

Arboricultural Method Statement

Bryn Y Groes, Gresford - Phase 5

Prepared for:

SG Estates

Our Ref: 18/AMS/WXM/198 (C)
Planning Ref: P/2014/0671

October 2018

Tree Solutions Ltd

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1.0 INSTRUCTION

- 1.1 Tree Solutions Ltd has been instructed by SG Estates to provide an Arboricultural Method Statement (AMS) to satisfy and discharge Planning Conditions 5 & 6 Planning Code No: P/2014/0671 – Plots 22-33, Bryn Y Groes, Gresford, LL12 8UA.
- 1.2 This Method Statement sets out the methodology and protection measures for all works within close proximity to trees located on and adjoining the site boundary indicated on the Tree Protection Plan at **Appendix 2**. All trees have been surveyed and are detailed within the tree survey schedule sheet at **Appendix 1**. Compliance with this method statement will be a requirement of all relevant contracts associated with the approved development. Copies of this document will be made available for inspection on site.
- 1.4 Trees to be retained and details including the designated Root Protection Area and location of tree protective fencing are clearly indicated on the Tree Protection Plan Ref 18/AMS/WXM/198 (C), Drawing No 1 which is at **Appendix 2** to this report.
- 1.5 The purpose of the AMS is to provide information on protection and control measures affecting the existing tree stock. The works, with applicable methodology, are divided into the sequence of operations at paragraph 4.0:

2.0 STATUTORY CONTROLS

- 2.1 All trees on site are subject to a Tree Preservation Order. As such, statutory planning consent is required prior to undertaking any works not granted consent under previous planning applications.

3.0 SITE PLAN

- 3.1 The observations and recommendations contained in this document relate to the approved plan Ref: LTP PH4 and latest amended site plan Ref: PH5 PL1C supplied Cartwright Architectural & Planning Services.
- 3.2 The method statement should be read in conjunction with the enclosed Tree Protection Plan, which is based upon the above drawing.

4.0 SEQUENCE OF OPERATIONS

From commencement of the above development, the following methodology shall be implemented in the manner and sequence described:

1. Erect temporary tree protective fencing
2. Main construction phase
3. Installation of no-dig footpath
4. Removal of temporary fencing
5. Landscaping within RPA of trees
6. Arboricultural site supervision

1. Erect Temporary Tree Protective Fencing

1. Prior to commencement of any construction, preparation, excavation or material deliveries the main contractor shall erect the temporary protective fencing as detailed in the 'Tree Protection Specification' and in the location indicated on the Tree Protection Plan.
2. Tree Solutions are to be given 5 days written notice as soon as all protective fencing has been erected in order to inspect the specification and location. An inspection report will be completed and returned to the LPA Tree Officer for approval. Any damage occurring to protective fencing during the demolition or construction phase shall be made good by the main contractor

2. Main Construction Phase

1. Tree protective fencing to be erected prior to any construction plant or materials entering the site
2. Tree protective barriers in accordance with BS 5837: 2012 will be erected to prevent damage to the tree stems and any movement of plant within the RPA

3. There shall be no storage of construction material, site parking, site accommodation or equipment in any area designated as the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing
4. No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained. No fires will be lit
5. The site agent shall supervise deliveries by self-loading crane, with vehicles positioned in such a manner that retained trees are not at risk of damage

Cement Mixing

- The cement mixer will be laid on top of plywood boards in a position located outside the RPA of any tree or hedgerow. The mixer will be kept in this position throughout the development work.

Avoiding Damage to Stems and Branches

- Care shall be taken when planning site operations in proximity to trees to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious injury resulting in safe retention impossible

On Site Storage of Spoil and Building Materials

- Prior to and during all site construction works no spoil will be stored and no cement mixing will take place within the Root Protection Area of any tree on or adjacent to the site even if proposed site work is to be within the crown spread. Any encroachment within this protected area will only be with the prior agreement of the LPA Arboricultural Officer

3. Installation of 'No-Dig' Footpath/Cycleway

1. Upon completion of all construction work and removal of all plant and machinery from site, the no-dig footpath can be installed
2. The no-dig sections as indicated with a blue hatch on the Tree Protection Plan shall be constructed using a three dimensional cellular confinement system in accordance with the engineers and manufacturers recommendations - see Cartwright Architectural & Planning Services Boundary POS Planting Layout & Sections Plan Ref: AppH4 PL1 - cross section extract at plate 1 below.
3. Construction shall ideally be undertaken in dry weather when ground is driest and least prone to compaction
4. Ground vegetation should be killed using a translocated herbicide such as glyphosate. To prevent severe oxygen depletion in the soil during the process of decomposition, all dead organic material shall be removed
5. All major protrusions such as rocks and demolition material shall be removed minimizing ground disturbance. All hollows will be filled with sharp sand
6. Permeable matting will then be laid and the cellular confinement system laid on top and pegged in place.
7. The cellular confinement system will then be installed in accordance with the manufacturer's guidelines using **no-fines** aggregate. Fill the cells working from the area furthest from the tree first. Further filling should be carried out using the filled Cellweb as a platform
8. Edging will be constructed with tanned boards attached to pegs driven into the ground. Pegs should be long enough to give adequate support during construction
9. Install a permeable wearing course, e.g. porous tarmac or block paving or porous tarmac placed on the aggregate. Paving slabs or brick paving should be dry-bedded on the sub-base and joints left unsealed

10. Under no circumstances is limestone aggregate to be used

4. Remove all Temporary Tree Protective Fencing

1. Tree Protective fencing will only be removed upon completion of all construction work and once all machinery associated with the works has left site.
2. The tree protection fencing shall not be removed until written confirmation has been received from the Local Planning Authority that it is acceptable to do so.

5. Landscaping within RPA of Trees

1. There shall be **no rotovation** of ground within any area designated as a Root Protection Area (RPA) and Construction Exclusion Zone (CEZ)
2. Any undulation of land within the public open space (POS) areas shall be filled with a 50-50 mix of sharp sand and imported topsoil in accordance with land BS 3882 (2015). Fill level must not exceed 75mm and to be spread by hand
3. Movement of material shall be by hand using wheelbarrows. The use of any mechanical excavator or dumper within the RPA of tree is strictly prohibited
4. No hard landscaping works or excavation for cables or any other service should be installed within the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) without the written consent of the LPA

6. ARBORICULTURAL SITE SUPERVISION

- 1 The erection of all tree protection measures outlined in this AMS and as indicated on the Tree Protection Plan will be inspected by the contract Arboricultural Consultant immediately after erection. Photographic evidence of the location and specification of all protective fencing will be forwarded to the LPA Tree Officer upon completion.
- 2 All proposed work within any designated RPA will be overseen by the contract Arboricultural Consultant with photographic records taken and signed inspection report emailed direct to the LPA for approval
- 3 A pre-commencement site meeting is to be held between the landscape contractor and project Arboricultural Consultant prior to any site works commencing
- 4 Landscape works within the POS area to be supervised by the project Arboricultural Consultant with a report and photographic record issued to WCBC for record

Useful Contacts

Arboricultural Consultant

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LPA Arboricultural Officer

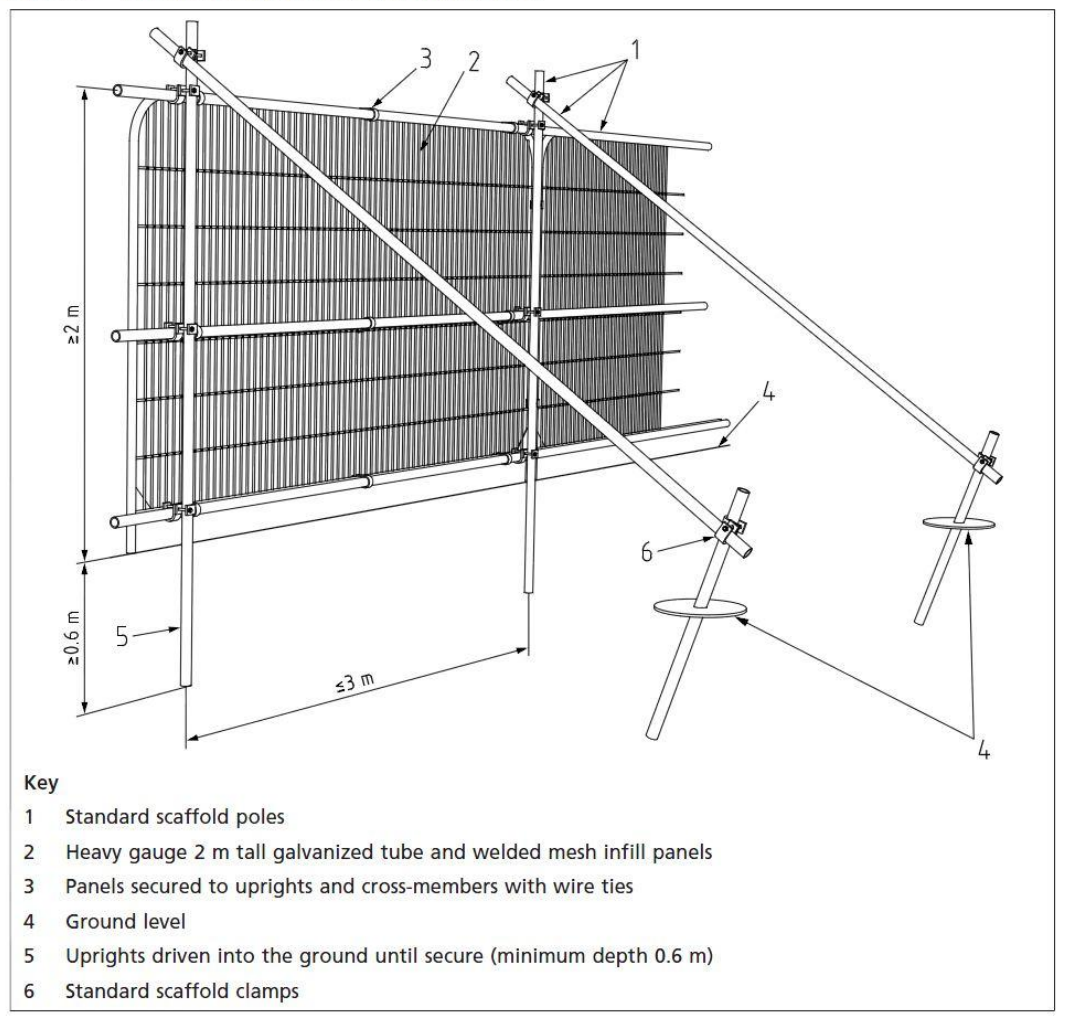
Name: Jon Brewin
 Tel: 01978 298763
 Email: jon.brewin@wrexham.gov.uk

TREE PROTECTIVE FENCING

- 1 Before the commencement of any demolition and subsequent construction works on site (other than those set out in the schedule of tree works contained in this document), protective fencing will be erected as detailed on the Tree Protection Plan and as specified below. The LPA Tree Officer will be given 5 days notice upon completion of the fencing in order to inspect and approve prior to the commencement of any site works.
- 2 The fencing will consist of a scaffold framework in accordance with Figure 2 of BS 5837 – 2012 (illustration below) comprising a metal framework, both vertical and horizontal, well braced to resist impacts. Vertical tubes will be spaced at a maximum interval of 3m. Onto this, weldmesh panels shall be securely fixed with wire or scaffold clamps. Weldmesh panels on rubber or concrete feet are not considered resistant to impact and for this reason will not be used. The site manager or other suitably qualified appointed person will be responsible for inspecting the protective fencing on a daily basis; any damage to the fencing or breaches of the fenced area will be rectified immediately.
- 3 Clearly legible weatherproof signage, stating “Protected Trees – Exclusion Zone” shall be attached to the fencing 1.5m from the ground, facing out of the Tree Protection Zone located at regular intervals along the fence line.
- 4 The fencing will remain in place until completion of all site works and then only removed when all site traffic is removed from site.
- 5 Other than works detailed within this method statement or approved in writing by the Local Planning Authority (LPA), no works including storage or dumping of materials shall take place within the exclusion zones defined by the protective fencing.

Protective Fencing Detail

Figure 2 Default specification for protective barrier



Appendix One

Tree Survey Schedule

TREE SURVEY SCHEDULE (BS5837: 2012)

Tree Solutions

Arboricultural Consultants

SITE:	BRYN Y GROES, GRESFORD - PHASE 5
CLIENT:	SG ESTATES
BRIEF:	ARBORICULTURAL METHOD STATEMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	04/10/2018
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	18/AMS/WXM/198 (C)

PAGE 1 OF 2

TREE NO. T - Tree G - Group H - Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m)				STEM/ MULTI-STEM* DIA.(mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W						
T1	Wellingtonia	M	17 1S	2.5	2	2.5	2.5	1060	G	- Prominent tree with no visual defects - E.R.C. 40	• N/A	A2	12.7 508m²
T2	Cedar (Lebanon)	M	18 3S	6.5	5	6	5	1200	G	- Ivy clad impeding inspection - Prominent landscape feature to site - E.R.C. 40	• N/A	A2	14.4 652m²
T3	Lime	FM	18 0	4.5	4.5	6	5	1100	G	- Epicormic growth around base impeding inspection - E.R.C. 40	- Sever Ivy and remove epicormic growth back to stem to allow for re-survey - Crown lift to 4m to allow access beneath canopy	A3	13.2 547m²
T4	Lime	M	17 0	3	4	4	3	500	G	- As T3 - Dieback in crown - Past large diameter limb failure to west - E.R.C. 20	- As T3 - Crown clean to removal all dead/dying and dangerous limbs	B2	6 113m²

HEADINGS & ABBREVIATIONS

TREE NO.
SPECIES:
AGE RANGE/LIFE STAGE:
HEIGHT:
CROWN SPREAD:
CROWN CLEARANCE & DIRECTION OF GROWTH:
STEM DIA/MULTI-STEM DIA:
VITALITY:
E.R.C. = ESTIMATED REMAINING CONTRIBUTION:
BS 5837 CATEGORY & SUB-CATEGORY GRADING:
BS 5837 RADIUS & BS 5837 RPA:

REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE (T = TREE, G = GROUP, H = HEDGE)
COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)
Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE
ESTIMATED AND RECORDED IN METRES. APPROXIMATELY 1 IN 10 TREES ARE MEASURED USING A CLINOMETER AND THE REMAINDER ESTIMATED AGAINST THE MEASURED TREES
MAXIMUM CROWN RADIUS MEASURED TO THE FOUR CARDINAL COMPASS POINTS FOR SINGLE SPECIMENS ONLY (MEASUREMENT FOR TREE GROUPS - MAXIMUM RADIUS OF THE GROUP)
HEIGHT IN METERS OF CROWN CLEARANCE ABOVE ADJACENT GROUND LEVEL (TO INFORM ON GROUND CLEARANCE, CROWN/STEM RATIO AND SHADING)
STEM DIAMETER - MEASURED AT APPROXIMATELY 1.5 METRES ABOVE GROUND LEVEL OR A COMBINATION OF STEMS FOR MULTI-STEMMED TREES
A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD
RELATIVE USEFUL LIFE EXPECTANCY (YEARS)
A = HIGH QUALITY AND VALUE, B = MODERATE QUALITY AND VALUE, C = LOW QUALITY AND VALUE, U = UNSUITABLE FOR RETENTION (SUB-CATEGORY REFERS TO ARBORICULTURAL, LANDSCAPE AND CULTURAL/CONSERVATION VALUES)
PROTECTIVE DISTANCE - RADIUS FROM THE CENTRE OF THE STEM TO THE LINE OF TREE PROTECTION (CONSTRUCTION EXCLUSION ZONE - CEZ) AND PROTECTIVE BARRIER ROOT PROTECTION AREA - BS 5837 (2012) ANNEX D (THE RECOMMENDATIONS STATE THAT THE RPA SHOULD BE CAPPED AT 707 M²) NOTE – ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

TREE SURVEY SCHEDULE (BS5837: 2012)

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				N	S	E	W						
T5	Sycamore	EM	13 1S	1	4	1.5	3.5	370	M	- Poor quality naturally colonised tree of no value/merit - Removal will clear space to T4 - E.R.C. 0	• Remove	C3	4.4 62m²
T6	Lime	FM	17 0	4	3	4	3	500	G	- No access to base of stem due to mass epicormic growth - Prominent landscape feature - E.R.C. 40	- Sever Ivy and remove epicormic growth back to stem to allow for re-survey - Crown lift to 4m to allow access beneath canopy	A2	6 113m²
T7	Lime	FM	17 0	4.5	3	3	4.5	650	G	• As T6	• As T6	A2	7.8 191m²

Table 1 Cascade chart for tree quality assessment

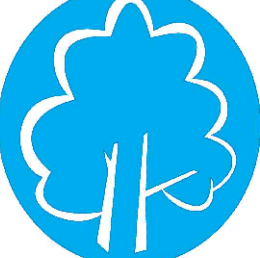
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10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

Appendix Two

Tree Protection Plan



Tree Protective Fencing Specification

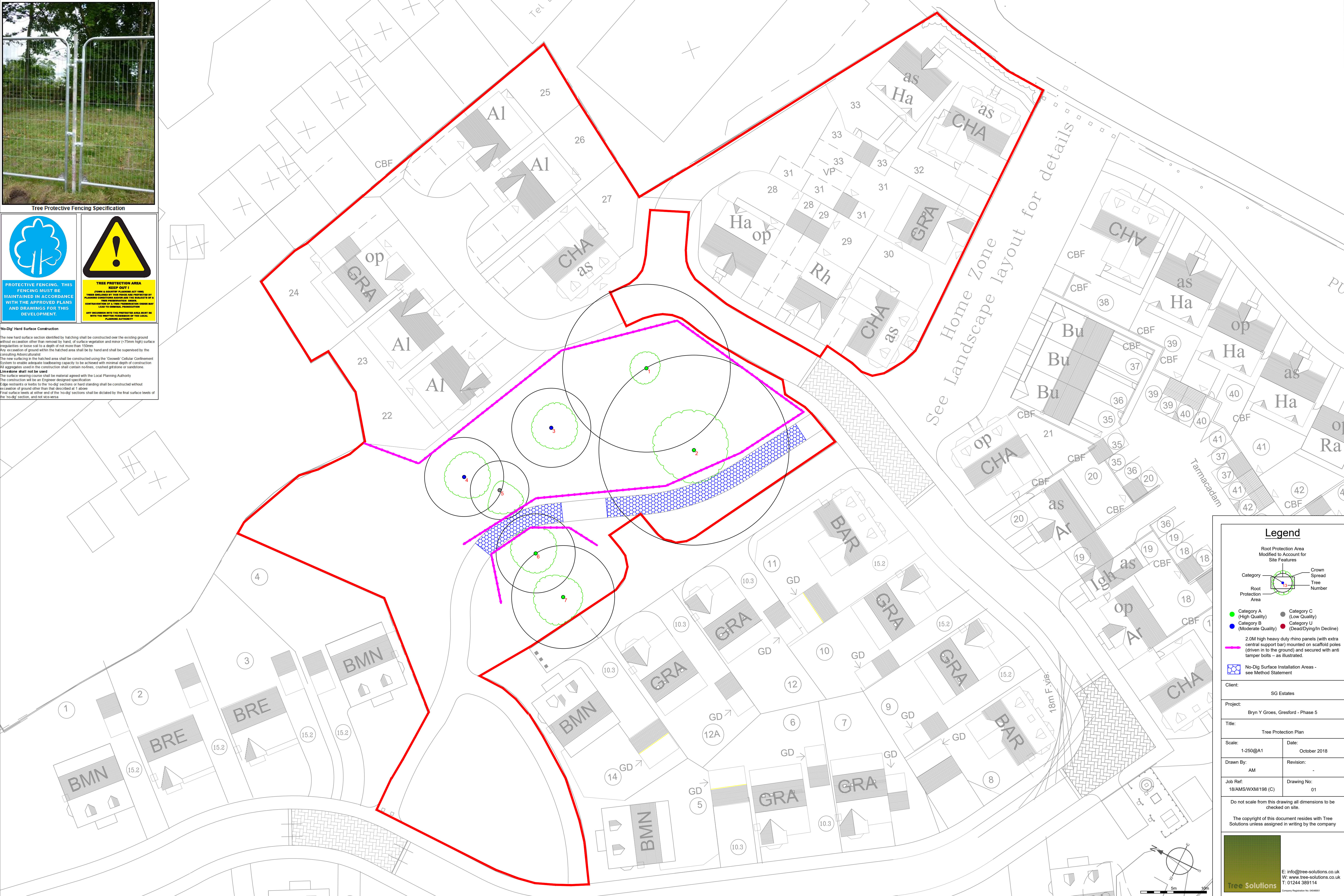


PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.



TREE PROTECTION AREA
KEEP OUT!
IT IS THE DUTY OF ALL PERSONS TO KEEP OUT OF THIS PROTECTED AREA AND TO REMAIN OUT OF IT AT ALL TIMES. ANY PERSONS WHOSE ACTIONS OR INACTION MAY BE IN BREACH OF THIS PROTECTION SHALL BE PROSECUTED BY THE LOCAL PLANNING AUTHORITY.

No-Dig Hard Surface Construction
The new hard surface section identified by hatching shall be constructed over the existing ground without excavation other than removal of hard, of surface vegetation and mulch (<150mm high) surface irregularities or loose soil to a depth of not more than 150mm.
Any excavation of ground within the hatched area shall be by hand and shall be supervised by the consulting Arboriculturalist.
The new surfacing in the hatched area shall be constructed using the 'Goweb' Cellular Confinement System to enable adequate loadbearing capacity to be achieved with minimal depth of construction.
All aggregates used in the construction shall contain no fines, crushed gritstone or sandstone.
Limedone shall not be used.
The surface wearing course shall be material agreed with the Local Planning Authority.
The construction will be as an Engineer designed specification.
Edge restraints or kerbs to the 'no-dig' sections or hard standing shall be constructed without excavation of ground other than that described at 1 above.
Final surface levels at either end of the 'no-dig' sections shall be dictated by the final surface levels of the 'no-dig' section, and not vice-versa.



Legend

Root Protection Area
Modified to Account for
Site Features

Category

Root Protection Area

Crown Spread
Tree Number

Category A (High Quality)
Category B (Moderate Quality)
Category C (Low Quality)
Category U (Dead/Dying/In Decline)

2.0M high heavy duty rhino panels (with extra central support bar) mounted on scaffold poles (driven in to the ground) and secured with anti tamper bolts – as illustrated.

No-Dig Surface Installation Areas - see Method Statement

Client: SG Estates

Project: Bryn Y Groes, Gresford - Phase 5

Title: Tree Protection Plan

Scale: 1:250@A1
Date: October 2018

Drawn By: AM
Revision: -

Job Ref: 18/AMS/WXM/198 (C)
Drawing No: 01

Do not scale from this drawing all dimensions to be checked on site.

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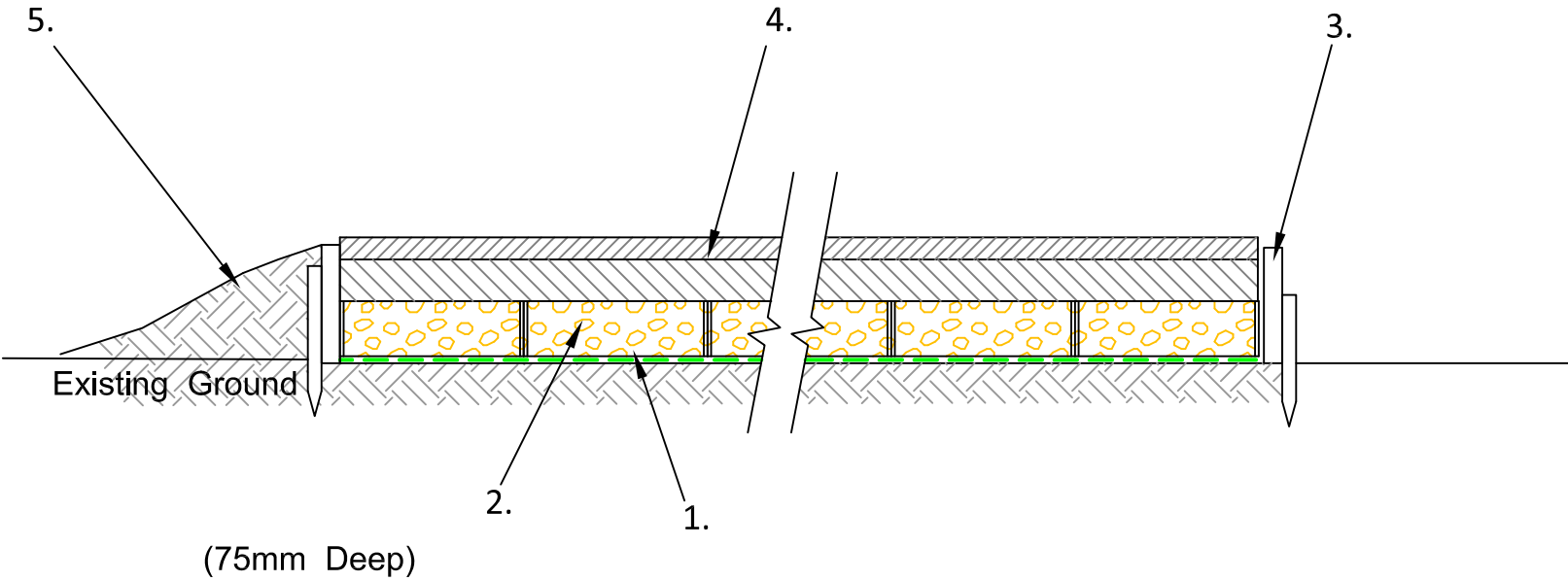


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Appendix Three
Example Cross Section Drawing
of No-Dig Footpath

KEY

- 1. Permatex 300 geotextile
- 2. 75mm deep InfraWeb tree root protection System infilled with 4/20 Clean angular Stone to BS EN 13242 / EN 12620
- 3. Treated timber edging (Or other Edging detail acceptable)
- 4. Pervious asphalt surface to engineers details
- 5. Soil graded to edging (if required)



Footpath Cross Section	TITLE InfraWeb Section - Tree Root Protection c/w Pervious Asphalt Surface	DRAWN BY PP	SCALE 1:10	DATE 01/14	CHECKED BY RP
		DRAWING NO IG-SD-IW-PA-75		REVISION	APPROVED