

Arboricultural Method Statement

Chestnut Court, off Summerhill Road, Gwersyllt, Wrexham, LL11 4SP

Prepared for:

SG ESTATES LTD

Our Ref: 14/AIA/WXM/135(Rev A)

Planning Ref: P/2014/0262

07 April 2016

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1.0 Introduction

- 1.1 Tree Solutions Ltd has been commissioned by SG Estates Ltd to prepare site specific Arboricultural Method Statement detailing all proposed works within close proximity to retained trees in order to satisfy Planning Condition 5 of Planning Code Number P/2014/0262 which states:

The Method Statement shall include the following:

1. A specification for tree protection fencing and ground protection measures that comply with British Standard 5837:2012;
 2. A Tree Protection Plan showing the location of the trees to be removed and retained with their crown spreads, Root Protection Areas, Construction Exclusion Zones, and location of protective fencing and ground protection measures accurately plotted;
 3. A full specification for any access, driveway, path, underground services or wall foundations within retained tree Root Protection Areas or Construction Exclusion Zone, including any related sections and method for avoiding damage to retained trees;
 4. Details of general arboricultural matters including proposed practices with regards to cement mixing, material storage and fires;
 5. Details of the frequency of supervisory visits and procedures for notifying the findings of such visits to the Local Planning Authority;
 6. Method for protecting retained trees during demolition works;
 7. Details of all proposed tree works, including felling and pruning
- 1.2 This Method Statement sets out the protection measures for all works within close proximity to trees located on and adjoining the site boundary as indicated on the Impact Assessment Plan at **Appendix 2**. All trees have been surveyed and are detailed within the tree survey schedule sheets 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 14/AIA/WXM/135, Drawing No 3 (Rev C) which is at **Appendix 3** 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 5.0:

2.0 STATUTORY CONTROLS

- 2.1 All trees on site are subject to a Tree Preservation Order.

3.0 SITE PLANS

- 3.1 The method statement should be read in conjunction with the enclosed Tree Protection Plan and proposed plan Ref: SGE.1/TMJ-03.1 Rev A dated March 2015 provided by Axis Architectural Services.

4.0 DEVELOPMENT IMPACTS TO RETAINED TREES

- 4.1 A phase one preliminary tree survey and report was carried out in March 2014 in support of Outline Planning Consent Ref: P/2014/0262 in which all existing trees were identified and plotted on a Tree Constraints Plan. The proposed layout has been determined by the retention categories of each tree and the location of their designated Root Protection Areas. It has been amended a number of times following detailed pre-application discussions with WCBC and the Councils Tree Officer. As such the principles of BS5837:2012 have been adhered to and the layout is in accordance with Planning Policy EC4 and Local Planning Guidance Note 17 'Tree & Development'.

Every effort has been made at the design stage to avoid conflicts with the best quality trees on site in order to retain the mature tree cover and have minimal impact on the character and setting of the locale. As such the trees are well intergraded within the design and there are only minimal adverse impacts as detailed below:

1. The proposed pedestrian footpath in the south east corner of the site and two parking bays to plot 10 encroach within the RPA of tree numbers 37, 40 & 41. In order to comply with recommendations contained within para. 7.2 of BS5837: 2012 this footpath and parking bays will be constructed to a no-dig design specification using a three dimensional cellular confinement system such as 'Infracore'. They will be installed with a 75mm layer of plastic cells laid above the existing ground level and back filled with a free draining washed stone that contains no fines in order to help maintain adequate gaseous diffusion for tree roots below. The top dressing will be a porous surface dressing to be agreed with the LPA. Details of design for the driveway can be found within Infracore cross section drawing Ref: IG-SD-IW-PA-75 and footpath IG-SD-IW-BP-75 is at **Appendix 4 & 5**
2. In order to accommodate the layout two individual trees (T34 & T35) and one group (G2) require to be removed. These are small insignificant specimens that are not visually prominent from any location outside the site boundary. The removal of the trees allows for a better site layout that ensures a greater separation distance to more important trees. Furthermore, this has been discussed and agreed by the Councils Tree Officer during a site meeting and subsequent pre-application discussions.
3. Whilst unnecessary to facilitate development works, we have detailed all 'C' category trees to be removed as discussed and agreed with the Councils Tree Officer during a site meeting and subsequent pre-application discussions. These trees are all of low quality and have no material conservation or other cultural value due to impaired health and vigour or significant suppression by surrounding more dominant specimens. The removal of these trees along the western boundary will allow light to penetrate through this dense tree line and those located to the south (36, 38 & 39) will make a stand alone feature of T37.
4. Tree numbers 14 & 42 are in advanced decline and have therefore been categorised as 'U' grade i.e. 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 or those with serious structural defects. These trees should be removed irrespective of this proposal and as such they should not form a material consideration of this planning application.
5. Tree numbers 31,32, 33, 44 & 48 are to be removed in order to provide clearance for the eradication of the Japanese Knotweed on site. The removal of these trees is being dealt with under Planning Application No: P/2016/0263. Refer to Ashfield Japanese Knotweed Management Plan for further details

5.0 SEQUENCE OF OPERATIONS

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

1. Pre-contract site meeting
2. Tree surgery works
3. Erect temporary tree protective fencing
4. Main construction phase
5. Install 'No-Dig' car parking bays & pedestrian footway
6. Removal of temporary fencing
7. Landscaping within RPA of trees
8. Arboricultural site supervision

1. Pre-Contract Site Meeting

To outline working methods in relation to trees prior to any construction activity on site, a site meeting of the following shall take place:

Client, Contractor, Contract Arboricultural Consultant, LPA Tree Officer

2. Tree Surgery Works

1. Before the erection of the temporary protective fencing, all tree removal shall be implemented in accordance with the Tree Survey Schedule at **Appendix 1**
2. All possible efforts must be made to prevent damage to retained trees including potential root incursion or compaction caused by vehicle access.
3. All arboricultural works shall conform to the recommendations of BS 3998 (2010) 'Recommendations for Tree Work'
4. All operatives shall be equipped with and use personal protective equipment (PPE) in accordance with current Health & Safety Executive current directives and industry codes of practice.
5. Performance of all arboricultural operations and use of equipment shall be in accordance with current Health & Safety Executive current directives and industry codes of practice.

3. Erect Temporary Tree Protective Fencing

1. Prior to any Japanese Knotweed eradication works, 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

4. 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 with 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 outside the RPA of any trees. The mixer will be kept in this position throughout all 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

5. Installation of 'No-Dig' Parking Bays & Pedestrian Footway

1. The proposed car parking bays & pedestrian footway that encroach within the RPA of tree numbers 37, 40 & 41 and as indicated with a blue cross hatch on the tree protection plan shall be constructed using a no-dig three dimensional cellular confinement system in accordance with the engineers and manufacturers recommendations see drawings at **Appendix 4 & 5**.
2. Construction shall ideally be undertaken in dry weather when ground is driest and least prone to compaction
3. 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
4. All major protrusions such as rocks and demolition material shall be removed minimizing ground disturbance. All hollows will be filled with sharp sand
5. Permeable matting will then be laid and the cellular confinement system laid on top and pegged in place.
6. 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/Infraweb as a platform
7. 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
8. Install a permeable wearing course, e.g. block pavers or porous tarmac placed on the aggregate.
9. Tree Solutions will be responsible for monitoring all excavation works and issuing a certificate of practical completion
10. **Under no circumstances is limestone aggregate to be used**

Cross section details:

Car Parking Bays Refer to Infraweb Section Drawing Ref: IG-SD-IW-BP-75 at Appendix 4

Pedestrian Footpath Refer to Infraweb Section Drawing Ref: IG-SD-IW-PA-75 at Appendix 5

6. 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.

7. 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) and enclosed by Temporary Protective Fencing.
2. 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.

8. ARBORICULTURAL SITE SUPERVISION

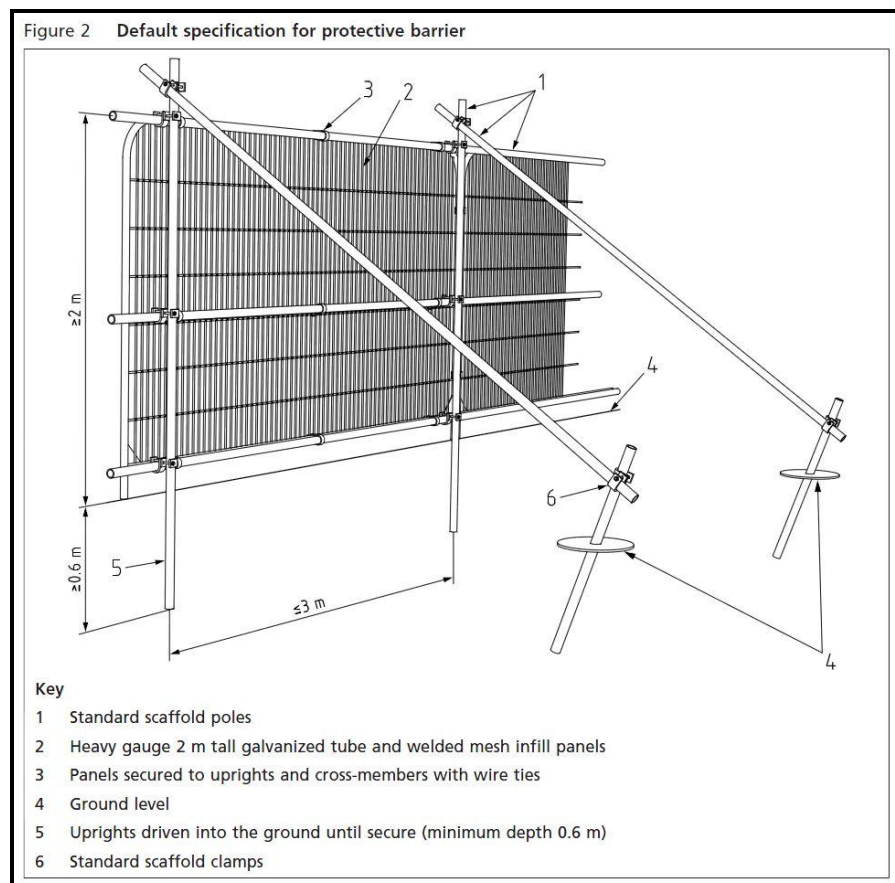
1. The erection of all tree protection measures outlined in this AMS and as indicated on the Tree Protection Plan will be inspected by the contract Arboricultural Consultant immediately after erection. Photographic evidence of the location and specification of all protective fencing will be forwarded 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

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

1. **Magenta** - Trees



Appendix One
Tree Survey Schedule

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS LTD

SITE:	LAND OFF SUMMERHILL ROAD, GWERSYLLT, WREXHAM
CLIENT:	SG ESTATES
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	02 APRIL 2015
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	14/AIA/WXM/135

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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	Horse Chestnut	FM	18 2E	6	5	6	5.5	650	G	- Located within rear garden of adjoining residential dwelling with no access to survey accurately - D.B.H approx - Tree appears to be in good health and vigour & is prominent - E.R.C. 20+	N/A	A2	7.8 191m²
T2	Horse Chestnut	M	18 1.5N	4	4	5	5	830	G	- Entirely Ivy clad impeding inspection - Appears in good health and vigour - E.R.C. 20+	Sever Ivy at base & re-inspect in 12 months	A2	10 312m²
T3	Sycamore	M	18 4N	4.5	4	4	3.5	500	M/P	- Lower crown dead due to light suppression from adjacent mature tree cover - Large diameter limb loss to west leaving poor crown form - Ok to retain as part of screen but could be considered for removal in future to allow light to dwellings - E.R.C. 20	N/A	B2	6 113m²

HEADINGS & ABBREVIATIONS

TREE NO.	REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE (T = TREE, G = GROUP, H = HEDGE)
SPECIES:	COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)
AGE RANGE/LIFE STAGE:	Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE
HEIGHT:	ESTIMATED AND RECORDED IN METRES. APPROXIMATELY 1 IN 10 TREES ARE MEASURED USING A CLINOMETER AND THE REMAINDER ESTIMATED AGAINST THE MEASURED TREES
CROWN SPREAD:	MAXIMUM CROWN RADIUS MEASURED TO THE FOUR CARDINAL COMPASS POINTS FOR SINGLE SPECIMENS ONLY (MEASUREMENT FOR TREE GROUPS - MAXIMUM RADIUS OF THE GROUP)
CROWN CLEARANCE & DIRECTION OF GROWTH:	HEIGHT IN METERS OF CROWN CLEARANCE ABOVE ADJACENT GROUND LEVEL (TO INFORM ON GROUND CLEARANCE, CROWN/STEM RATIO AND SHADING)
STEM DIA/MULTI-STEM DIA:	STEM DIAMETER - MEASURED AT APPROXIMATELY 1.5 METRES ABOVE GROUND LEVEL OR A COMBINATION OF STEMS FOR MULTI-STEMMED TREES
VITALITY:	A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD
E.R.C. = ESTIMATED REMAINING CONTRIBUTION:	RELATIVE USEFUL LIFE EXPECTANCY (YEARS)
BS 5837CATEGORY & SUB-CATEGORY GRADING:	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)
BS 5837 RADIUS & BS 5837 RPA:	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

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				N	S	E	W						
T4	Oak	M	11 1.5E	2	3	5	4	570	P	- Top failed in past at 11m leaving just an ivy clad stump/pole - Biodiversity value - E.R.C.1 0	Fell to allow light through to rear gardens	C2	6.9 147m²
T5	Sycamore	M	19 1E	6	4	4	4	560	G	- Stem leans north at 20° to vertical - Ivy clad impeding inspection - E.R.C. 20+	N/A	B2	6.7 142m²
T6	Horse Chestnut	M	17 0.5E	6	5	5	3	610	M	- Large diameter limb loss to north - new adventitious growth above wound - Poor crown form due to suppression - E.R.C. 20	N/A	B2	7.3 168m²
T7	Oak	M	17 2N	6	3	4	5	510	M	- Forms closed canopy with T7 - Ivy clad impeding inspection - Top failed & large diameter dead wood in crown - tree appears to be in decline - E.R.C. 10	Fell to allow light through to rear gardens	C2	6.1 118m²
T8	Horse Chestnut	M	17 1E	5	3	6	7	630	P	- Poor suppressed crown form - all bias west - Large scaffold failure to east - E.R.C. 20	N/A	B2	7.6 180m²
T9	Oak	M	17 4W	2	3	0	6	410	M	- Asymmetric crown - all bias west due to light suppression - Leans 45° to west from 5m - E.R.C. 20	N/A	B2	4.9 76m²

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				N	S	E	W						
T10	Sycamore	M	19 3E	6	5	5	7	660	G	- No significant defects - E.R.C. 40	N/A	A2	7.9 197m²
T11	Sycamore	M	19 3E	5	5	5	5	630	G	- Entirely Ivy clad impeding inspection - Prominent skyline tree - E.R.C. 40	Severe Ivy at base & re-inspect in 12 months	A2	7.6 180m²
T12	Oak	M	14 2W	0.5	6	2	8	480	M	- As T9 - E.R.C. 20	N/A	B2	5.8 104m²
T13	Sycamore	M	16 3W	4	3	5	6	400	M	- Suppressed self set tree that offer screening along western boundary - E.R.C. 10+	N/A	B2	4.8 72m²
T14	Horse Chestnut	M							P	10m stump with mass epicormic growth - Not suitable/appropriate to retain within context of residential development - E.R.C. 0	Fell	U	N/A
T15	Elm	EM	16 3E	4	3	6	3	210 x 2 (297)	M	- Insignificant small self set tree that could be removed with no impact on amenity if necessary - Unlikely to be subject to 1974 TPO - E.R.C. ≤10	Fell to allow light through to rear gardens	C2	3.6 40m²

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				N	S	E	W						
T16	Sycamore	M	18 3W	8	5	5	8	580	G	- No significant defects - E.R.C. 20+	• N/A	A2	7 152m²
T17	Sycamore	M	17 4E	3	5	5	1	620	M/G	- Forms closed canopy with T18 - Crown bias east - Entirely Ivy clad impeding inspection of stem - E.R.C. 20+	• N/A	B2	7.4 174m²
T18	Sycamore	M	18 5W	5	4	4	7	640	G	- As T17 - E.R.C. 20+	• B/A	B2	7.7 185m²
T19	Sycamore	FM	21 2W	4	5	5	6	880	G	- Entirely Ivy clad impeding inspection - Large prominent tree when viewed from west - Dead wood in crown to south - E.R.C. 20+	• N/A	A2	10.6 350m
T20	Ash	M	19 2W	5	2	2	6	610	M	- Majorly suppressed tree with acute bend in stem at 5m pushing top stem 45° west - E.R.C. 10+	• Remove	C2	7.3 168m²
T21	Beech	FM	20 1S	7	7	6	9	940	G	- Large prominent tree - Ivy clad stem impeding inspection - E.R.C. 20+	• N/A	A2	11.3 400m²

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				N	S	E	W						
T22	Beech	FM	20 1N	8	9	8	6	880	G	As T21	N/A	A2	10.6 350m²
T23	Sycamore	M	16 3N	3	2	1	4	440	P	- Poor quality self set tree of no value & insufficient spec to develop to maturity - E.R.C. 10	Fell to open up space to surrounding trees	C2	5.3 88m²
T24	Oak	M	22 2E	6	7	7	8	930	G	As T21	N/A	A2	11.2 391m²
T25	Sycamore	M	20 2W	8	5	3	5	610	M/G	- Ivy clad stem impeding inspection - E.R.C. 20	Sever Ivy at base & re-inspect in 12 months	B2	7.3 168m²
T26	Sycamore	EM	17 2E	2	3	5	2	300	M	- Self set tree of no significance - E.R.C. 10	N/A	C2	3.6 41m²
T27	Sycamore	FM	22 3E	5	8	5	5	810	G	- Tall prominent tree - Co-dominant stems from 6m - good union - E.R.C. 20+	N/A	A2	9.7 297m²
T28	Sycamore	M	17 3W	2	7	2	5	670	M	- Ivy clad overgrown self set tree of no value - E.R.C. 10	Fell to open up vista to better quality surrounding trees	C2	8 203m²

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				N	S	E	W						
T29	Sycamore	M	19 4S	4	5	5	5	520	G	- Located on top of boundary retaining wall - liable to cause displacement - E.R.C. 20	Consider removal	B2	6.2 122m²
T30	Lime	FM	23 3N	8	9	7	7	990	G	- Fully mature tree close to southern boundary - Tall an prominent to skyline - E.R.C. 20	N/A	A2	11.8 443m²
T31	Horse Chestnut	FM	19 2E	6	5	5	5	810	G	- Large stem abrasion to south with decay extending to 1.8m from grown level - E.R.C. 10+	Fell to ground level to allow for Japanese Knotweed eradication	B2	9.7 297m²
T32	Lime	FM	19 4N	5	4	5	5	940	G	- Mass epicormic growth around base impeded access to stem - DBH approx. - Ivy clad - E.R.C. 10+	As T31	B2	8.4 222m²
T33	Lime	FM	18 3N	7.5	6	5	5	730	G	- As T32 - Dieback in top of crown - E.R.C. 10+	As T32	B2	9.6 290m²
T34	Holly	M	11 0	5	5	4	4	300 320 240 (500)	G	- Visually insignificant from outside site boundary - Unsuitable to retain within context of residential development - E.R.C. 10+	Remove	C2	6 113m²

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS LTD

SITE:	LAND OFF SUMMERHILL ROAD, GWERSYLLT, WREXHAM
CLIENT:	SG ESTATES
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	02 APRIL 2015
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	14/AIA/WXM/135

PAGE 7 OF 9

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* D/A (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W						
T35	Yew	M	8 0	5	5	4.5	5	380	G	- Small unmanaged tree that is not visually prominent from any location outside site boundary - Tip dieback - E.R.C. 20+	Fell for development	B2	4.6 65m²
T36	Cherry	M	16 2N	5	5	1	4	560	M	- Self set tree growing under canopy of T37 with no space to develop further - Not visually significant and detracts the amenity/landscape value of T37 - E.R.C. 10	Fell to make individual feature of T37	C2	6.7 142m²
T37	Sweet Chestnut	FM	22 5S	9.5	10	9	9	1580	G	- Large impressive tree - best on site - Veteran potential - E.R.C. 40+	N/A	A1,2	15 707m²
T38	Sycamore	M	16 7S	4	4	3	3	380	M	- Ivy clad self set tree that abuts boundary retaining wall - Screens views to T37 from south - E.R.C. 10	Remove to open up vista to T37 and prevent damage to boundary wall	C2	4.6 65m²
T39	Sycamore	M	16 5S	2	3	5	4	350	M/P	- As T38 - E.R.C. 10	As T38	C2	4.2 55m²

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS LTD

SITE:	LAND OFF SUMMERHILL ROAD, GWERSYLLT, WREXHAM
CLIENT:	SG ESTATES
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	02 APRIL 2015
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	14/AIA/WXM/135

PAGE 8 OF 9

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* D/A (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W						
T40	Yew	M	14 1N	4.5	4.5	4.5	4.5	550	G	- Good quality tree with no defects - Offers good screening to road - E.R.C. 40+	N/A	A2	6.6 137m²
T41	Sycamore	M	16 1.5N	4	5	3	4	700	M	- Ivy clad self set tree allowed to grow due to lack of site management - E.R.C. 20	N/A	B2	8.4 222m²
T42	Horse Chestnut	M							P	- Butt decay beneath entire stem - Pro-active to remove now due to location adjacent to high value targets - Not suitable to retain adjacent to residential development - E.R.C. 0	Fell	U	N/A
T43	Lime	FM	20 0	6	5	6	5.5	1000	G	- Mass of epicormic growth around base impeding access to stem to take accurate measurement - DBH approx - Prominent tree from outside site boundary - E.R.C. 20+	Remove epicormic growth to allow access to re-inspect stem for decay	A2	7.4 174m²
T44	Sycamore	FM	19 1.5W	6	5	6	6	960	G	- Entirely Ivy clad impeding inspection - Prominent from east - E.R.C. 20+	Fell to ground level to allow for Japanese Knotweed eradication	A2	9.6 290m²

TREE SURVEY SCHEDULE (BS5837: 2012)

TREE SOLUTIONS LTD

SITE:	LAND OFF SUMMERHILL ROAD, GWERSYLLT, WREXHAM
CLIENT:	SG ESTATES
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	02 APRIL 2015
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	14/AIA/WXM/135

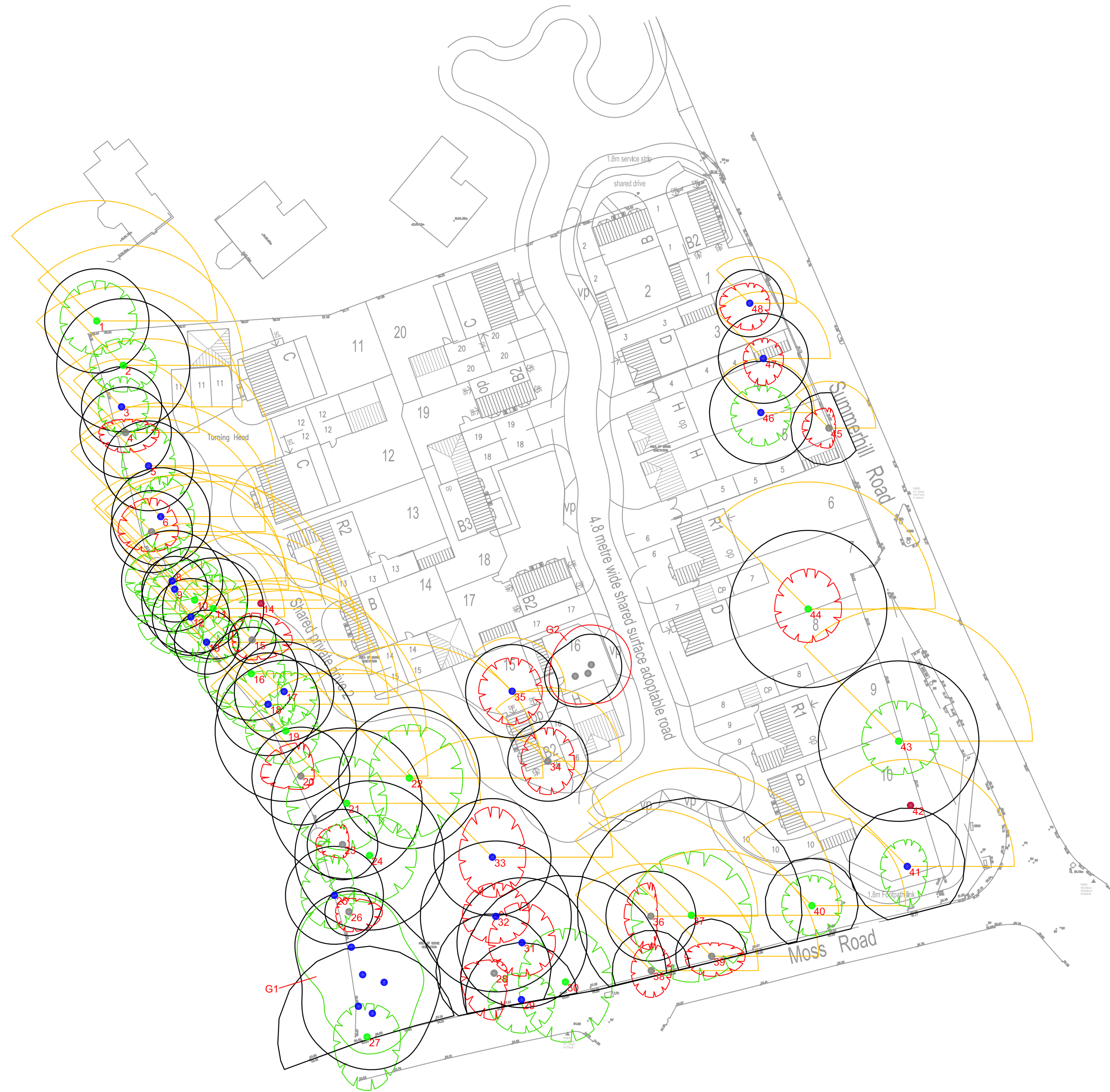
PAGE 9 OF 9

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* D/A (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W						
T45	Yew	M	7 0	3	3	1	4	270 300 (404)	M	- Unattractive tree due to asymmetric crown form - Poor quality Cypress located at 1.2m north of stem - Abuts boundary wall - E.R.C. 20+	Fell	B2	4.8 74m²
T46	Yew	M	8 0	4	5	4.5	4.5	500 400 (640)	G	- No significant defects - Not visually prominent - E.R.C. 20+	N/A	B2	7.7 185m²
T47	Yew	M	10 0	3	4	3	3	560	G	- No significant defects - Not visually prominent - E.R.C. 20+	Fell	B2	6.7 142m²
T48	Yew	M	7 0	3	4	3	3	450	G	- No significant defects - Not visually prominent - E.R.C. 20+	Fell to ground level to allow for Japanese Knotweed eradication	B2	5.4 92m²
G1	Horse Chestnut	M/ FM	≤18 1E					≤700	M/G	- Small copse located in south west corner of site - Trees of varying quality - E.R.C. 10-20	N/A	B2	8.4 222m²
G2	Sycamore Irish Yew x 1	EM /M	≤11 0					≤380	M/P	- Mass of Sycamore stem from past coppice 1 majorly suppressed Irish yew - Trees have no long-term value to site - E.R.C. 0	Fell for development	C2	4.6 65m²

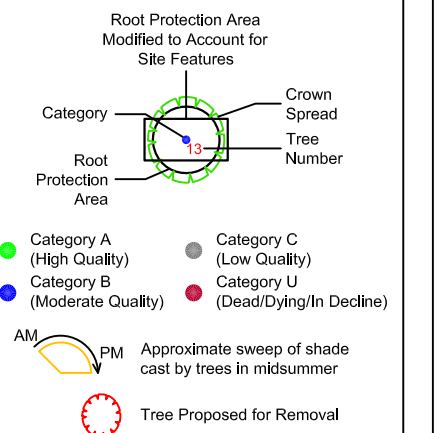
Table 1 Cascade chart for tree quality assessment

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
Arboricultural Impact Assessment Plan (With Shading Diagram)



Legend



Client:	
SG ESTATES LTD	
Project:	
Chestnut Court, Summerhill Road, Gwersyllt	
Title:	
Arboricultural Impact Assessment	
Scale:	Date:
1:500 @ A2	April 2016
Drawn By:	Revision:
LI & AM	H
Job Ref:	Drawing No:
14/AIA/WXM/135	02

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

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Appendix Three
Tree Protection Plan

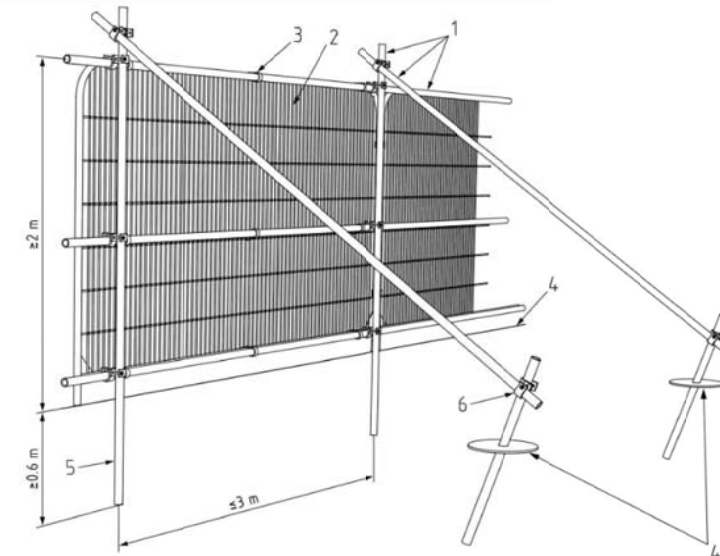


PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.



TREE PROTECTION AREA
KEEP OUT!
FROM A DEVELOPER PLANNING ACT 1990
THIS NOTICE IS THE PROPERTY OF THE
PLANNING AUTHORITY AND THE SUBJECT OF A
PLANNING PERMISSION. ANY
CONSTRUCTION OF A TREE PROTECTION AREA MUST
BE IN ACCORDANCE WITH THE
PLANNING AUTHORITY.

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



'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 by hand, of surface vegetation and minor (<75mm 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 Arboriculturist.
The new surfacing in the hatched area shall be constructed using the 'Geoweb' 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.
Limestone shall not be used
The surface wearing course shall be material agreed with the Local Planning Authority
The construction will be 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
- Crown Spread
- Tree Number
- Root Protection Area
- Category A (High Quality)
- Category B (Moderate Quality)
- Category C (Low Quality)
- Category U (Dead/Dying/In Decline)
- Tree Protection Fencing
- No-Dig Surface Installation Areas - see Method Statement

Client:
SG Estates Ltd

Project:
Chestnut Court, Summerhill Road, Gwersyllt, Wrexham

Title:
Tree Protection Plan

Scale:
1:500 @ A2

Date:
April 2016

Drawn By:
LI & AM

Revision:
C

Job Ref:
14/AIA/WXM/135

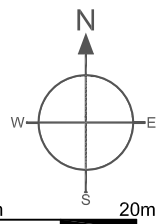
Drawing No:
03

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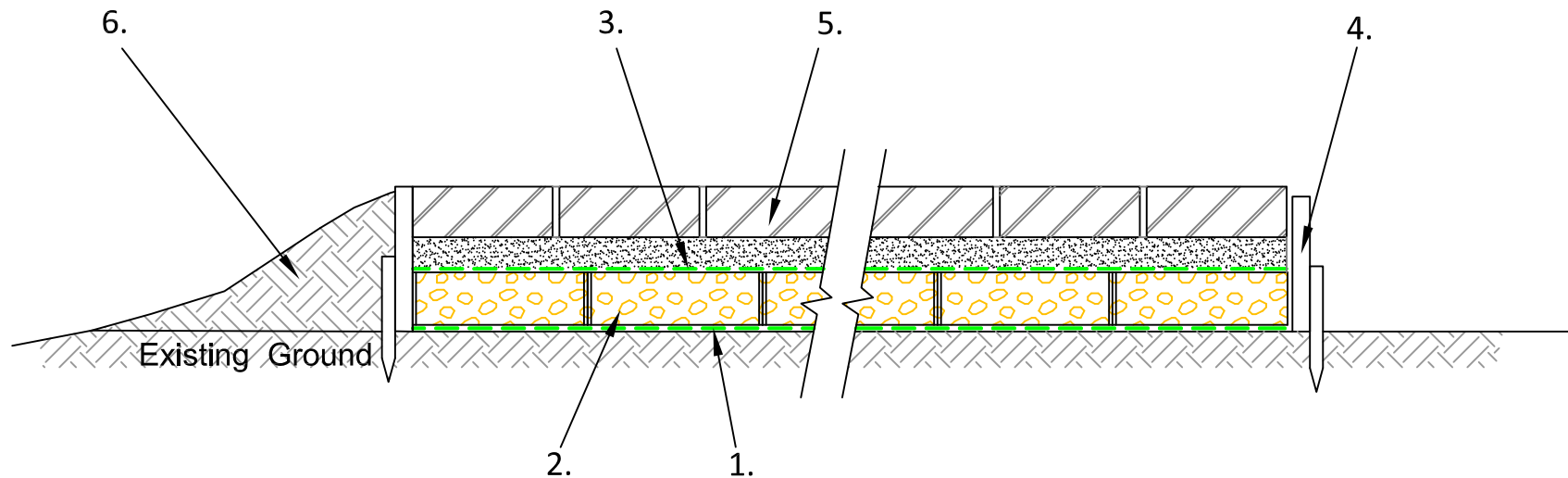


Appendix Four

Infraweb Cross Section Drawing of No-Dig Parking Bay Section

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. Permatex 200 separation geotextile
4. Treated Timber Edging (Or other Edging Detail Acceptable)
5. Block Paving with sand bed to Engineers Specification
6. Soil graded to edging (if required)



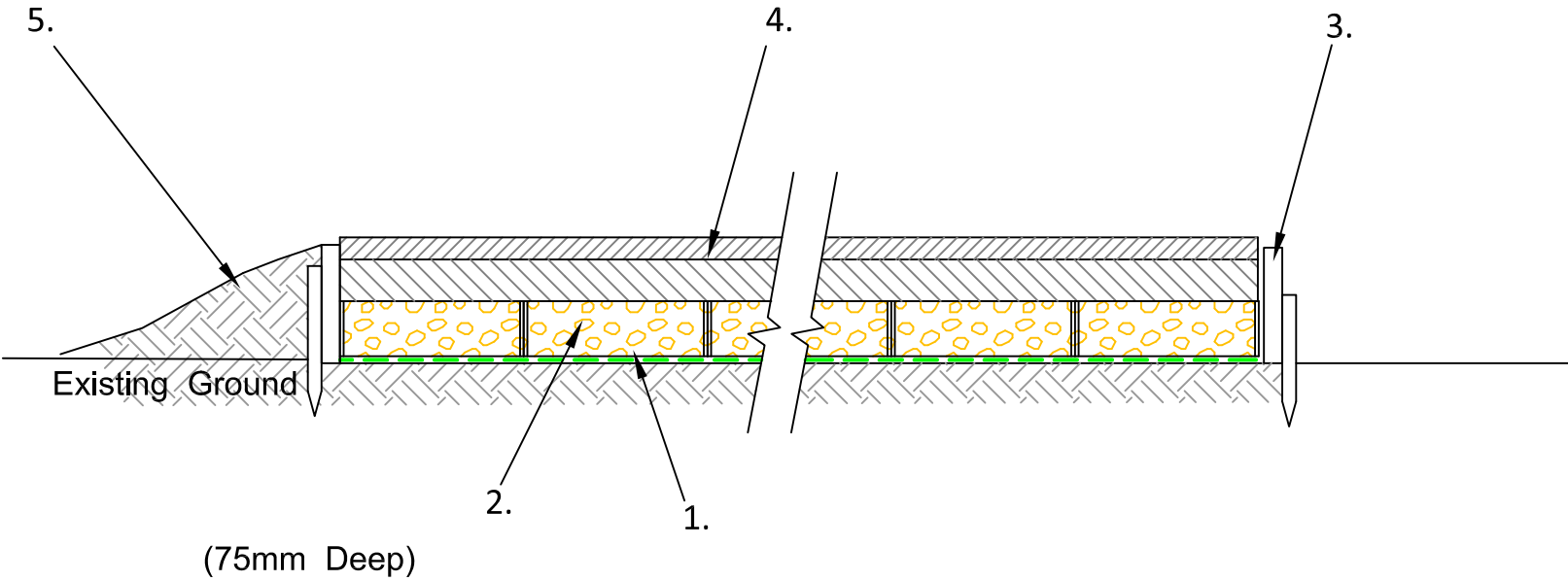
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		DRAWING NO IG-SD-IW-BP-75		REVISION A	APPROVED

Appendix Five

Infraweb Cross Section Drawing of No-Dig Pedestrian Walkway Section

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)



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