

Trees and Construction

BS5837 Arboricultural Method Statement

Site: Bersham Hall, Wrexham, LL14 4HS

Client: QEWC Ltd

Ref: 20102_21/A4 rev A



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- Dec 2022 -

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Revision	Description	Date
//	Tree Survey Advice (20102/A1)	11/11/2021
//	Minor Edits (20102_22/A1)	2/12/2022

1. INTRODUCTION

- 1.1 **Instruction:** This advice has been prepared for the QEWCLtd (hereafter; client) and is in respect of the tree related planning considerations at Bersham Hall, Wrexham, LL14 4HS (hereafter; site).

It is in respect of the tree related planning conditions of granted planning application ESC P/2022/0344 and is produced in accordance with British Standard 5837 : 2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*' (hereafter; BS5837).

- 1.2 **Scope of this report:** This report has been produced in accordance with BS5837 and is intended to demonstrate how trees have been properly considered in relation to the approved application and associated plans. The objective is to provide tree protection details relating to the scheme's potential impact on trees and vice versa.
- 1.3 Following instruction the site was surveyed by Rod Benzies BSc MArborA (hereafter; Consultant) on the 20th October 2021. Pursuant to the agreed brief a site assessment and a BS5837 tree survey were carried out with the production of arboricultural advice for the client in the form of the '*BS5837 Tree Survey Report*'.
- 1.4 The details herein are subject to caveat at Appendix I, outlines relevant terms and definitions at Appendix II and constitutes the findings of the preliminary site survey, the assessment of the accepted scheme and the tree related planning conditions.
- 1.5 The tree survey and site observations were used to illustrate the site's arboricultural constraints in plan format as a 'Tree Constraints Plan' (hereafter; TCP). This is used as a base layer with the approved scheme outline as an overlay to inform this advice as a Tree Protection Plan (hereafter; TPP); the survey table and TPP are at Appendix III.
- 1.6 The initial arboricultural assessment and Tree Report referenced are as part of the planning approval notice, these outlined the arboricultural constraints which informed a TCP with tree locations, BS5837 quality categories, measured crowns and augmented RPAs (based on existing restrictions to root growth). With reference to the above detail, the overlaid scheme outline is assessed against the arboricultural constraints and tree protection recommendations detailed herein.

2. SITE & APPLICATION INFORMATION

2.1 The wider site consists of Bersham Hall with associated structures, access and amenity areas. The surveyed site section consists of a section of the rear garden associated to Bersham Hall.

2.2 **Scheme:** A development scheme has been granted planning permission (ref: ESC P/2022/0344) for the '*PROPOSED NEW ACCESS AND DRIVEWAY TO CREATE A ONE WAY DRIVEWAY SYSTEM.*'.

It is also understood that the current construction intents relate to the new landscaping, tree works and landscape planting throughout; this is to be detailed within the client's Landscape Scheme of which this advice will act as an informative on trees.

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.

The site requires consideration from an arboricultural perspective due as part of the approved layout and design as acknowledged by the council in the form of planning condition 7.

3. ARBORICULTURAL ASSESSMENT & METHOD STATEMENT

- 3.1 The following information, as with the prior contents of this report, is to be read in conjunction with the tree survey data table and the appended Tree Protection Plan (20102_21/TPP/01 rev A); it is referred to as the Method Statement (hereafter; AMS).

Additionally, the recommendations of this AMS require approval by the local authority in accordance with the tree related planning conditions as illustrated on the TPP.

3.2 Arboricultural Site Monitoring / Supervision

- 3.2.1 In adherence to this AMS, the local authority will need confirmation of adherence to this AMS for tree protection, generally by 'a scheme of arboricultural supervision'. This will require site inspections by a qualified arboriculturist during the site's development (i.e. Rods Benzies from Indigo Surveys Ltd).

- 3.2.2 In this instance, as the majority of the trees are clear of works, phased works will be used in conjunction with Protective Barrier Fencing (hereafter; PBF). The tree protection and site management will be supplemented by arboricultural supervision / inspection.

- 3.2.3 Once the PBF is in place with retained hard surfaces for RPAs (ground protection), a high frequency of site inspections is not necessarily essential, i.e. the risk to trees [once the protection measures are in place] is considered to be limited on this site.

It is necessary for *intermittent inspections* of which 4 are *recommended* to ensure this advice is adhered to and the consultant is available for onsite tree queries.

- 3.2.4 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 by email for distribution).

The arboricultural supervision/monitoring is therefore recommended thus:

- (1) Pre-commencement to confirm approved tree works, site hoarding / tree protection fence line and construction restrictions for ground works;
- (2) Cellweb Based Surface Installation. Supervise the installation of the 'Cellweb' based surface within the RPA of T4, T5, T6 and T18 To be carried out by hand through the program to confirm maintained tree protection, no tree damage and exclusion of RPA access. Multiple visits will be required if installed over more than 1 day.
- (3) Airspade Utility Installation. Supervise the installation of the utility run for lighting bollards within the RPA of T4. To be carried out by hand through the program to confirm maintained tree protection, no tree damage and exclusion of RPA access. Multiple visits will be required if installed over more than 1 day.
- (4) Development completion after all hard landscape works and tree and shrub planting is complete to sign off the site as having adhere to the AMS.

3.3 Tree Works

- 3.3.1 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.
- 3.3.2 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):

APPROVED TREE WORK SUMMARY

NUMBER	TREE REMOVALS / PRUNING WORKS	
G2	Pruning	G1 to be pruned to accommodate new access splay as per TPP
Retained trees		Protection by placement of fixed BS5837 specification frame work panels around the crown / RPA extents to have no access during construction and manually operative sensitive surface works and retained soil levels within RPAs.

3.4 Underground utilities

- 3.4.1 For the most part the proposed drainage and underground utilities will be well clear of retained trees. The installation of light bollards which will require sensitive ground works within the RPA of T4 is required.
- 3.4.2 It is therefore considered that special measures for underground utilities will be required.
- 3.4.3 The following restrictions are recommended for underground utilities within RPAs:
- Any necessary excavations to be undertaken sensitively using either a no-dig method (e.g. Air-Spade) and/or under arboricultural supervision;
 - Any exposed roots shall be packed with a clean damp sand (not builders sand) and wrapped in hessian sacking to protect them;
 - Small roots which are identified (those less than 25mm diameter) may be carefully pruned back with a clean sharp tree saw; and
 - Larger roots which are identified (those greater than 25mm in diameter) are to be retained and protected as they may be necessary for a tree's health and stability.

3.5 Protective Barrier Fencing (PBF) Specification

- 3.5.1 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.
- 3.5.2 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".

3.6 Sensitive Ground Works (within RPAs)

- 3.6.1 The site works concentrate on the installation of the driveway access the construction of which is to use the following sensitive techniques
- 3.6.2 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 ;
 - 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.
- 3.6.3 The RPA excavation area of trees is to be marked out [as per the TPP] on the surface and undertaken by hand with the use of manually operated (hand held) tools.
- 3.6.4 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.
- 3.6.5 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.
- 3.6.6 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.

3.7 Additional Tree Protection Considerations

- 3.7.1 It is understood that the client is also finalizing a detailed landscape scheme in order to address conditions 4, 5 and 6 to demonstrate the '*hard and soft landscape works*'. This will also take account of this advice in respect of retained trees' RPAs, retained soil levels within RPAs and CEZs and works within fenced off sections only after construction.
- 3.7.2 General consideration for material storage, handling and pollution control is to be detailed within a 'construction management plan' and supplied by the client in addition to this advice. It is understood that storage of materials/ site cabins will take place off site on existing hard standing

Thereafter, it is important to ensure that delivery, storage, material preparation, access etc. are all located entirely outside of retained trees' RPAs and crowns, i.e. not within the areas enclosed by PBF as per the TPP.

3.8 Summary of Construction Restrictions

3.8.1 The following restrictions apply for tree protection purposes: as illustrated on the Tree Protection Plan (TPP/20102_21/01 rev A):

- a) No additional tree works are permitted unless further agreed in writing by the council.
- a) (completed) PBF is to be installed prior to site works commencing, i.e., site preparation and/or construction as per the TPP (appended)
- b) Once the PBF is in place the enclosed areas are to act as Construction Exclusion Zones (no access is permitted); the site cabins and materials will be placed off site.
- c) No chemicals or materials are to be transported or stored or used or mixed within an exposed RPA or Construction Exclusion Zone (CEZ).
- d) No fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of a tree's canopy or within a RPA or CEZ.
- e) During construction processes RPAs / CEZs may not be breached, i.e. no surface work, without the consultant's prior advice and council consent; this is with the exception of pedestrian access for sensitive landscape works within the rear garden section.
- f) No mechanical digging or scraping is permitted within a RPA / CEZ.
- g) When all construction is complete remaining service installation works can be completed for the Light Bollards.
- h) Only following hard landscaping completion can the PBF be removed and any remaining soft landscaping/tree planting works be undertaken.

3.10 Additional Recommendations

3.10.1 This report is released to the client for them to distribute at their discretion. The consultant is available via telecom and/or email (via the methods on the title page) for any queries relating to this report and/or any other matter relating to arboriculture.

3.10.2 This AMS and the TPP are to be approved by the council as a means of authorised tree protection measures of which all site personnel are to have access to a copy and the details herein are to be inspected as per s.3.2 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 report is limited to the observations made on the date of inspection as detailed herein and any deletion, editing or alteration will result in the report being null and void in its entirety. | This report 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 report. | This report 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 report 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 report 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 categorization 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 m². 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 finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures.

Appendix III

Data Table:
as part of planning application)

As appended (BS5837 Tree Survey Key & Table approved

Tree Protection Plan:

As appended (20102_21/TPP/01 rev A)
Specification of the proposed road surface and service run
to be supplied by the client based on the principles within
this document.

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

CLIENT: QEwC Ltd

PROJECT REF: 21102_21

SITE: Bersham Hall, Bertram Road, Wrexham, LL14 4HS

CONTACT: /

SURVEY DATE: 20 October 2021

ARB CONSULTANT: Rod Benzies (MARborA)

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	Sycamore; Acer psuedoplatanus; Aceraceae	M	20+	1.0	10	9.0	1.5	290, 270, 222	5.45	3	4.5E	Good/ Fair	20-40	Growth influenced by adjacent trees. Multistemmed tree 3 stems. Ivy establishing on stem hindering VTA	B 2	
T2	Sycamore; Acer psuedoplatanus; Aceraceae	M	20+	7.0	6	7.0	4.5	500, 470	8.23	3	3.5E	Good/ Fair	20-40	Ivy establishing on stem hindering VTA. Multistemmed tree 2 stems. Low level adhoc pruning	A 2	
T3	Common Ash; Fraxinus excelsior; Oleaceae	M	20+	5.0	5.5	7.0	4.5	560	6.72	10	5.5E	Good/ Fair	20-40	Ivy establishing on stem hindering VTA. Minor ADB symptoms	B 2	
T4	Lawson Cypress; Chamaecyparis lawsoniana; Cupressaceae	M	20+	4.0	4.5	5.0	3.5	970*	11.64	4	3.5E	Good/ Fair	20-40	Ivy establishing on stem hindering VTA. Low level adhoc pruning. Multistemmed at 1.5m. DBH measured lower than 1.5m. Post horn Branch structure	A 2	
T5	Chile Pine; Araucaria araucana; Araucariaceae	M	20+	6.5	6.5	6.5	6.5	740	8.88	4.5	10All round	Good/ Fair	40+	Ivy establishing on stem hindering VTA. Tarmac drive to east within RPA	A 2	
T6	English Yew; Taxus Baccata; Taxaceae	M	8	5.5	4.5	3.0	4.5	500*	6	0	0All round	Good/ Fair	20-40	Tarmac drive to east within RPA. Multistemmed all round with recumbent stems	B 2	
T7	Hybrid Holly; Ilex alterclarensis; Aquifoliaceae	Y/SM	7	2.5	2.5	2.5	2.5	190, 200	3.31	1.5	1.25All round	Fair	10_20	Ivy establishing on stem hindering VTA. Multistemmed tree 2 stems	C 2	
T8	Sycamore; Acer psuedoplatanus; Aceraceae	M	20+	10.0	8.0	8.0	7.0	690	8.28	3	6E	Fair	20-40	Ivy establishing on stem hindering VTA. Multistemmed tree 2 stems. Inert cavity in base. Multistemmed from 1.5m. Tarmac to north and east	B 2	
T9	English Yew; Taxus Baccata; Taxaceae	M	6.5	3.5	2.5	1.5	3.5	500*	6	0	0All round	Fair	20-40	Ivy establishing on stem hindering VTA. Tarmac drive to east within RPA. Multistemmed all round with recumbent stems	B 2	

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
T10	Hybrid Holly; Ilex alterclarensis; Aquifoliaceae	EM	5	1.5	1.5	1.5	1.5	150	1.8	1.5	1.25All round	Fair	10_20	Small tree	C	2	
G1	Mixed species group	M/OM	20+	n/a	n/a	n/a	n/a	200+	n/a	0	0	Norm	40+	Canopy edge of boundary group, individuals picked up within. Group's	A	3	

TREE SURVEY 'KEY' - BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'																	
TPO/CA		-	On client request: presence of Tree Preservation Orders (TPO) / site location within a Conservation Area (CA) & date checked;														
TREE REF. #		-	Tree reference number: tag or plan number (T - individual tree, G - group of trees/shrubs, H - hedge);														
SPECIES		-	Genus, species and/or common name;														
AGE		-	Age classification (NP - new planting, Y - young, EM - Early-Mature, SM - semi mature, M - mature, LM - late mature, OM - over mature);														
HEIGHT (in m)		-	Approximate height of tree in metres;														
CANOPY (in m) N - S - E - W		-	Approximate branch spread in metres of the four principal compass points;														
STEM (in mm)		-	Stem diameter in millimetres: measured in accordance with s.4.6 of BS5837;														
RPA (in m)		-	Circle radius of the Root Protection Area: calculated using the stem diameter (single/multiple stem variant, as outlined within BS5837);														
CLEARANCE (in m)		-	Crown clearance in metres above the adjacent ground level;														
1ST BRANCH (in m)		-	Clearance in metres to first significant branch and direction of growth (where relevant);														
VITALITY		-	Physiological condition typically gauged from canopy cover and annual extension growth (good, fair, poor, dead);														
ESTIMATED REMAINING CONTRIBUTION		-	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;														
NOTES		-	Structural and physiological condition observations;														
BS CAT.		-	BS5837 tree quality assessment category: resulting from structural/physiological condition and remaining contribution (approximate useful life expectancy);														
		-	Standard retention category U : in such a condition that any existing value would be lost within 10 years;														
		-	Standard retention category A : high quality and value, in such a condition as to be able to make substantial contribution of 40+ years;														
		-	Standard retention category B : moderate quality and value, in such a condition as to make a significant contribution of 20+ years;														
		-	Standard retention category C : low quality and value, currently in adequate condition to remain until new planting could be established 10+ years;														
MANAGEMENT		-	Standard retention sub-category, mainly due to: 1 - Arboricultural values, 2 - Landscape values, 3 - Cultural values, including conservation;														
		-	Preliminary management recommendations (as appropriate);														
' * '		-	Within the survey schedule denotes an estimate														



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.

KEY

Tree Crown Spread

Root Protection Area (RPA)

Tree Stem

T1 Tree No.

Removed Tree

Tree Condition Category

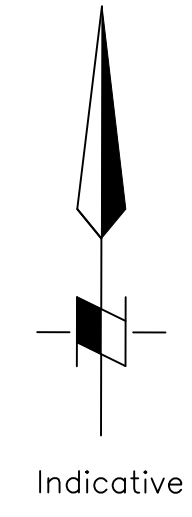
A

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'

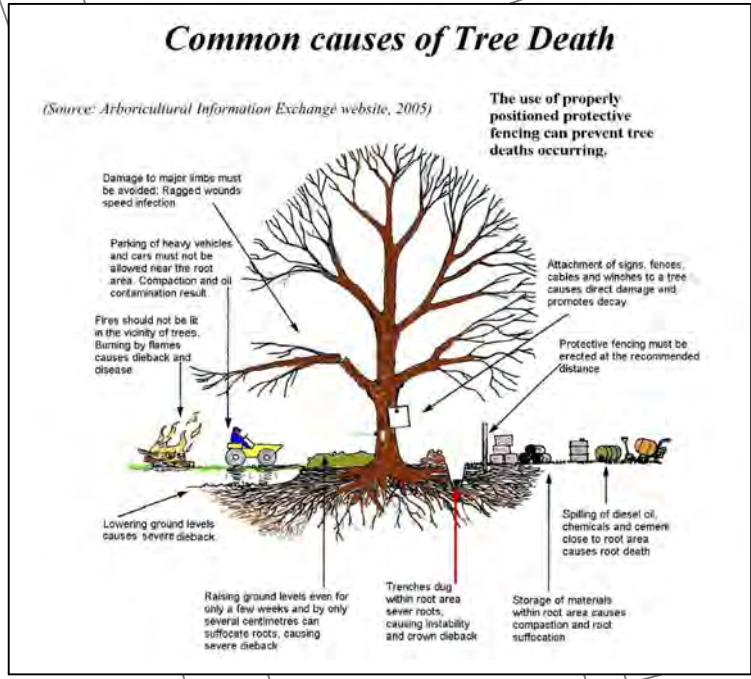


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DRAWING

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REV.	DESCRIPTION			DWN	CHK'D	DATE
CLIENT						
QEwC Ltd						
PROJECT						
20102_21/A1 Bersham Hall, Bertram Road, Wrexham, LL14 4HS						
TITLE						
Tree Constraints Plan						
DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	11/11/2021	AT	11/11/2021			1-200
 Indigo^{Ltd} Surveys (Mail) Second Floor, 1 Hunter's Walk, Canal Street, Chester. CH1 4EB Telephone: 0333 123 7080 www.indigosurveys.co.uk						
Drawing Number						A1
20102_21/A1/TCP/01						REV.

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Tree Removals:
G1 to be removed in area shown adjacent to T8 remainder to be protected

Protective Barrier Fencing (PBF):
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 "Tree Protection Area - Keep Out". See example on TPP.

Sensitive Ground Works:
Service Run Existing vegetation may be removed with hand tools or sprayed with an approved non residual herbicide such as 'Glyphosate'. The excavation will be initially undertaken by hand under direct on-site arboricultural supervision to a minimum of 750mm deep of any excavation, underground services. The soil is to be loosened with the use of a fork or pick and then cleared with the aid of an air-spade and air-vac.

Proposed Driveway The driveway is to follow the existing 'cut' north of T8 and south of T6 that is present in this location as an existing feature and will not require the removal of trees or further excavation.

Existing vegetation may be removed with hand tools or sprayed with an approved non residual herbicide such as 'Glyphosate'. The new hard surfacing will be constructed using a 'No Dig' surfacing situated entirely above the existing soil surface and where needed using a proprietary cellular confinement system (GeoWeb or similar) laid over a bi-axial geo-grid (tensar Triax or similar). Prior to this any small hollows on the surface may be filled with clean sharp sand (not builders sand) to a maximum depth of 150mm. The 'GeoWeb' is to be back filled by hand with a no-fines aggregate of 20mm - 30mm. The area of 'GeoWeb' will be covered with a permeable geotextile fabric and the finished wearing course laid on top. Edge supports of an appropriate size and strength should be set above ground level and secured with haunching or steel pins driven into the ground. The outer edge of the supports may be banked up with clean top soil. Please example on the TPP for the principle.

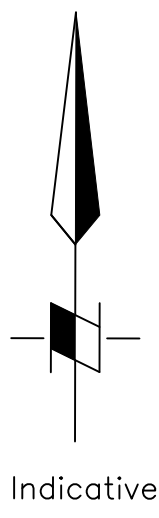
KEY

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

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'



Construction Exclusion Zone - all RPAs on site, that areas enclosed by tree protection fencing are to have no landscaping until construction completion, soil levels to be retained and works to be undertaken manually (turf, planting etc.)

Protective Barrier Fencing - to exclude retained trees from construction works with tree protection signs, fixed in place for the duration of site works for tree protection



Principle of trenching technique to be used when installing electricity supply for light bollards. Air Spade to be employed under supervision.



Example of surface to be employed in areas within RPA of trees. Details to be provided by client

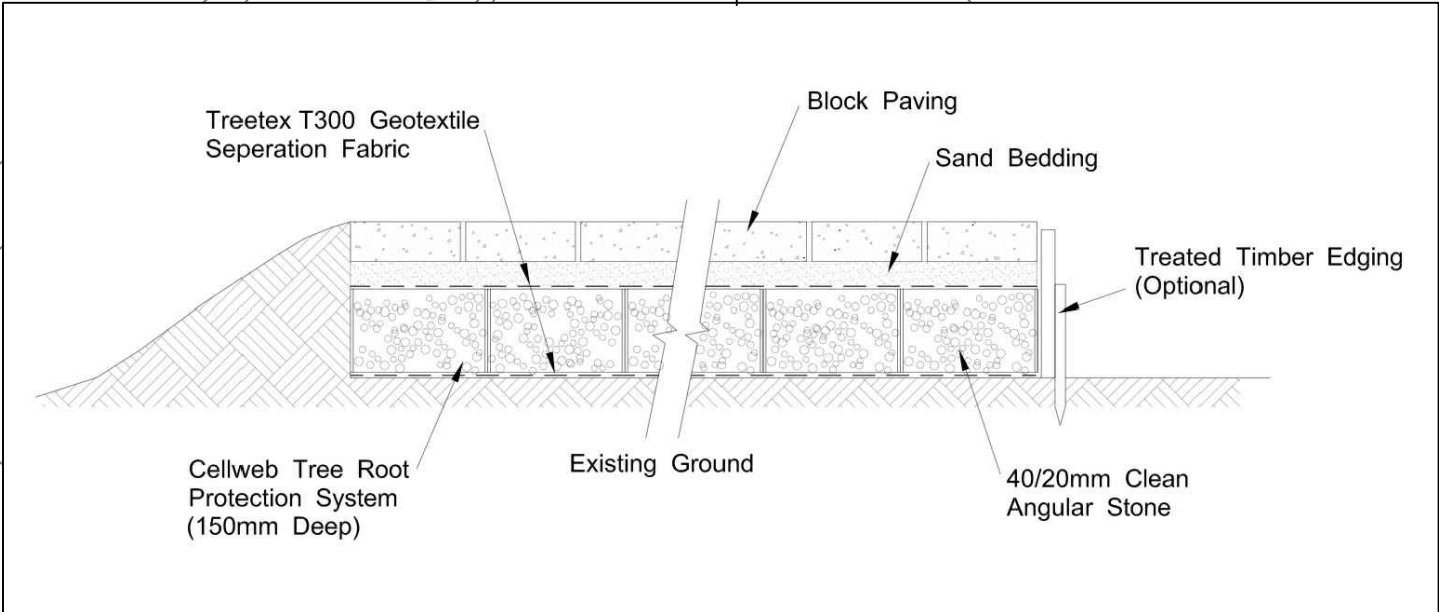
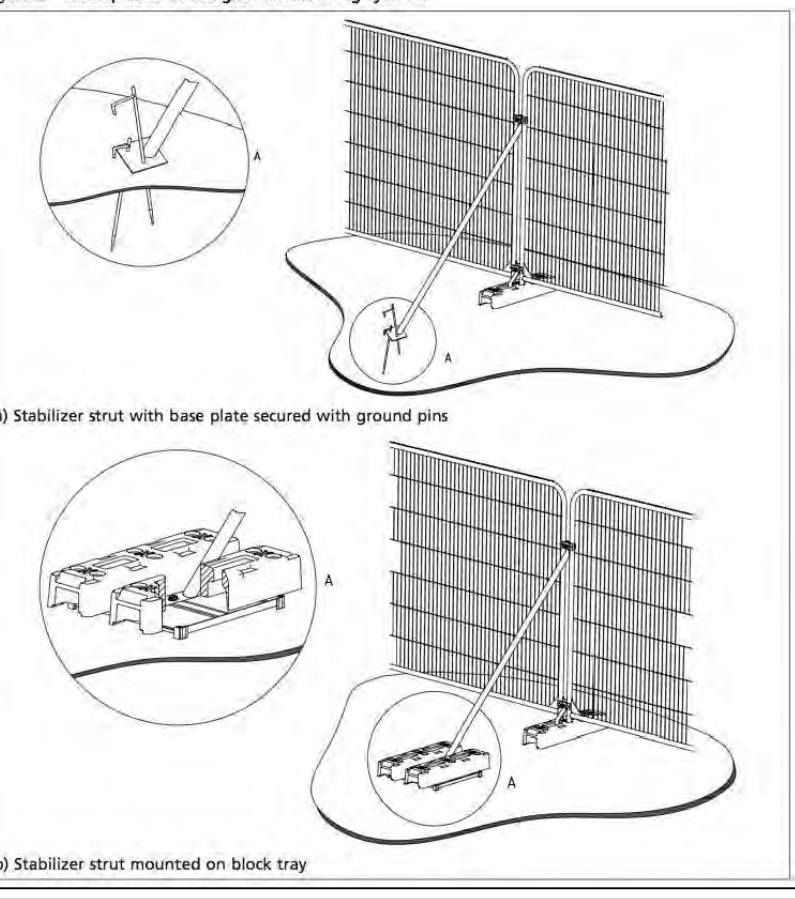


Figure 3 Examples of above-ground stabilizing systems



- Tree Protection Specification**
- The tree protection measures outlined within the Arboricultural Method Statement (ref: 20102_21/A2 AMS) are to be adhered to as illustrated on this Tree Protection Plan (ref: 20102_21/A2/TPP-01), and the additional details below, that:
- Tree works are to be completed prior to commencement of any and all site processes: no additional tree works (not specified in the method statement), or leaning against or attaching of objects to a tree, are permitted.
 - Protective Barrier Fencing (PBF), with Tree Protection Signs fixed at least every 5m (see detail and illustration on this TPP), is to be installed prior to the site works commencing.
 - Hard Surfaces within RPAs are to be retained where ongoing access is required.
 - No chemicals or materials are to be transported or stored or used or mixed within a RPA or Construction Exclusion Zone (CEZ).
 - No fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of a tree's canopy or in a CEZ.
 - During site works RPAs and CEZs may not be breached, i.e. no surfacing works, without the prior advice of the consultant and the consent of the council.
 - No mechanical digging or scraping is permitted within a RPA or CEZ.
 - When all construction works are completed the PBF can be removed however, should be realigned consistent with the final landscape design to allow for the hard landscape improvement works to be undertaken ahead of the soft landscape shrub and tree planting works.

A	Edits to driveway procedure	RB	TB	2/12/22
	Based on TCP 20102_21 & 18779 - Bersham Hall-002 Proposed Drive	RB	TB	15/09/22
REV.	DESCRIPTION	DWN	CHK'D	DATE

CLIENT
QEwC Ltd

PROJECT
20102_21/A1
Bersham Hall, Bertram Road,
Wrexham, LL14 4HS

TITLE
Tree Protection Plan

DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RPHB	15/09/2022	AT	15/09/2022			1-200



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Drawing Number
20102_21/A2/TPP/01
A1
REV. A

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DRAWING
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