

# Trees and Construction

## BS5837:2012 Tree Survey, Arboricultural Implications Assessment & Method Statement

**Site:** Dafarn Newydd, Llangefni

**Ref:** 21435/AIA/AMS/A2 rev A

**Client:** Mr James France-Hayhurst



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**- Jan 2022 -**

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<b>Revision</b>	<b>Description</b>	<b>Date</b>
/	Tree Survey Baseline Advice (21435/A1)	22/4/2021
A	Minor edits and changes	11/1/22

## 1. INTRODUCTION

1.1 **Instruction:** This advice has been prepared for the client Mr James France-Hayhurst (hereafter; client) and is in respect of the tree related planning considerations at Dafarn Newydd, Llangefni (hereafter; site).

As the proposal relates to development works at site, the advice herein is produced in accordance with the British Standard 5837 : 2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*' (hereafter; BS5837).

1.2 **BS5837:** The scope of BS5837 is to provide guidance on how trees and other vegetation can be integrated into construction and development design schemes. The overall aim is to ensure the protection of amenity by trees which are appropriate for retention.

1.3 **Scope of this advice:** This advice has been produced in accordance with BS5837 and is intended to demonstrate the site's realistic arboricultural constraints and assist with the design process. The objective is to systematically assess the site and provide suitable recommendations regarding the proposal's potential impact on trees and vice versa.

1.4 Following instruction the consultant surveyed the site on the 15<sup>th</sup> April 2021 where a site walkover and BS5837 tree survey were carried out; all trees on site and around the application boundary were surveyed from ground level and plotted as either an individual or a tree group.

1.5 This advice is subject to caveat at Appendix I, outlines relevant terms and definitions at Appendix II and constitutes the findings of the preliminary site assessment and associated arboricultural recommendations.

1.6 The survey data and site observations use the supplied plan to illustrate the surveyed trees in plan format as a 'Tree Constraints Plan' (hereafter; TCP); the TCP and the tree survey data table are at Appendix III.

## 2. SITE INFORMATION & TREE ASSESSMENT

- 2.1 The site encompasses a field currently used for grazing. It is accessed off the B5420 Penmynydd Road to the south. The field is bounded on all sides with trees and hedges. To the western boundary is a more mature line of trees partially separated by a raised dyke.
- 2.2 **Proposal:** It is understood that a scheme is in being considered that will provide a site for static caravan style homes with associated access and facilities. This has now been confirmed and plan '2621'21'03a Proposed layout drawing (1)' has been provided
- 2.3 The site requires consideration from an arboricultural perspective due to the presence of trees on and around the site; these trees are deemed to be within impacting distance of the existing property and potential construction area.
- 2.4.1 The tree survey and assessment resulted in a full range of the BS5837 quality/retention categories of 'A' - Good, 'B - moderate', 'C - low' and 'U - poor' being attributed to trees/tree groups; it is also worth noting that the BS5837 circular RPAs are considered to halt at the extents of existing property such as walls etc.
- 2.4.2 A council search/contact has not been requested and hence confirmation as to whether any tree is protected by Tree Preservation Order was unavailable at the time of writing this advice. It is however a council owned park
- 2.4.3 The BS5837 tree survey is a means of objective assessment and reflects the trees' condition, quality contribution, remaining life expectancy and spatial considerations (stem, crown and roots). On this basis and in order to consider the trees' accurate constraints, the survey data has the crown extents for north, south, east west, the stem diameter measurement, and the calculated root protection areas (hereafter; RPAs). Hereafter, the trees are therefore reviewed and considered on their own merits and in line with the guidance of BS5837.

### 3. FINDINGS & RECOMMENDATIONS

3.1 The following information, as with the prior contents of this report, should be read with the appended tree data table and tree constraints plan (21435/TCP /01).

#### 3.2 General Considerations for Tree Retention / Removal

3.2.1 'A' the category trees are those which are most 'notable', on site trees and the scheme should be designed to take into account their retention. i.e. crown clearance RPA avoidance and Layout to avail future growth debris and light pressure.

3.2.3 'B' Class trees are also considered of value both individually and in the landscape and should be retained by design. Proposed encroachment or removal would need to be justifiable and mitigated although Council resistance would be anticipated.

3.2.4 The smaller scale, declining or limited contribution trees are categorised as low quality 'C' category trees. These may be suitable for retention for the most part, but should not present a significant constraint to the scheme as mitigation planting can replicate and enhance their contribution.

3.2.5 The removal of the above trees or vegetation may have an impact on the green cover in the first instance, however, the scheme presents a significant enhancement opportunity. Said removals would have no impact on the long term amenity of the site and will allow for the selection of native species to enhance amenity and biodiversity.

3.2.3 Trees categorized as 'U' should only be considered undesirable to retain within a development without intervention. Within a woodland setting management and habit should be considered. These trees are T16 and T22

3.2.4 The removal of the above trees or vegetation may have an impact on the green cover in the first instance, however, the scheme presents a significant enhancement opportunity. Said removals would have no impact on the long term amenity of the site and will allow for the selection of native species to enhance amenity and biodiversity.

### 4. SCHEME / IMPLICATIONS ASSESSMENT

4.1 For this assessment, the proposed scheme has been considered (see; s.2.2 herein). This includes consideration for arboricultural management / tree works for H&S tree risk management, tree removal and pruning options, design solutions, tree protection and sensitive measures to account for trees. As per s.1.6 and s.2.2 herein, the TCP scheme overlay illustrates the proposed scheme.

#### 4.2 *Consideration for G2 and G3-*

4.2.1 It is proposed to construct a new access partially within both groups. The areas indicated on the TPP will be cleared of stems and foliage the remained will be protected by avoidance and temporary fencing.

4.3.1 *Consideration for T1-*

4.3.2 It is proposed to construct a new pathway within the RPA of this tree. This will be accomplished by the use of temporary protective fencing until construction phase is complete then to lay a path using sensitive ground working techniques to lay a 'GEOweb' based porous path to preserve the existing ground levels. The tree will also be pruned to accommodate the new path and provide statutory clearance if not already compliant.

4.6.1 *Consideration for Remaining trees-*

Remaining trees will be protected by avoidance and temporary protective fencing as per TPP

## 5. METHOD STATEMENT 'CONSIDERATIONS'

### 5.1 Arboricultural Construction Restrictions

5.1.1 The following restrictions are considered relevant for tree protection purposes which are illustrated on the appended Tree Protection Plan:

- a) **Tree Works** - are to be completed prior to any and all site works: no tree works not specified within this AIA (or leaning against or attaching of objects to a tree) are permitted unless agreed in writing by the council (subject to standard exemptions).
- b) **Tree Protection** - a site compound will be set up within the application boundary, excluding the surveyed trees as per the TPP, or Protective Barrier Fencing (PBF) is to be installed as per the TPP.
- c) **Construction Exclusion** - the fenced off areas are Construction Exclusion Zones (CEZ).
- d) **Site Restrictions** - no chemicals/materials are to be transported/stored/used/mixed within the CEZ, and no fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of the tree's canopy or in a CEZ.
- e) **Ground Works** - during site works RPAs/CEZ may not be breached, i.e. no surface works, without the consultant's prior advice and council consent, and no mechanical digging or scraping is permitted within RPAs/CEZ;
- f) **Sensitive Landscape** - the PBF may be temporarily moved to allow pedestrian access to start sensitive soft landscape works within RPA, i.e. turf removal, retained soil levels, new planting, mulch borders.
- g) **Completion** - only following construction and hard landscape completion can PBF be removed and remaining soft landscape works undertaken within RPAs / CEZ (ground levels to be retained and works undertaken manually with non driven machinery).

## 5.2 Arboricultural Site Monitoring / Supervision

- 5.2.1 The council will typically request '*a scheme of supervision for the arboricultural protection measures*' to confirm tree protection and adherence to working methods around trees.
- 5.2.2 The appointed site contractor and project manager will be provided with an approved AMS and TPP and will need to be briefed as to prohibited works and tree protection.
- 5.2.3 A record of each site visit will be kept and a summary letter drafted for the client, the site manager and the local authority (to be sent to the client for distribution), thus –
- (1) ***Pre-commencement*** to confirm approved tree works, site hoarding / tree protection fence line and construction restrictions for ground works.
  - (2) ***Main construction*** Path Installation, - to be carried out within the RPA of and PBZ of T1
  - (3) ***Development completion*** after all hard landscape works and tree and shrub planting are complete to sign off the site as having adhere to the AMS.

### 5.3 Tree Works

5.3.1 All approved tree works must be undertaken with the council’s written permission (subject to statutory exemption) and undertaken to BS3998 by a tree service contractor who is suitably qualified, experienced and insured to for arboricultural contracting.

5.3.2 In accordance with the approved scheme and the tree related planning condition(s), the following tree works are recommended in conjunction with the scheme (additional tree works must only be undertaken with the full and written permission of the council):

#### TREE WORK SUMMARY

NUMBER	TREE REMOVALS / PRUNING WORKS	
G5 and G6	Remove	Remove in conjunction with the scheme: Replacements to be provided within the landscape scheme.
G2, G3 and G4	Prune	Selectively pruned for highway splay lines (G4) and cleared of stems and foliage within the areas hashed green for G2 and G3
Retained trees		Protection by placement of fixed BS5837 specification Heras panels around the crown / RPA extents to have no access during construction and manually operative sensitive surface works and retained soil levels within RPAs. Ground protection to be used as indicated on the TPP within RPA’s outside of PBF,

- 5.4 Sensitive Ground Works (Within or in close proximity to RPAs)
- 5.4.1 Any excavations necessary within a RPA or designated CEZ (as illustrated on the TPP - each RPA and the areas enclosed by PBF) must:
- Only be undertaken when the construction works are completed; and
  - Retain the existing soil levels; and
  - Use sensitive excavation techniques to protect the tree roots and their existing growing conditions, i.e. sensitive manual excavations / air spade.
- 5.4.2 The RPA excavation areas are to be marked out [as per the TPP] on surfaces and undertaken by hand with the use of manually operated (hand held) tools.
- 5.4.3 The excavations are to be preventative and carefully avoid damage to tree roots; therefore, individual 50mm layers are to be excavated at a time within an RPA/CEZ. This is to ensure that excavations do not incur on the existing soil levels, i.e. no downward regrading of soil levels within RPAs.
- 5.4.4 Any exposed roots shall be packed with a clean damp sand (not builders sand) and wrapped in hessian sacking to protect them from temperature changes and drying out.
- 5.4.5 Small roots (those less than 25mm in diameter) may be carefully pruned back with a clean sharp tree saw. However, pruning large roots (those greater than 25mm in diameter) will require the advice of the consultant and permission of the council; these may be necessary for a tree's health and stability.
- 5.4.6 Once the surface layer material has been removed, any hessian wrapping will be removed and roots will be surrounded/packed with a sharp sand and any existing ruts, holes or dips are to be infilled with a mix of sharp sand and high grade tree planting soil.
- 5.4.7 Any exposed roots shall be packed with a clean damp sand (not builders' sand) and wrapped in hessian sacking to protect them from temperature changes and drying out.
- 5.4.8 Small roots (those less than 25mm in diameter) may be carefully pruned back with a clean sharp tree saw.
- 5.5 Protective Barrier Fencing (PBF) Specification
- 5.5.1 Barrier fencing is to be installed (and signed off by way of arboricultural supervision) following the completion of the tree works. It is illustrated on the Tree Protection Plan and is to remain in situ for the entire duration of preparation/construction processes unless otherwise agreed in writing by the council.
- 5.5.2 To comprise of 2m tall welded mesh panels on rubber or concrete feet. Panels are to be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabilizer struts, which should be attached to a base plate and secured with ground pins. All weather notices should be erected at regular intervals

on the weld mesh panels with words such as "Construction exclusion zone - Keep out".

## 5.6 Underground utilities

5.6.1 Any new underground utilities are to utilise the construction area and hard surface extents for new installations and avoid the need for works in proximity to trees. Certainly, utility installations are to be:

- Located outside of RPAs and construction exclusion zones; and
- Installed only following the installation of the protective barrier fencing to ensure the retained trees and their RPAs are protected.

## 5.7 Landscape Detail

5.7.1 The finer details of the site landscaping proposals are to be illustrated on a landscape plan. This is to include the exact proposals for hard and soft landscaping together with the details for any new trees' planting locations, species and stock selection, installation and maintenance; this is to be undertaken by the appointed landscape architect who will have the full support of the arboricultural consultant where required.

## 5.8 Report Handling

5.8.1 This report is released to the client and architect to be distributed at their discretion and the consultant is available for queries relating to this report and/or trees.

5.8.2 The proposed scheme is reviewed in respect of the arboricultural constraints and is considered to be achievable in line with the BS5837 guidance. The tree protection methods herein may be approved by the council for which a planning approval will be subject to a final and detailed Arboricultural Method Statement based on the approved information and other detail perhaps not available at the pre-planning approval stage, i.e. utility layout, final landscape plan, construction management plan (CMP) etc.

5.8.3 This AMS and the TPP may be approved by the council in support of the application, subject to a conditioned final AMS and TPP as a means of authorised tree protection measures; all site personnel will have access to a copy and the tree work and protection details are to be inspected as per s.5.2 for '*Arboricultural Monitoring / Supervision*'.

**This concludes our advice.**

## Appendix I

### Caveat

Any and all information supplied to Indigo Surveys Ltd by/on behalf of the client is assumed to be accurate unless otherwise informed. | This advice is limited to the observations made on the date of inspection as detailed herein and any deletion, editing or alteration will result in the advice being null and void in its entirety. | This advice in its entirety may be deemed null and void if remedial works are undertaken on any area of the site, on or after the date of the survey. | No liability is assumed by the author or by Indigo Surveys Ltd for any misuse, misinterpretation or misrepresentation of this advice. | This advice is not valid in adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events. | No responsibility is assumed either by the author of this advice or by Indigo Surveys Ltd for any legal matters that may arise as a consequence. | Neither the author nor Indigo Surveys Ltd will be required to attend court or give testimony as part of this agreement. | The responsibility for any works undertaken on the basis of the recommendations of this advice does not form part of this agreement.

## Appendix II

### Terms and Definitions

*“Arboriculturist”* - person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.

*“Competent Person”* - person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached.

*“Topographical survey”* - an accurately measured land survey undertaken to show all relevant existing site features. A method of carrying out topographical surveys is given in RICS specification Surveys of land buildings and utility services at scales of 1:500 and larger.

*“BS5837 Tree survey”* - should be undertaken by an arboriculturist to record information about the trees on or adjacent to a site. The results of the tree survey, including material constraints arising from existing trees that merit retention, should be used (along with any other relevant baseline data) to inform feasibility studies and design options. For this reason, the tree survey should be completed and made available to designers prior to and/or independently of any specific proposals for development.

*“Tree categorisation method”* - trees should be categorised in accordance with the BS5837 cascade chart by an arboriculturist. This is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring.

*“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, shown as an arboricultural constraint in m<sup>2</sup>. The radius is calculated using the BS5837 calculation method. An arboriculturist may change the shape of an RPA but not reduce its area.

*“Arboricultural implications assessment”* - a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

*“Arboricultural method statement”* - methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.

*“Tree protection plan”* - a scale drawing, informed by descriptive text where necessary, based upon the finalised proposals, showing trees for retention and illustrating the tree and landscape protection measures.

## Appendix III

<b>Data Table:</b>	As appended (BS5837 Tree Survey Key & Table)
<b>Tree Constraints Plan:</b> (TCP / Scheme Overlay)	As appended (21435/TCP/01)
<b>Tree Protection Plan:</b> (Application Stage)	As appended (21435/TPP/01 rev A)

**TREE SURVEY IN ACCORDANCE WITH BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'**

**CLIENT:** Mr James France-Hayhurst

**PROJECT REF:** 21435/A1

**SITE:** Dafarn Newydd, Llangefni

**CONTACT:** /

**SURVEY DATE:** 15 April 2021

**ARB CONSULTANT:** Rod Benzies BSc MArborA NDArb

TREE REF. #	SPECIES	AGE	HEIGHT (in m)	CANOPY (in m) N - S - E - W				STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES	BS CAT.	MANAGEMENT	
T1	Elm; Ulmus (species); Ulmaceae	M	19	5	5.5	4.5	4	530	6.4	2	3.5	All round	Norm	40+	Ivy on stem preventing VTA. Pronounced buttress roots	A 3	
T2	Sycamore; Acer psuedoplatanus; Aceraceae	M	19	3	12	4.5	4	720	8.6	2	3.5	S	Norm	40+	Ivy on stem preventing VTA. Pronounced buttress roots. Situated on raised embankment. Exposed surface roots. Asymmetric crown shape due to light competition. Part of woodland edge group	A 3	
T3	Sycamore; Acer psuedoplatanus; Aceraceae	SM/EM	19	2	5	4.5	4	300*	3.6	1.75	1	S	Norm	20-40	Ivy on stem preventing VTA. Situated on raised embankment. Asymmetric crown shape due to light competition. Part of woodland edge group. Multistemmed tree 2 stems	B 3	
T4	Sycamore; Acer psuedoplatanus; Aceraceae	M/OM	20+	6	9.5	4.5	8	830	10.0	4.5	8	S	Norm	20-40	Ivy on stem preventing VTA. Situated on raised embankment. Asymmetric crown shape due to light competition. Part of woodland edge group	A 3	
T5	Sycamore; Acer psuedoplatanus; Aceraceae	M/OM	20+	6	12	4.5	8	600*	7.2	4.5	8	S	Norm	20-40	Ivy on stem preventing VTA. Situated on raised embankment. Asymmetric crown shape due to light competition. Part of woodland edge group	A 3	
T6	Elm; Ulmus (species); Ulmaceae	SM/EM	14.5	3	6	3.5	4	280*	3.4	3	2	S	Norm	20-40	Ivy on stem preventing VTA. Situated on raised embankment. Part of woodland edge group. Asymmetric crown shape due to light competition	A 3	
T7	Common Ash; Fraxinus excelsior; Oleaceae	SM	12	2.5	2	5.5	2.5	280*	3.4	7	7	S	Low	10_20	Situated on raised embankment. Part of woodland edge group. Asymmetric crown shape due to light competition. Possible ADB symptoms. Ash in vicinity have ADB	C 3	

TREE REF. #	SPECIES	AGE	HEIGHT (in m)	CANOPY (in m)				STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES	BS CAT.		MANAGEMENT
				N	S	E	W										
T8	Common Ash; Fraxinus excelsior; Oleaceae	SM/EM	12	2.5	4	4	2.5	300	3.6	7	7S	Norm	20-40	Situated on raised embankment. Part of woodland edge group. Asymmetric crown shape due to light competition. Ash in vicinity have ADB. No defined ADB symptoms. Ivy on stem preventing VTA. Bowed main stem. Recent loss of adjacent significant tree	C	3	
T9	Common Beech; Fagus sylvatica; Fagaceae	M	15	2.5	4	6	6	550*	6.6	6	6S	Low	20-40	Situated on raised embankment. Part of woodland edge group. Still particularly alive	C	3	Reduce to viable growth points
T10	Rowan; Sorbus aucuparia; Rosaceae	M	13	2.5	5	3	3.5	390	4.7	6	6S	Norm	20-40	Situated on raised embankment. Part of woodland edge group. Bifurcates at 1.5m to 3m. Recent loss of adjacent trees have damaged some branches	B	3	
T11	Goat Willow; Salix capreae; Saliaceae	M	13	3.5	4	1	8	490	5.9	2	2E	Norm	20-40	Situated on raised embankment. Part of woodland edge group. Recent loss of adjacent trees have damaged some branches. Bifurcates at 1.5m to 3m. Asymmetric crown shape due to light competition	B	3	

TREE REF. #	SPECIES	AGE	HEIGHT (in m)	CANOPY (in m) N - S - E - W				STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES	BS CAT.	MANAGEMENT
T12	Common Ash; Fraxinus excelsior; Oleaceae	M	16	3.5	6.5	4	8	320	3.8	4.5	5S	Norm	20-40	Situated on raised embankment. Part of woodland edge group. Recent loss of adjacent trees have damaged some branches. Ivy on stem preventing VTA. bowed stem	B 3	
T13	Common Ash; Fraxinus excelsior; Oleaceae	M	19	4	6.5	4.5	8	550*	6.6	4.5	5W	Norm	20-40	Part of woodland edge group. Recent loss of adjacent trees have damaged some branches. Ivy on stem preventing VTA. Bifurcates at 3m or above. Possible ADB symptoms	A 3	
T14	Oak; Quercus (species); Fagaceae	M/OM	20+	8	12	4.5	8	640*	7.7	4.5	10W	Norm	40+	Part of woodland edge group. Recent loss of adjacent trees have damaged some branches. Ivy on stem preventing VTA. Bifurcates at 3m or above	A 3	
T15	Common Ash; Fraxinus excelsior; Oleaceae	M/OM	20+	5	8	6	10	, 480, 500	8.3	4.5	10W	Norm	40+	Part of woodland edge group. Recent loss of adjacent trees have damaged some branches. Ivy on stem preventing VTA. Bifurcates at 1.5m to 3m. Ash bark canker evident. Some storm damage and branch loss. epicormic growth. Situated on raised embankment	A 3	
T16	Common Ash; Fraxinus excelsior; Oleaceae	M/OM	18	0.5	10	3	3.5	540	6.5	4.5	3.5S	Low	10_20	Part of woodland edge group. Recent loss of adjacent trees have damaged some branches. Ash bark canker evident. Some storm damage and branch loss. epicormic growth. Situated on raised embankment. Ash in vicinity have ADB. Possible ADB symptoms. Cavities evident in some branches. Bark cracking in places	U	Pollard to habitat stump
T17	Common Ash; Fraxinus excelsior; Oleaceae	M/OM	20	5	4	3	6	530	6.4	4.5	10W	Norm	20-40	Part of woodland edge group. Ash in vicinity have ADB. No defined ADB symptoms	B 3	
T18	Sycamore; Acer pseudoplatanus; Aceraceae	M	20	5	9	7	6	560	6.7	4.5	3.5S	Norm	40+	Part of woodland edge group. Ash bark canker evident. Situated on raised embankment. Ash in vicinity have ADB. Old occluded stem wounds	A 3	
T19	Pine; Pinus (species); Pinaceae	M	20	2.5	6	7	4	550*	6.6	4.5	4S	Norm	40+	Part of woodland edge group. Situated on raised embankment. Ivy on stem preventing VTA. Old occluded stem wounds	A 3	
T20	Common Ash; Fraxinus excelsior; Oleaceae	M	20	4	5	8	0.5	530	6.4	6	6E	Norm	20-40	Part of woodland edge group. Situated on raised embankment. Ivy on stem preventing VTA. Ash in vicinity have ADB. Leaning east	B 3	
T21	Common Ash; Fraxinus excelsior; Oleaceae	EM/M	13	3	3	3	3	, 260, 240	4.3	2	2E	Norm	20-40	Recent drainage work to west of hedge base. Fence embedded in stem	B 3	
T22	Common Ash; Fraxinus excelsior; Oleaceae	M	13	8	8	5.5	4	490*	5.9	1	1All round	Low	10_20	Crown dieback evident	U	High pollard to suitable growth points
T23	Common Ash; Fraxinus excelsior; Oleaceae	M	13	4	2	4	4	320	3.8	4.5	4.25All round	Norm	20-40	Ivy on stem preventing VTA. Recent drainage work to west of hedge base	B 3	

TREE REF. #	SPECIES	AGE	HEIGHT (in m)	CANOPY (in m) N - S - E - W				STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES	BS CAT.	MANAGEMENT
T24	Common Ash; Fraxinus excelsior; Oleaceae	M	13	2.5	2	4	4	300	3.6	4.5	4.25All round	Norm	20-40	Ivy on stem preventing VTA. Recent drainage work to west of hedge base	B 3	
T25	Common Ash; Fraxinus excelsior; Oleaceae	M	13	4	4	7	6	580*	7.0	2	2All round	Norm	20-40	Ivy on stem preventing VTA. Recent drainage work to west of hedge base. Multistemmed tree 4 stems	B 3	
T26	Common Ash; Fraxinus excelsior; Oleaceae	M	13	4	4	7	6	580*	7.0	2	2All round	Norm	20-40	Ivy on stem preventing VTA. Recent drainage work to west of hedge base. Multistemmed tree 4 stems	B 3	
T27	Common Ash; Fraxinus excelsior; Oleaceae	M	13	4	4	7	6	640*	7.7	2	2All round	Norm	20-40	Ivy on stem preventing VTA. Recent drainage work to west of hedge base. Multistemmed from base	B 3	
T28	Common Ash; Fraxinus excelsior; Oleaceae	M	15	4.5	7	7	8	530*	6.4	2	2E	Norm	20-40	Wet ditch to the south of hedge 1m deep. Ash dieback / Chalara ash dieback ( Hymenoscyphus fraxineus). Ivy on stem preventing VTA	B 3	
T29	Sycamore; Acer psuedoplatanus; Aceraceae	EM/M	15	4.5	4	4	4.5	430*	5.2	2	2E	Norm	20-40	Wet ditch to the south of hedge 1m deep. Ivy on stem preventing VTA	B 3	
T30	Common Ash; Fraxinus excelsior; Oleaceae	EM/M	12	4.5	5	8	4.5	430*	5.2	2	2E	Norm	20-40	Wet ditch to the south of hedge 1m deep. Ivy on stem preventing VTA. No defined ADB symptoms	B 3	
T31	Common Ash; Fraxinus excelsior; Oleaceae	EM/M	12	5	7	4	5.5	, 240, 380, 260	6.2	2	2E	Norm	20-40	Wet ditch to the south of hedge 1m deep. Ivy on stem preventing VTA. No defined ADB symptoms. Compaction around the base. Multistemmed tree 3 stems	B 3	
T32	Common Ash; Fraxinus excelsior; Oleaceae	EM/M	12	5	7	6	8	, 270, 270, 330, 100, 100	6.3	2	2All round	Norm	20-40	Wet ditch to the south of hedge 1m deep. Ivy on stem preventing VTA. No defined ADB symptoms. Compaction around the base. Multistemmed tree 5 stems	B 3	
G1	Mixed woodland	M	20	N/A	N/A	N/A	N/A	800 max	10.0	0	0	Norm	20-40	Strip of woodland containing mature over mature trees.. Constituent Ash showing some ADB symptoms. Recent loss of some trees due to storms. Standing and fallen dead stems throughout. Healthy understory predominately Hawthorn	A 3	
G2	Hawthorn; Crataegus monogyna; Rosaceae;Common Ash; Fraxinus excelsior; Oleaceae	M	13	N/A	N/A	N/A	N/A	330*	3.9	0	0	Norm/low	10_20	Field boundary hedge. Ash standard trees spaced with the hedgerow. Recent drainage work to west of hedge base. Some Ash stems showing ADB symptoms	B 2	
G3	Hawthorn; Crataegus monogyna; Rosaceae;Common Ash; Fraxinus excelsior; Oleaceae	M	15	N/A	N/A	N/A	N/A	100	0.9	0	0	Norm	20-40	Field boundary hedge. Wet ditch to the south of hedge 1m deep. Some ash stems showing ADB symptoms. Ash dieback / Chalara ash dieback ( Hymenoscyphus fraxineus). Ash standard trees spaced with the hedgerow	B 2	
G4	Myrobalan Plum; Plum; Prunus cerasifera Rosaceae; Hawthorn; Crataegus monogyna; Rosaceae	EM/M	7	N/A	N/A	N/A	N/A	100	0.9	0	0	Norm	20-40	Boundary hedge sprouting from dry stone wall	B 3	
G5	Myrobalan Plum; Plum; Prunus cerasifera Rosaceae; Hawthorn; Crataegus monogyna; Rosaceae	EM/M	4.5	N/A	N/A	N/A	N/A	100	0.9	0	0	Norm	20-40	Field boundary hedge. Boundary hedge sprouting from dry stone wall	C 3	

TREE REF. #	SPECIES	AGE	HEIGHT (in m)	CANOPY (in m) N - S - E - W				STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES	BS CAT.		MANAGEMENT
G6	Hawthorn; Crataegus monogyna; Rosaceae	EM/M	4.5	N/A	N/A	N/A	N/A	100	0.9	0	0	Norm	20-40	Small clump	C	3	

### TREE SURVEY 'KEY' - BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'

<b>TPO/CA</b>	-	On client request: presence of Tree Preservation Orders (TPO) / site location within a Conservation Area (CA) & date checked;
<b>TREE REF. #</b>	-	Tree reference number: tag or plan number (T - individual tree, G - group of trees/shrubs, H - hedge);
<b>SPECIES</b>	-	Genus, species and/or common name;
<b>AGE</b>	-	Age classification (NP - new planting, Y - young, EM - Early-Mature, SM - semi mature, M - mature, LM - late mature, OM - over mature);
<b>HEIGHT (in m)</b>	-	Approximate height of tree in metres;
<b>CANOPY (in m) N - S - E - W</b>	-	Approximate branch spread in metres of the four principal compass points;
<b>STEM (in mm)</b>	-	Stem diameter in millimetres: measured in accordance with s.4.6 of BS5837;
<b>RPA (in m)</b>	-	Circle radius of the Root Protection Area: calculated using the stem diameter (single/multiple stem variant, as outlined within BS5837);
<b>CLEARANCE (in m)</b>	-	Crown clearance in metres above the adjacent ground level;
<b>1ST BRANCH (in m)</b>	-	Clearance in metres to first significant branch and direction of growth (where relevant);
<b>VITALITY</b>	-	Physiological condition typically gauged from canopy cover and annual extension growth (good, fair, poor, dead);
<b>ESTIMATED REMAINING CONTRIBUTION</b>	-	Approximate number of years a tree will continue to contribute without the need for oppressive arboricultural intervention, categorised in years as <10, 10-20, 20-40 and >40;
<b>NOTES</b>	-	Structural and physiological condition observations;
<b>BS CAT.</b>	-	BS5837 tree quality assessment category: resulting from structural/physiological condition and remaining contribution (approximate useful life expectancy); Standard retention category <b>U</b> : in such a condition that any existing value would be lost within 10 years; Standard retention category <b>A</b> : high quality and value, in such a condition as to be able to make substantial contribution of 40+ years; Standard retention category <b>B</b> : moderate quality and value, in such a condition as to make a significant contribution of 20+ years; Standard retention category <b>C</b> : low quality and value, currently in adequate condition to remain until new planting could be established 10+ years; Standard retention sub-category, mainly due to: <b>1</b> - Arboricultural values, <b>2</b> - Landscape values, <b>3</b> - Cultural values, including conservation;
<b>MANAGEMENT</b>	-	Preliminary management recommendations (as appropriate);
<b>' * '</b>	-	Within the survey schedule denotes an estimate

**KEY**

- Tree Crown Spread
- Root Protection Area (RPA)
- Tree Stem
- T1 Tree No.
- Removed Tree
- Guide Root Protection Area (RPA)

**Tree Condition Category**

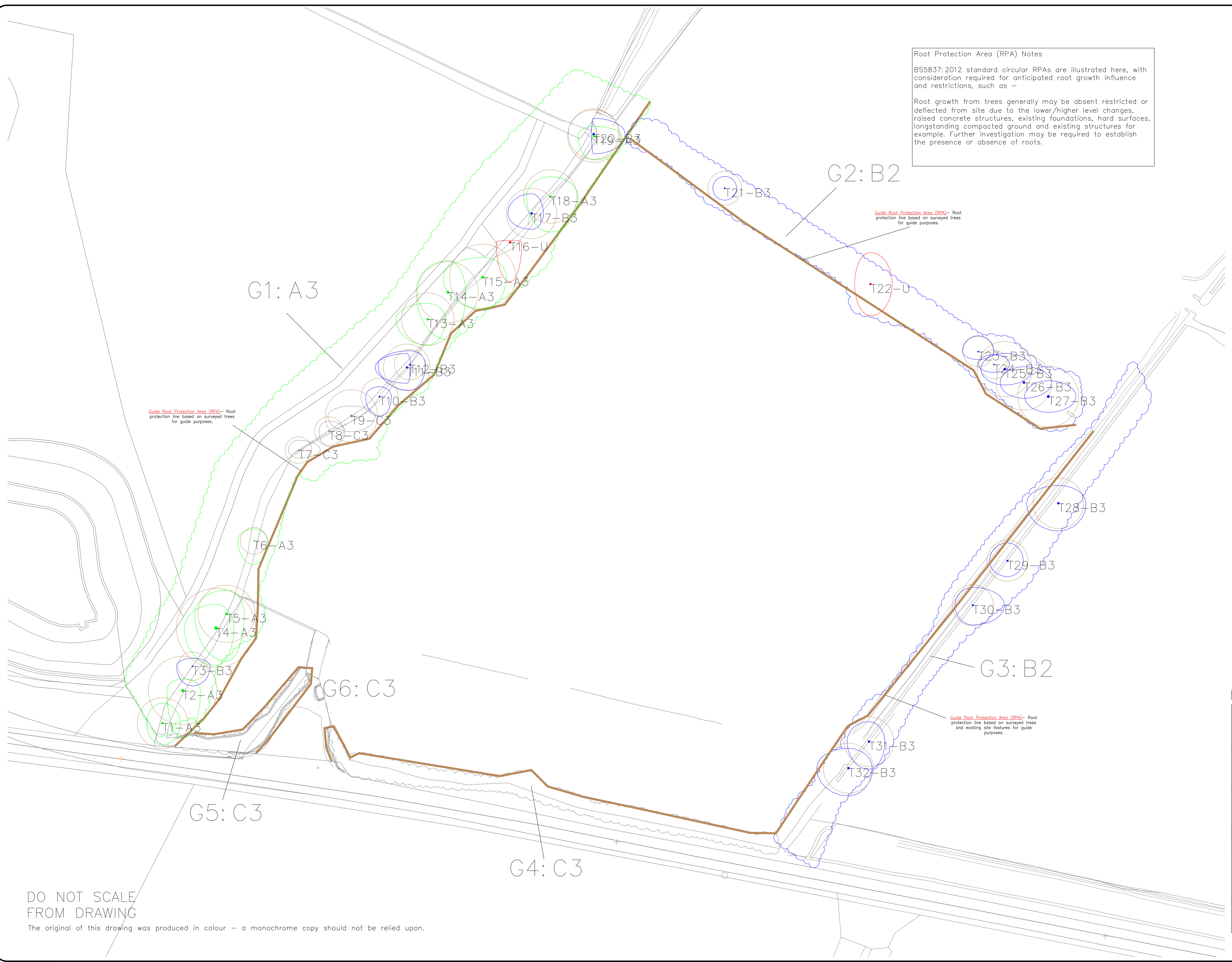
- A
- B
- C
- U

The surveyed trees are illustrated on this Constraints Plan which is prepared in accordance with British Standard BS5837: 2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'

**Root Protection Area (RPA) Notes**

BS5837:2012 standard circular RPAs are illustrated here, with consideration required for anticipated root growth influence and restrictions, such as –

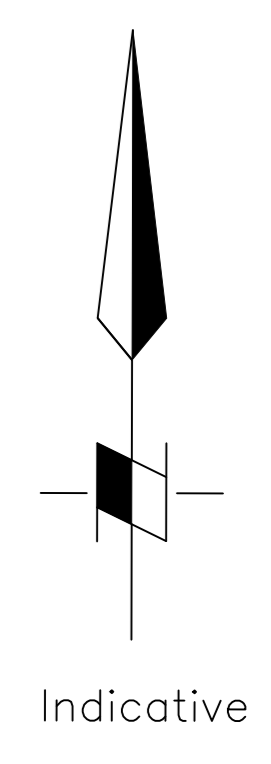
Root growth from trees generally may be absent restricted or deflected from site due to the lower/higher level changes, raised concrete structures, existing foundations, hard surfaces, longstanding compacted ground and existing structures for example. Further investigation may be required to establish the presence or absence of roots.



Guide Root Protection Area (RPA) – Root protection line based on surveyed trees for guide purposes.

Guide Root Protection Area (RPA) – Root protection line based on surveyed trees for guide purposes.

Guide Root Protection Area (RPA) – Root protection line based on surveyed trees and existing site features for guide purposes.



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REV.	DESCRIPTION	DWN	CHK'D	DATE		
CLIENT Mr James France-Hayhurst						
PROJECT 21435/A1 Dafarn Newydd, Llangefni						
TITLE Tree Constraints Plan						
DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	22/04/2021	AT	22/04/2021			1-300
(Mail) Second Floor, 1 Hunter's Walk, Canal Street, Chester, CH1 4EB Telephone: 0333 123 7080 www.indigosurveys.co.uk						
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