occupiers are aware of the above then proximuity to the trees should not result in significant future conflicts.

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Section 3
Arboricultural Method Statement (AMS)

This section should be read in conjunction with the associated Tree Protection Plan both of which should be kept on site for reference during all stages of the development.

3.1 Arboricultural supervision requirments
Pre-commencment meetings should identify the need, or otherwise, for arboricultural supervision and at which stages arboricultural imput may be required.

Digging the holes for the pillars to support the balconies as identified in para. 2.4 should be done under arboricultural supervision so that any roots encountered can be pruned correctly.

Arboricultural supervision may also be requested by the Local Planning Authority or required in order to comply with a Condition relating to a Planning Permission.

3.2 Protective fencing discussion
Refer to drawings shown in Appendix 4 and as provided from BS5837:2012 for protective fence design and ground protection.

The suggested location of the protective fencing is given in Appendices 10 “Tree Protection Plan”.

The protective fencing should be erected prior to any construction or demolition stages and must remain in place for the duration of the development in accordance with any Conditions imposed by the Local Planning Authority.

The fencing is intended as a precaution to prevent accidental damage to the rooting area of retained trees. However, no materials should be stored inside the protective area and no waste run off, for example from the cleaning of equipment, should be allowed to enter the root protection areas.

It is recommended that signs are fixed to the protective fencing as shown in Appendix 5.

3.3 Works sequence

Order of Work flow	Work required
1	Pre-commencement meetings if required
2	Carry out any prescribed tree works
3	Install tree protection in accordance with Appendix 10
4	Carry out any required demolition if required
5	Introduce site facilities, car parking etc.
6	Construction starts
7	Introduction of landscaping or mitigation planting outside of the construction area
8	Construction completed

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9	Remove protective fencing
10	Landscape within construction area if required
Development complete	

3.4 Quality of tree work
All tree work should be in accordance with the British Standard for tree work "BS3998:2010 Tree work – Recommendations."

Your tree contractor should be familiar with the Standard and understand its contents evidenced by prior works of a similar nature.

Care should be taken that compaction does not occur through the use of heavy machinery around trees and wood chip should not be stored or left within the root protection area of trees.

In the interests of the environment, tree stumps should be ground out with a stump grinder or dug out rather than poisoned. Stump grinding is less impactful to the environment than digging stumps out.

Severing of ivy should be with hand tools such as pruning saws or secateurs and not chainsaws or hedge cutters.

Bats are European protected species, and great care is needed not to disturb them. Your chosen contractor should be familiar with the signs and evidence of bat activity and seek advice where needed. Similarly, your contractor needs to understand legislation in terms of nesting birds and work accordingly.

3.5 Site supervision during construction
The site manager should have a copy of this report and be aware of which trees are to be retained and protected from the earliest stages.

The site manager should brief those working close to trees or undertaking activities which may accidentally affect them so as to avoid any incidents of damage either above or below ground. Should damage occur then the Local Planning Authority should be contacted and made aware of the situation.

3.6 Landscaping
Landscaping should be carried out when the tree protection is removed and should not involve any digging other than by hand in the root protection area. Any roots encountered should not be severed or damaged.

Many of a tree's feeder roots can be seen in the first 300mm of soil and for this reason rotovators and similar equipment must not be used within the root protection areas.

Where possible the soil should not be altered within root protection areas with fertilisers etc. and care should be taken that compaction does not occur as a result of the landscape works.

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3.7 Generic tree protection measures

i. No fires shall be lit within root protection areas, or under the canopy, of any retained tree on or adjacent to the site.
ii. No materials should be stored within root protection areas.
iii. Levels within root protection areas must remain unaltered.
iv. Contamination or compaction of areas proposed for future landscaping works should be avoided or made good prior to any planting.
v. Contractor parking or other facilities will not be within root protection areas.
vi. Herbicides must not be used within root protection areas.
vii. Excavations and ground vegetation stripping, excluding the removal of trees and shrubs shown for removal, should not be undertaken until root protection areas have been established.
viii. Retained trees will not be used for the anchorage of equipment or signage.
ix. Protective fencing should not be moved other than in accordance with this document.
x. Should incursion into the root protection areas be unavoidable then specific consent from the Local Authority will be needed.
xi. Unless Planning Consent is granted pruning or removal of any tree should not be undertaken without prior checks with the Local Authority.
xii. Washing of vehicles with detergents should not be carried out within 5m of root protection areas.
xiii. Refuelling of vehicles and equipment should not be carried out within 5m of root protection areas.
xiv. Working with machinery within 5m of the tree canopies should include a banksman.

3.8 Notes for the use of working corridors

i. Working corridors within root protection areas must have ground protection installed before use.
ii. Ground protection is to follow the construction detail in Appendix 6 and should only be deviated from with the prior consent of the Local planning Authority.
iii. The footway will be maintained and kept fit for purpose for the lifetime of its use.
iv. Waste cement should be cleared off the walkway regularly and removed. It should not be washed off into the root protection areas of trees.
v. Any pruning required for the installation of working corridors should be carried out by a qualified arborist.

Statement

It is my opinion that provided the recommendations in this report are followed, the proposed development will not have a negative impact on the trees to be retained.

Signed  Dated 27/09/2024

Matt Bardsley MICFor

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Appendix 1 - Definitions / glossary of terms

Adaptive growth	an increase in wood in localised areas
Allelopophy	suppression of one species by another due to chemical release
Armour Bundled Cable	power line usually to a domestic dwelling
Basal sweep	stem which curves upwards from the base but then corrects itslef
Bifurcation	union producing two stems
Bulge	pronounced bulge in a tree's stem or limbs indicating possible internal issues such as decay
Callus	tissue introduced because of a wound, specialising over time to form a natural repair
Cambium	narrow band of cells responsible for the growth of a tree's circumference
Canker	area of damaged bark/cambium normally associated with bacterial organisms
Cavity	hole within the tree
Chlorotic	normally associated with the yellowing of leaves
Co-dominant	two stems both approximately the same age growing from the same root stock
Compartmentilisation	natural repair of a trees wound
Compaction	compaction of ground around a tree's root area preventing gaseous exchange
Compression Union	tight fork between two stems, often considered as a potential defect
Conservation Area	in accordance with the Town & Country Planning Act protects all trees over 75mm DBH
Crown	head of foliage
Crown lift	remove or prune lower branches to raise the trees foliage
Crown reduction	reducing a trees overall canopy size
Deadwood	typically associated with branches and limbs
DBH	Diameter at Breast Height
Decay	degradation of woody tissues
Deciduous	tree that sheds its leave annually
Decline	a tree or tree component which is dying
Dieback	branch tips showing signs of poor health
Dormant	seasonally inactive tree or tree part
End weight	uneven distribution of foliage favouring the branch terminuses
Epicormic growth	shoots formed when dormant bud growth is triggered often through stress
Etiolated	reaching for light, generally resulting in a tall, unbalanced, or slender tree
Extension growth	growth put on the previous growing season suggesting vitality
Exudation	weeping, oozing
Fibrous roots	also root fibres absorbing roots normally within top 30cm of soil
Formative pruning	a tree to shape usually started at young age

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Fruiting body	Visible part of fungi associated with tree decays
Hazard Beam	partially split of branch or limb
Heartwood	central core of the tree
Heave / root heave	partial movement of a tree's root plate
Hung up branch	snapped branch suspended above the ground
Hymenoscyphus fraxineus	commonly known as Ash Die Back – a disease that affects Fraxinus species
Included bark/inclusion	example; stem or branch growing into one another
Lateral	branch growing horizontally from the stem
Live crown ration	percentage of live crown able to photosynthesis
Monolith	trunk with crown removed, usually kept for ecological value
Multi-stemmed	having more than two stems
Natural bracing	where branches intertwin to support one another
Pioneer species	first species to populate an abandoned site
Primary union	first point from the ground where a trunk develops into stems or branches
Pollard	process of removing branches from a tree to promote epicormics growth
Reaction Wood	secondary wood developed in response to stress such as a lean
Retrenchment Pruning	pruning method intended to emulate a trees natural aging process
Roots	underground tree component responsible for stability and water/nutrient uptake
Root plate	area around the base of the tree where the anchorage roots are formed
Root pruning	sympathetic pruning of roots
Scion	part of the tree that is grafted to a root stock
Sp./Spp.	abbreviation of species and species'
Supressed	affected by a neighbouring tree or obstruction
Stub	see 'Topping'
Sweep	see 'Basal sweep'
Tag/Tree Tag	small metal numbered disk attached the tree for identification
Topping	where a limb, branch or stem has been cut with little regard for its ability to compartmentalise and recover. Contrary to the British Standard
TPO/Tree Preservation Order	tree protected in accordance with the Town & Country Planning Act
Vertical shoot	normally a reaction to pruning where regrowth extends vertically rather than horizontally
Waterlogging	standing water unable to drain freely normally associated with compaction
Windthrow, windblown	where a tree is blown over

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Tree No.	Species	*Age Class	Height (M)	Crown Spread (M)				D.B.H (MM)	First Branch (M)	Physiological Condition	Structural Condition	Est. Remaining Contribution	Comments	Category*	Recommendations	RPA (M^2)	Radius of circle (M)
				N	E	S	W										
7746	Cypress	EM	14	4	4	5	5	260 140 200 200	2E	Poor	Good	<10	In decline with significant crown die back, north crown spread and 2x 200mm stems estimated	U	Not considered to be a constraint to development	4.9	75.6
7747	Hand kerchief tree	SM	8	2	4	4	3	330	2W	Fair	Fair	20>	Cavity forming around likely decay point at 1.5 above ground level east side	C	Remove to facilitate development	3.96	49.3
7748	Cherry	IMM	5	1	1	1	1	120	1S	Poor	Fair	<10	Newly planted tree still needing support, in decline	U	Not considered to be a constraint to development	1.44	6.5
7749	Cherry	IMM	5	1	1	1	1	110	2W	Poor	Fair	<10	Newly planted tree still needing support, in decline	U	Not considered to be a constraint to development	1.32	5.5

***Category**	A – High Quality Life of 40yrs+	B - Moderate Quality 20yrs+	C - Low Quality 10yrs+	U – Poor Quality <10yrs	***Sub-Category**	1 Arboricultural	2 Landscape	3 Cultural
***Age Class**	Y Young	IMM Immature	SM Semi-mature	EM Early mature			M Mature	

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				N	E	S	W										
7750	Cherry	IMM	9	2	2	2	2	100 80 80 110 70 60 60	N/A	Good	Good	10 >	Small group of cherry either growing from the same root stock or planted as a bundle	C	Retain and protect	4.9	20.3
7751	Cherry	IMM	9	2	2	2	2	105 125 120 80 70	N/A	Good	Good	10>	Small group of cherry either growing from the same root stock or planted as a bundle	C	Retain and protect	2.7	23.7
7752	Sycamore	IMM	6	2	2	1	1	110	1W	Good	Fair	<10	squirrel damaged throughout	U	Not considered to be a constraint to development	1.32	5.5
7753	No tree																

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				N	E	S	W										
7754	Sycamore	IMM	6	1	0	0	3	155	3N	Good	Poor	<10	Badly squirrel damaged throughout	U	Not considered to be a constraint to development	1.86	10.9
7755	Sycamore	SM	13	4	5	4	5	370	2W	Good	Poor	<10	Badly squirrel damaged historically, top lost and re-grown with multiple leaders, vertical cavity at 4m above ground level east side, east crown spread estimated	U	Not considered to be a constraint to development	4.44	61.9
7756	Elm	SM	14	1	1	1	1	400	N/A	Poor	Poor	<10	Dead elm tree in hedge, diameter estimated	U	Not considered to be a constraint to development	4.8	72.4
7757	Mixed	SM	7	1	1	1	1	200 Av.	N/A	Poor	Poor	<10	Group of 3 x dying elm trees and 1 x badly squirrel damaged sycamore	U	Not considered to be a constraint to development	2.4	18.1
7760	Sycamore	EM	15	2	2	3	3	640	12N	Good	Good	20>	Slight lean west with high crown form	B	Retain and protect	7.68	185.3
7761	Sycamore	EM	17	4	1	3	3	375 320	3W	Good	Good	20>	Co-dominant as of ground level	B	Retain and protect	5.9	109.9

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				N	E	S	W										
7762	Sycamore	M	24	10	5	7	5	1290	3W	Good	Good	40>	Co-dominant as of 1m above ground level, measured low in accordance with annex C BS5837	A	Retain and protect	15.48	752.8*
7763	Sycamore	EM	22	2	4	4	2	600	1E	Good	Fair	20>	secondary stem lost at 1m east side	B	Retain and protect	7.2	162.9
7764	Beech	EM	22	3	4	5	5	480	2N	Good	Good	40>	None	A	Retain and protect	5.76	104.2
7765	Beech	EM	20	5	2	4	5	600	8N	Good	Fair	20>	Co-dominant as of 5m above ground level with reaction wood forming	B	Retain and protect	7.2	162.9
7766	Spruce	IMM	6	2	2	2	2	145	GL	Good	Good	40>	Category C due to size	C	Not considered to be a constraint to development	1.74	9.5
7767	Willow	SM	5	2	3	2	2	210	1N	Good	Good	10>	Basal flare corrects at 0.5m	C	Not considered to be a constraint to development	2.52	20
7768	Sycamore	M	18	6	5	3	3	660	2S	Good	Good	40>	Co-dominant as of 4m above ground level	A	Retain and protect	7.92	197.1

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*Capped at 707m^2 in accordance with BS5837:2012 para. 4.6, sub-para. 4.6.1

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				N	E	S	W										
7769	Sycamore	IMM	6	1	1	1	1	160	1W	Fair	Poor	<10	Badly squirrel damaged throughout	U	Not considered to be a constraint to development	1.92	11.6
7770	No tree																
7771	Yew	SM	5	1	2	1	1	160 170 180	1N	Good	Good	20>	Root bound in concrete bed	B	Remove to facilitate development	3.5	39.3
7772	Sycamore	SM	10	2	2	3	2	300 380	2W	Good	Good	10 >	Co-dominant as of ground level with inclusion forming	C	Remove to facilitate development	5.8	106
7773	Cherry	SM	3	4	0	0	0	140 110	1N	Good	Poor	<10	Historically collapsed but still growing	U	Not considered to be a constraint to development	2.1	14.3
7774	Western red cedar	SM	10	4	4	4	4	300 360 160 285 305	2N	Good	Good	10>	Ornamental, multi stemmed tree, lever arm forming at west side	C	Remove to facilitate development	7.8	189.8
7775	White beam	EM	7	2	3	1	1	280	3N	Fair	Poor	<10	Decay at primary union and base, tree biased west	U	Not considered to be a constraint to development	3.36	35.5

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				N	E	S	W										
7776	Beech	SM	9	2	4	2	2	325	2E	Good	Good	20>	Poorly pruned historically	B	Remove to facilitate development	3.9	47.8
7777	Sycamore	SM	8	1	2	2	2	170 140	2S	Good	Fair	<10	Co-dominant as of ground level with significant inclusion	U	Not considered to be a constraint to development	2.6	21.9
7778	Laburnum	SEM	5	1	1	1	1	80 80 70	GL	Good	Fair	<10	Collapsed historically and regrowing	U	Not considered to be a constraint to development	1.6	8
7779	Laburnum	EM	4	1	1	1	1	180 120	1W	Good	Fair	<10	Significant inclusions associated with species	U	Not considered to be a constraint to development	2.6	21.2
7780	Beech	SM	5	2	3	2	1	325	1S	Good	Good	10>	Multple pruning points throughout primary union	C	Remove to facilitate development	3.9	47.8
7781	No tree																
7782	White beam	EM	6	3	4	1	0	190 220	1E	Good	Fair	10>	Whole tree biased east	C	Remove to facilitate development	3.5	38.2
7783	Magnolia	EM	5	3	3	2	1	105 105	GL	Good	Good	10>	Category C due to size	C	Remove to facilitate development	1.8	10

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				N	E	S	W										
7784	Willow	IMM	4	1	1	1	1	80	1W	Good	Good	10>	Category C due to size	C	Remove to facilitate development	0.96	2.9
7785	Apple	EM	3	1	1	1	1	225	GL	Good	Fair	10>	Heavily pruned historically and regularly pruned for the production of fruit	C	Remove to facilitate development	2.7	22.9
7787	Western red cedar	EM	14	2	2	2	2	410 180 280	2N	Good	Fair	20>	Central stems removed historically, planted as part of a linear group	B	Remove to facilitate development	6.3	126.2
7788	Western red cedar	EM	14	2	2	1	2	315	3N	Good	Good	20 >	Planted as part of a linear group	B	Remove to facilitate development	3.78	44.9
7789	Western red cedar	EM	14	3	3	1	2	210 325 350 225	3N	Good	Fair	20>	Central stems removed historically, planted as part of a linear group	B	Remove to facilitate development	6.8	146.1
7790	Lawson cypress	EM	12	3	3	2	2	330 245	3N	Poor	Good	<10	Sparse crown suggesting tree is in decline	U	Remove to facilitate development	4.9	76.4
7791	Willow	EM	6	10	9	0	7	480	2S	Good	Poor	<10	Crown heavily biased north to the point of needing support	U	Remove to facilitate development	5.76	104.2

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				N	E	S	W										
7792	Cherry	EM	4	2	2	2	2	225	1N	Good	Good	10>	Small ornamental cherry	C	Remove to facilitate development	2.7	22.9
7793	Cherry group	SM	11	3	1	3	3	225 av.	N/A	Good	Good	20>	largest stem 300, smallest 150, linear group of 7x stems, heavily pruned on east side for utilities	B	Remove to facilitate development	2.7	22.9
7794	Lawson cypress	SM	3	0	1	1	1	145	3	Good	Poor	<10	Top lost historically leaving 3m stump	U	Remove to facilitate development	1.74	9.5
H1	Cypress Hedge	SM	5	1	1	1	1	150 Av.	G/L	Good	Good	20>	Cypress boundary hedge	B	Cut to shape and retain and protect	1.8	10.2

*Category	A – High Quality Life of 40yrs+	B - Moderate Quality 20yrs+	C - Low Quality 10yrs+	U – Poor Quality <10yrs	*Sub-Category	1 Arboricultural / 2 Landscape / 3 Cultural
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Appendix 3 – BS5837:2012 Cascade Chart for tree categorisation

BS5837:2012 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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012]* ***4.5.7.***			
	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)	
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	
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	

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Figure 3 **Examples of above-ground stabilizing systems**

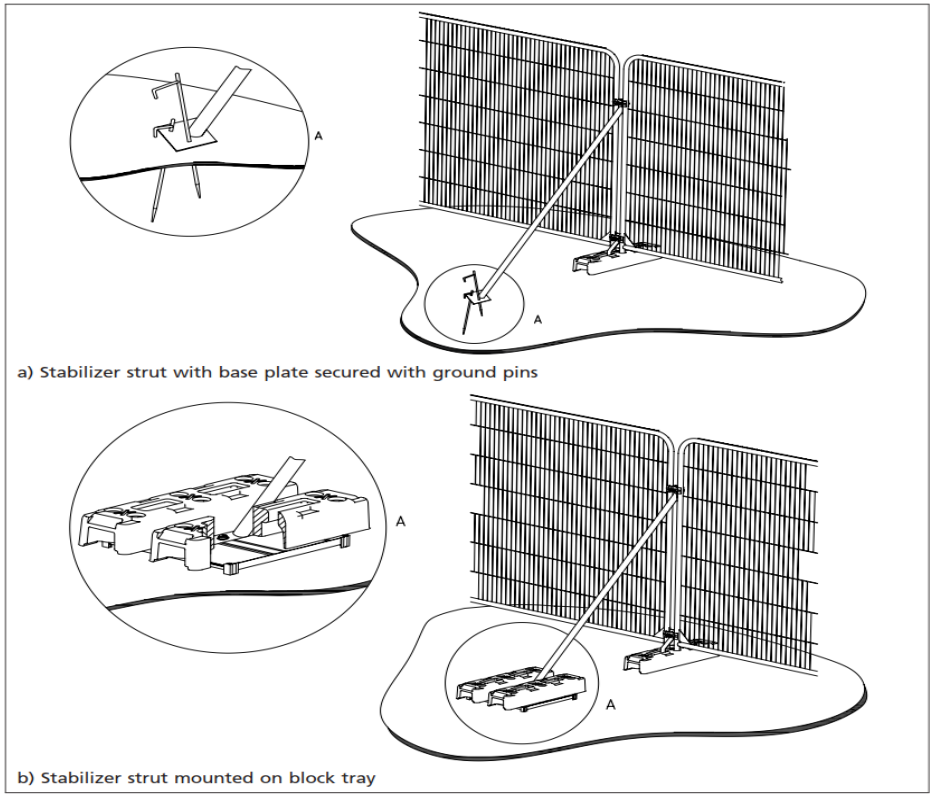
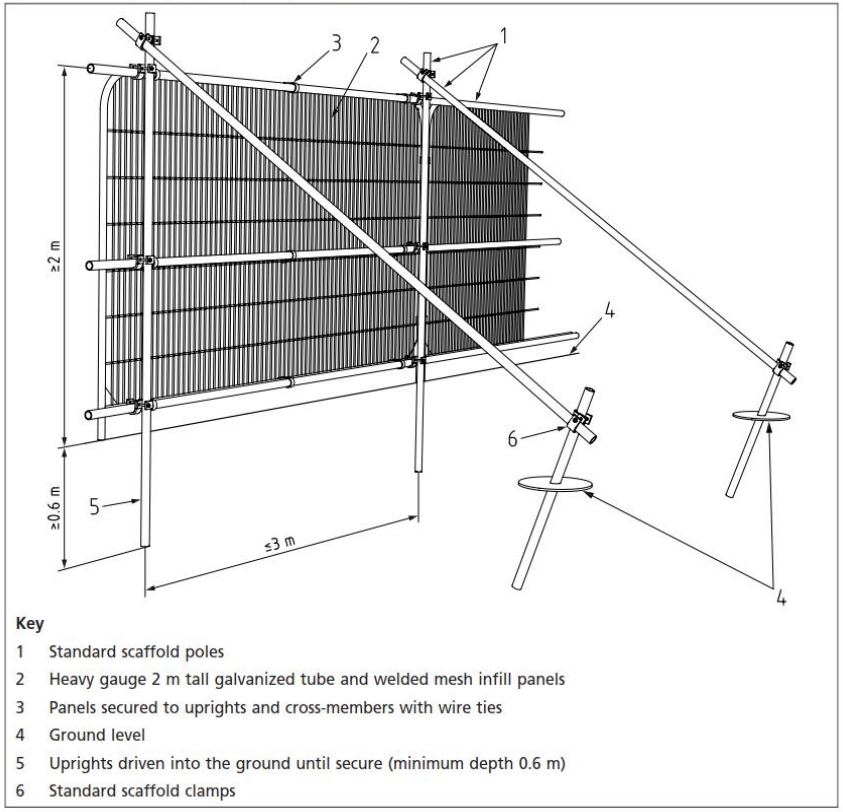


Figure 2 **Default specification for protective barrier**



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

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Appendix 4 continued – Heras Steadfast System

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Appendix 5 – RPA Example Sign 1

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Appendix 5 continued – RPA Example Sign 2

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Appendix 6 – Working Corridor - Scaffolding or light foot traffic within the RPA

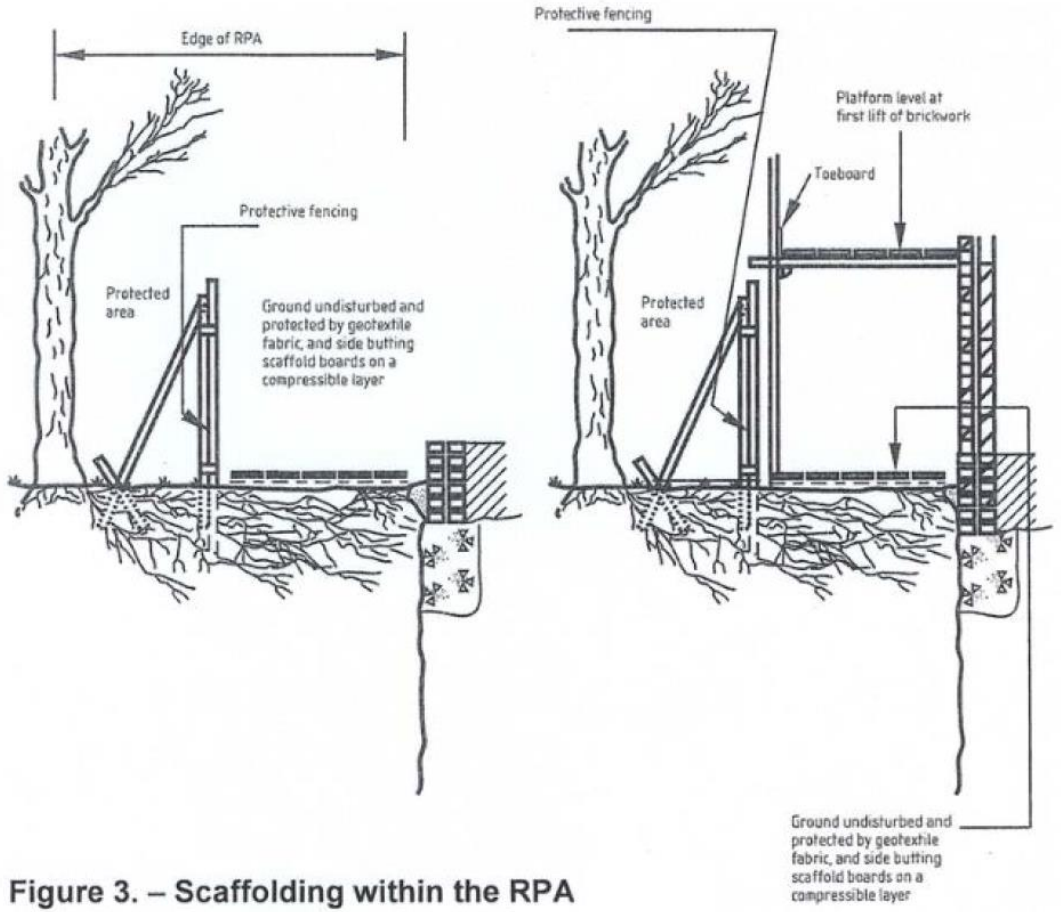

Figure 3. – Scaffolding within the RPA

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Plans

Appendix 7 – Vegetation Location Plan

Appendix 8 – Tree Location Plan

Appendix 9 – Tree Constraints Plan

Appendix 10 – Tree Protection Plan

The Tree Location, Constraints and Protection Plans should be submitted with your application as separate PDF.'s for on-site use by the Local Planning Authority

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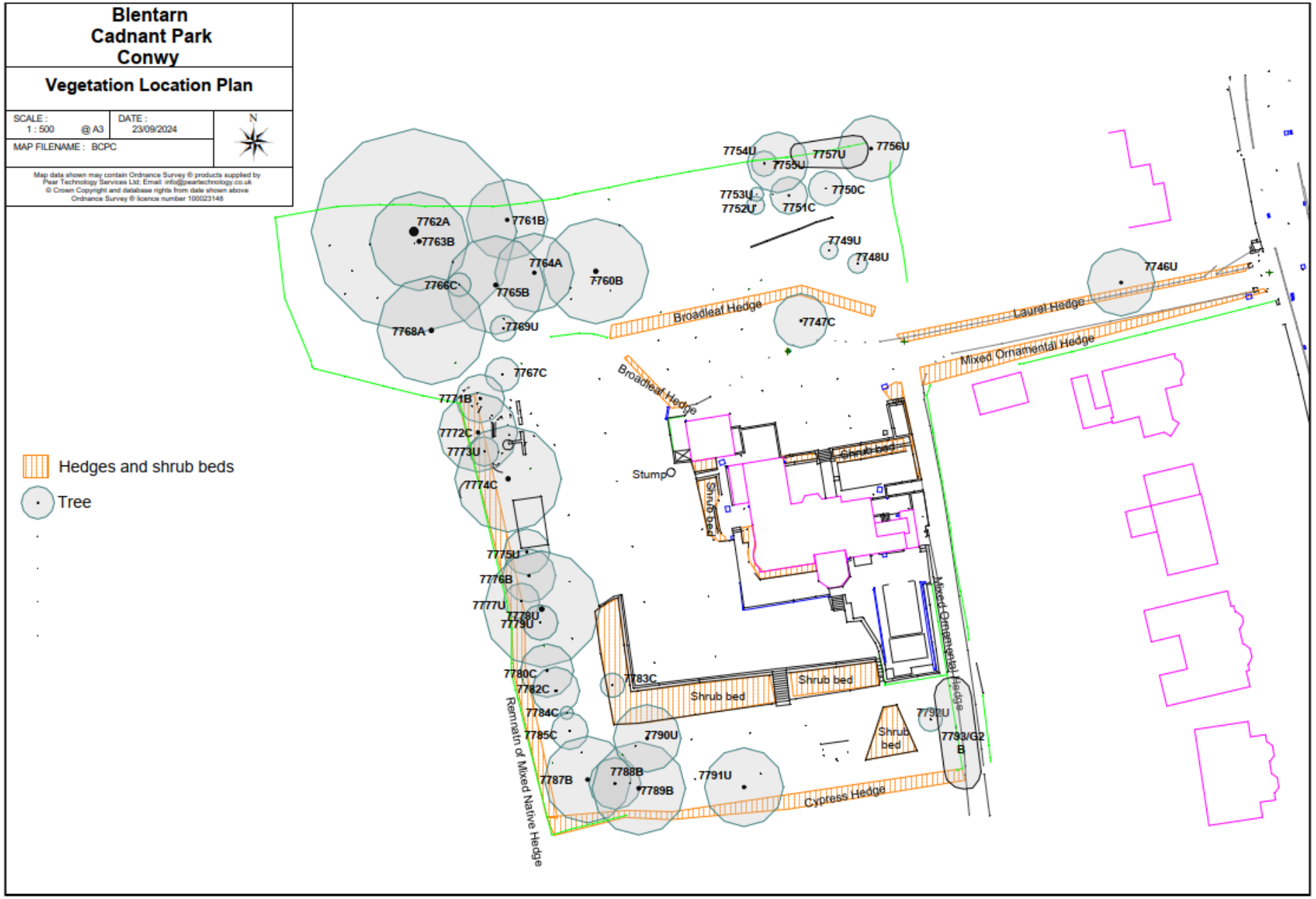
Blentarn
Cadnant Park
Conwy
Vegetation Location Plan
SCALE : 1 : 500 @ A3
DATE : 23/09/2024
MAP FILENAME : BCPC
N
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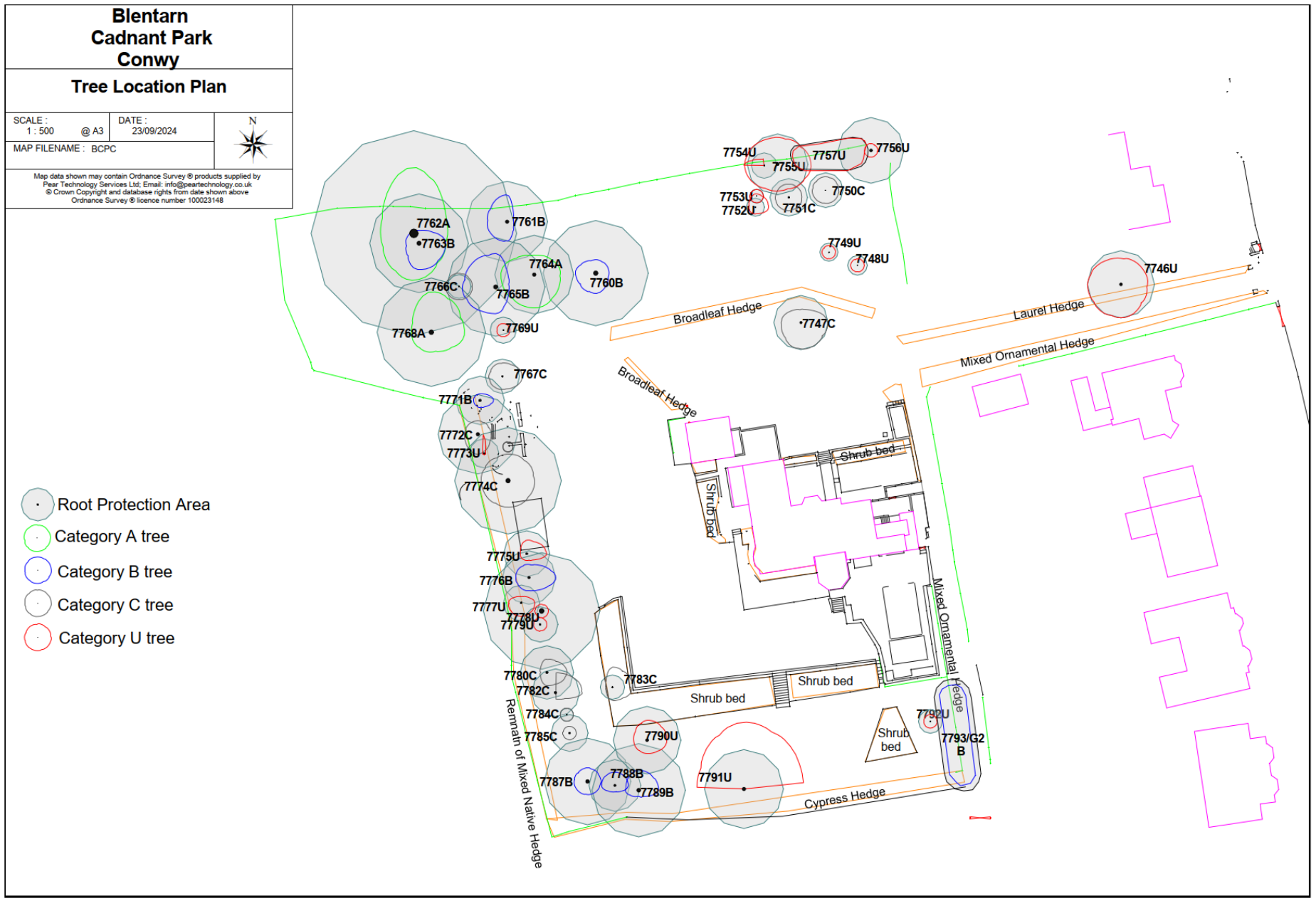
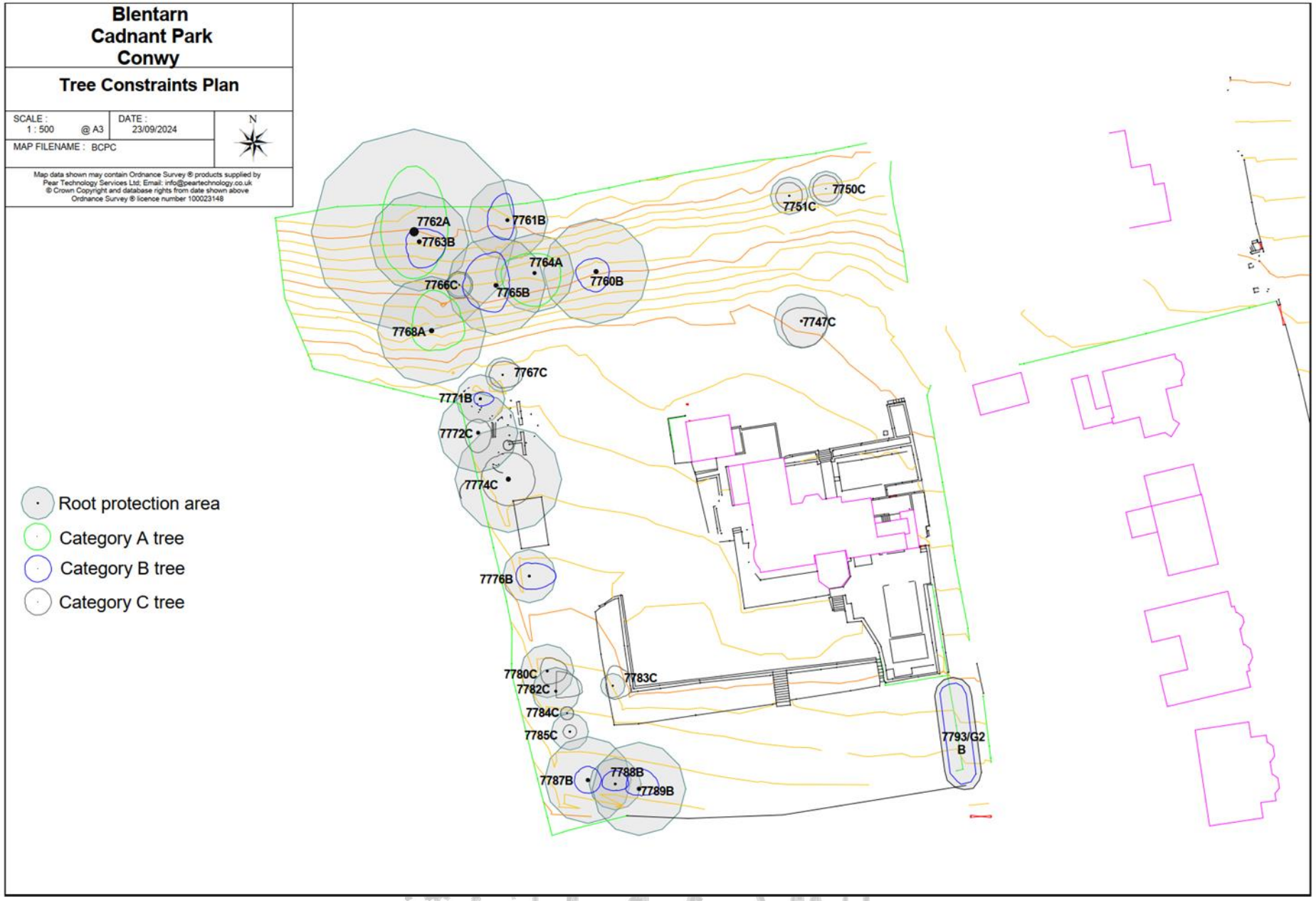
Hedges and shrub beds
Tree
7754U
7755U
7756U
7757U
7753U
7752U
7751C
7750C
7749U
7748U
7746U
7762A
7763B
7761B
7764A
7760B
7766C
7765B
7768A
7769U
7747C
Broadleaf Hedge
Laurel Hedge
Mixed Ornamental Hedge
7767C
7771B
7772C
7773U
7774C
Stump
Shrub bed
7775U
7776B
7777U
7778U
7779U
7780C
7782C
7784C
7785C
7787B
7788B
7789B
7790U
7791U
7783C
Shrub bed
Shrub bed
Shrub bed
7792U
7793/G2
B
Remnatn of Mixed Native Hedge
Cypress Hedge

Blentarn
Cadnant Park
Conwy

Tree Location Plan

SCALE : 1 : 500 @ A3
DATE : 23/09/2024
N
MAP FILENAME : BCPC




Blentarn
Cadnant Park
Conwy
Tree Constraints Plan
SCALE : 1 : 500 @ A3
DATE : 23/09/2024
N
MAP FILENAME : BCPC
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Root protection area
Category A tree
Category B tree
Category C tree
7762A
7763B
7761B
7764A
7766C
7765B
7760B
7768A
7750C
7751C
7747C
7767C
7771B
7772C
7774C
7776B
7780C
7782C
7784C
7785C
7783C
7793/G2
B
7787B
7788B
7789B

Blentarn
Cadnant Park
Conwy

Tree Protection Plan

SCALE : 1 : 500 @ A3 | DATE : 27/09/2024 | N

MAP FILENAME : BCPC

Appendix 11 – Images

7746 - tree at entrance to site clearly in decline

7747 – ornamental tree (Handkerchief tree) typical for the garden area

Cavity forming tree 7747

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7748 & 7749 – recently planted cherry trees (tree on right too small, <75mm to be included in survey)

7769 – typical small ornamental proposed for removal

7774 – ornamental garden tree proposed for removal

Penmaen Isa
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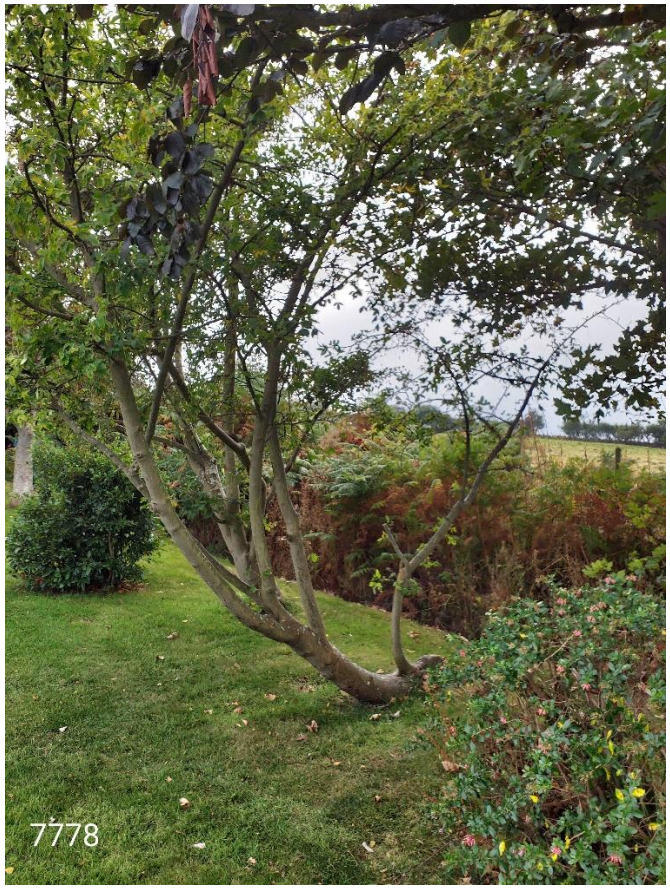
Decay and poor pruning to tree 7775

Co-dominant stems with inclusions forming to tree 7777



Laburnum 7778 – poor form and inclusions

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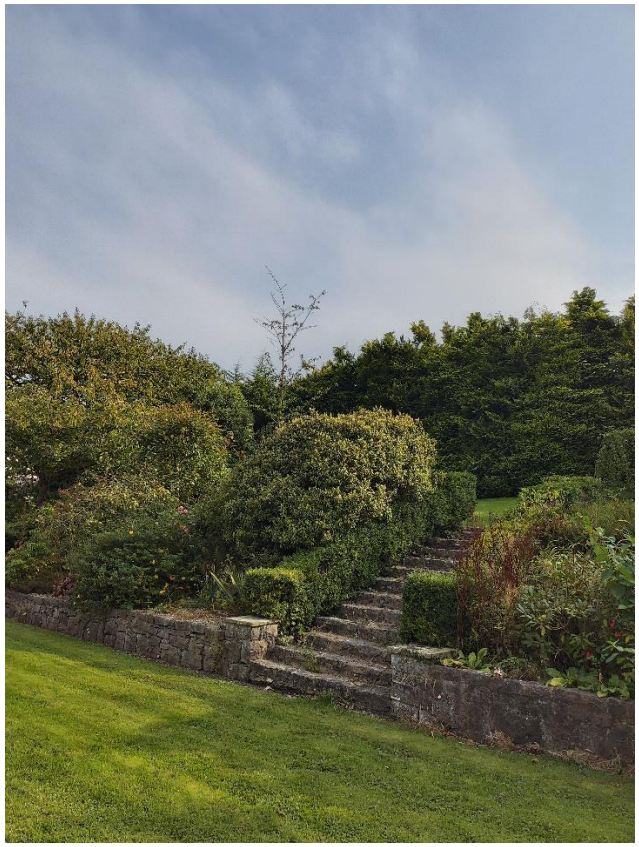
7790 – showing a sparse crown associated with decline

77981 – willow in need of support in order to stay upright



Typical shrub bed on the site

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Tree 7790 with trees 7787 – 7789 behind, all proposed for removal

Ornamental trees along the west boundary

View from the garden looking north towards the woodland to be retained

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Credentials of the arboriculturist

This report was prepared by Matt Bardsley who holds the following qualifications and accreditations: -

Chartered Arboriculturalist with Institute of Chartered Foresters

Professional member of the Arboricultural Association (PR5720)

HND Arboriculture & Woodland Management

Royal Forestry Society Certificate in Arboriculture

Lantra Professional Tree Inspection Qualification

Lantra Instructor Qualification

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Bibliography

A Guide to Good Practice: the use of cellular confinement systems close to trees, The Arboricultural Association

A-Z of tree terms; A Companion to British Arboriculture, Philip Wilson

BS3998:2010 Recommendations for Tree Work, British Standards Institute

BS5837:2012 Trees in relation to design, demolition and construction – recommendations. British Standards Institute

Geo-tech Tree Root Protection System, geo-tech.co.uk

Hilliers Manual of Trees and Shrubs, 3rd Edition, Thomas Hillier & Son

Landis, Landis.org.uk

The consultants guide to writing effective reports, The American Society of Consulting Arborists

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