Arboricultural Consultants

Arboricultural Impact Assessment & Method Statement

Harrison Home, Liverpool Rd South, Maghull, L31 8BS

Prepared for:

MIKHAIL HOTELS & LEISURE HOLDINGS C/o Clayton Architecture

Our Ref: 21/AIA/SEFTON/22

March 2021

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1.0 INSTRUCTION

- 1.1 We have been instructed by Clayton Architecture C/o Mikhail Hotels & Leisure Holdings to carry out an Arboricultural Impact Assessment (AIA) in order to assess the development proposal in relation to trees in accordance with the principles of British Standard 5837 'Trees in Relation to Design, Demolition & Construction Recommendations' 2012.
- We are instructed to prepare a report in order to provide information to assist all parties involved in the planning process to make balanced judgements regarding arboricultural features in relation to the proposed re-development/development at Harrison Home, Liverpool Rd, South, Maghull. As such, all significant trees within influencing distance to the development proposal both on and adjoining the site have been surveyed and are listed within a Tree Survey Schedule (Appendix 1) and plotted on all accompanying plans.
- 1.3 The stage 1 tree survey was carried out on 20 February 2021 by Russell Pearce, surveyor to Tree Solutions Ltd. Our appraisal of the mechanical integrity of trees on the site is enough to inform the current project. The assessment of trees is carried out from ground level without invasive investigation and the disclosure of hidden defects cannot therefore be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious defects that are significant in relation to the existing and proposed land use. We do not carry out detailed safety inspections unless specifically instructed to do so in writing and have not carried out such inspections of trees on the proposal site.
- 1.4 Fifty-five individual trees (T1-T55) and 23 groups (G23) were surveyed and mapped on a Preliminary Tree Constraints & Impact Assessment Plan Ref: 21/AIA/Sefton/22 Drawing No. 1 & 2 at Appendix 2. All arboricultural information recorded during the survey is presented within a schedule at Appendix 1.
- 1.5 The Arboricultural Impact Assessment is based on the site layout plan Ref: 2019-04001, Drawing 272-02 (Rev B) provided by Clayton Architecture.

2.0 STATUTORY CONTROLS & PLANNING POLICY

2.1 A search on Sefton Council interactive map on 02/03/2021 revealed that no trees on or adjoining the site are subject to a Tree Preservation Order and the land does not fall within a designated Conservation Area. As such statutory planning consent is not required prior to undertaking any works to trees.



Plate 1 – Extract from Sefton Council interactive map indicating no protected trees on site

2.2 Protected Species

2.2.1 Mature trees often contain cavities, crevices and hollows that offer potential habitat for species such as bats and barn owls. Both are afforded protection under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as The Conservation (Natural Habitats, &c) (Amendment) Regulations 2007.

2.3 Wildlife Habitats

2.3.1 Trees and hedgerows of most species provide valuable nesting sites for a wide range of birds and it is likely that nesting birds will be present on the site during the period March to September.

3.0 THE SITE

3.1 The site contains a care homes set within large grounds that contain a good mix of tree cover.

4.0 DEVELOPMENT PROPOSAL

- 4.1 Redevelopment of existing building to include new extension and car park with associated vehicular access off Sefton Lane.
- 5.0 GENERAL CONSTRAINTS DATA CONSTRUCTION EXCLUSION ZONES (CEZ's)

5.1 GENERAL

- 5.1.1 The three phases of an AIA were outlined in Section 1. In addition, during the development process for retention trees, there may be three and even four constraints to consider: Construction Exclusion Zone (CEZ's):
 - CEZ 1: Root Protection Area (see 5.2)
 - CEZ 2: Tree Crown Protection (see 5.3)
 - CEZ 3: Tree Dominance (see 5.4)
 - CEZ 4: New Tree Planting Zone (see 5.5)

CEZ's are explained below:

5.2 CEZ 1: ROOT PROTECTION AREA (RPA)

- 5.2.1 The RPA, calculated in m2, should be protected before and during any demolition/construction works. This ensures the effective retention of trees by safeguarding a reliable quantum of functioning tree roots. The RPA is based on a radial measure from the centre of the tree stem, which is calculated by multiplying the stem diameter by a factor of twelve or by the (mean stem diameter²) x number of stems for multi-stemmed trees. With the AIA 1, the RPA is only shown indicatively on the preliminary TCP, as its shape may be subject to amendment as the design progresses.
- 5.2.2 During the AIA 2, the derived radial measure is converted by the arboriculturalist into the actual area to be protected, having due regard to prevailing site conditions and how these may have affected the tree(s), particularly in relation to factors affecting their likely rooting disposition. The RPA for each tree should initially be plotted as a circle centred on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution.
- 5.2.3 The means of protecting the RPA will include the installation of tree protective fencing prior to the start of any demolition or construction work on site. The prohibition of various activities within the RPA must be adhered to (e.g. mechanical excavation, soil stripping, fire lighting, material storage, lowering levels and creating excessive sealed surfacing) and may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retention trees or within the RPA.

5.3 CEZ 2: TREE CROWN PROTECTION ZONE

5.3.1 This is the area above ground occupied by the crown (branches) of the tree, along with allowances for working space (safe working area) and if appropriate, for future growth. The extent of CEZ 2 is determined by considering the existing and future crown spread of the tree(s), bearing in mind the possibility of this being modified by an acceptable quantum of pruning.

5.4 CEZ 3: TREE DOMINANCE ZONE

- 5.4.1 This is the area above ground dominated by the tree in relation to issues of shading, seasonal debris and safety apprehension. This area is calculated by considering the height and spread of the tree relative to the proposed buildings, cross referenced with intended end use. As such, what is assessed is the likely psychological effect of the tree on the end user.
- 5.4.2 The purpose of identifying CEZ 3 is to protect trees from post development pressure (resentment) by the site's end users, who may, if resentful of the trees, seek to procure excessive pruning treatments or even to have them removed. This is a common Planning Service concern, which has led on many occasions both to refusals of consent and to dismissed Appeals against those refusals.
- 5.4.3 The means of protecting CEZ 3 is likely to include optimising the site layout and room type (especially in relation to new residential dwellings), such that any adverse psychological impacts of the trees are reduced to an acceptable minimum. Key principles include ensuring adequate separation distances between trees and new buildings, in the context of the buildings' end use relative to the location of the tree(s) and avoiding excessive obstruction by trees of critical solar access.

5.5 CEZ 4: NEW PLANTING ZONE

5.5.1 In some cases, it may be appropriate to identify and protect areas intended for new landscape planting, which can fail to establish if the soil has been heavily compacted or contaminated during the demolition/construction process. The means of protecting CEZ 4 will either be by fencing it off prior to the start of works on site, or by soil remediation once construction has finished (and prior to the start of planting). Topsoil protection in areas destined for new planting is frequently an economy measure, saving on plant replacement and soil structure remediation.

6.0 SURVEY METHODOLOGY

- 6.1 The method used in the preparation of this report is based on the principles of BS 5837: 2012.
 - Tree heights were surveyed to the nearest 1m.
 - Trunk diameters were measured by use of forestry girth tape
 - The category assessment (Table 1) on which the trees is based include current and long-term arboricultural, landscape, cultural and conservation values (BS5837: 2012). This table can be found at *Appendix 1*
 - 4. For clarity, the grading system is summarised from Table 2 of the BS as follows:

U grade - trees for removal, effective for less than 10 years

A grade – trees of high quality and value, effective for more than 40 years

B grade - trees of moderate quality and value, effective for more than 20 years

C grade – trees of low quality and value, effective for 10 years

Note: We have indicated colour coding on the drawing and therefore a monochrome copy should not be relied on.

6.2 SOIL ASSESSMENT

- 6.2.1 A soil assessment should be undertaken by a competent person to inform decisions relating to:
 - the root protection area (RPA)
 - tree protection
 - new planting design; and
 - foundation design to take account of retained, removed and new trees (potential soil subsidence/heave)

Tree Solutions do not undertake soil assessments and the client is advised to seek specialist advice in this respect.

7.0 JUXTAPOSITION OF TREES AND STRUCTURES

7.1 Below ground constraints

- 7.1.1 The below ground constraints are generally summarised as the root protection area (RPA). The shape of the RPA and its exact location will depend upon arboricultural considerations including likely tolerance of the tree to root disturbance; morphology and disposition of the roots when known influenced by past or existing site conditions; soil type and structure; and topography and drainage.
- 7.1.2 The purpose of the RPA is to prevent physical damage to tree roots and to prevent damage to the soil structure. Tree roots are damaged by soil compaction, changes in soil levels or soil contamination which could reduce tree health and/or stability.
- 7.1.3 Root patterns are affected by topography and characteristics of the soil or substrate. Where trees are located within proximity to existing hard standing or underground physical barriers, they are unlikely to have an even distribution of lateral roots due to restrictions in root growth created by compacted sub-grades beneath. RPAs to boundary trees and on site frontage have been modified around existing buildings and extend 2m within roads. The required RPA volume has been maintained by extending them in the opposite where a more favourable rooting environment exists. All other RPAs are shown unmodified as there were no significant underground barriers to prevent good radial root spread.

7.2 Underground Services

7.2.1 Existing service routes are to be utilised.

8.0 DEVELOPMENT IMPACT TO TREES

- 8.1 Tree Solutions carried out a stage one preliminary tree survey and provided the project architect with a report in which all existing trees and their respective Root Protection Areas (RPA) were identified and plotted on a tree constraints and impact assessment plan. The architect has incorporated the design and layout advice contained within the stage 1 survey and amended the car park and footpaths. We are therefore satisfied that the proposal has taken the long-term future of the most important tree account and the layout is therefore in accordance with Sefton Council Planning Policies, National Planning Policy Framework 2019 (NPPF) and recommendations contained with BS5837: 2012.
- 8.2 In order to accommodate the proposed development it will be necessary to remove the following trees as detailed within the survey schedule:
 - > Tree numbers 1, 2, 46, 54 & 55
 - ➢ Group Numbers 1-3, 9 (2 trees), 12 (2 trees), 19 (2 trees), 20, 21, 22 (east side)

Tree Retention Category	Number of Trees Lost to Development						
Α	0						
В	12						
С	15 (approx.)						
U	0 – trees to be removed for H&S						

- 8.3 There are two construction impacts to retained trees as detailed below:
 - The proposed car park encroaches within the RPA of tree numbers 17, 20 & 50 and the realigned pedestrian footpath encroaches within tree number 8 & 9. This incursion is less than the 20% tolerance specified at 7.5.3 of the BS and the trees are of good vigour such that these works are possible with no long-term adverse impact to their health and vitality. In order to comply with the requirements of the BS and ensure no damage to any underlying tree roots these sections will be installed to a no-dig design specification using a three-dimensional cellular confinement system such as 'Infraweb' or 'Cellweb' which will involve the installation of a layer of plastic cells laid above the existing ground level. The cells will be back filled with a free draining washed stone that contains no fines in order to help maintain adequate gaseous diffusion for tree roots below. Surface dressing will be a porous material to be agreed with the LPA. A full specification will be supplied by the project structural engineer and will comply with recommendations contained within para. 7.2 of BS5837: 2012. Details are included within an Arboricultural Method Statement.

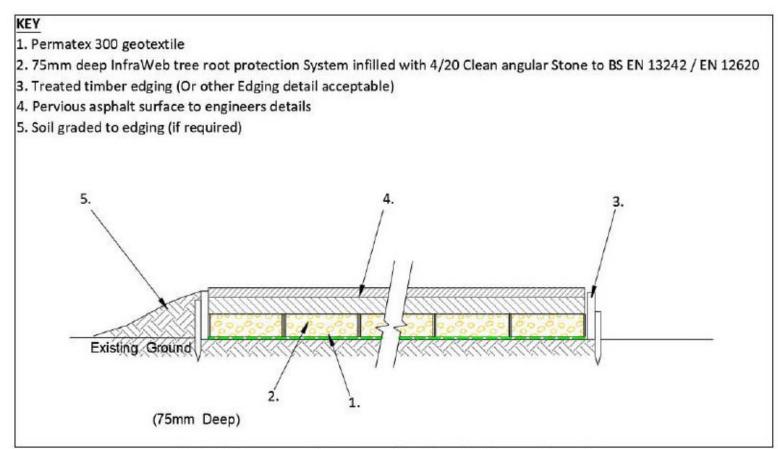


Plate 1- Cross section example of no-dig footpath section

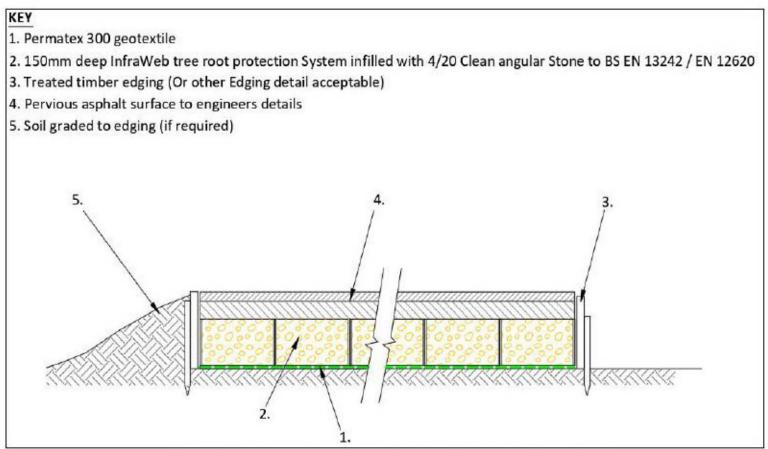


Plate 2- Cross section example of no-dig car park section

9.0 PROPOSED REVISIONS TO THE SCHEME

9.1 We advise that all proposed revisions having implications for trees should be referred to us for review.

10.0 CONCLUSIONS

- 10.1 BS 5837: 2012 contains clear and current recommendations for a best practice approach to the assessment, retention, and protection of trees on development sites. The proposed development has followed this guidance by:
 - Seeking arboricultural advice and undertaking a phase 1 preliminary tree survey to inform the layout and design of the proposed development
 - Respecting the constraints posed to development of the site by high or moderate quality trees
 - Acting upon arboricultural advice throughout the design process to obtain the best development proposal whilst considering the current and future tree requirements
 - · No trees of any significant value are to be removed to accommodate the development
 - There are no major impacts to retained trees by this development proposal resulting in no loss in amenity
- 10.2 The protection of retained trees will be in accordance with recommendation contained within the BS and as detailed on the Tree Protection Plan at Appendix 4.

11.0 LIMITING CONDITIONS

- Unless stated otherwise:
- Information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of the inspection.
- The inspection is limited to visual examination of the subject trees from ground level only and without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.
- This report has been prepared for the sole use and benefit of the client. Any liability of Tree Solutions shall not be extended to any third party.
- No part of this report can be reproduced without the authorisation of *Tree Solutions Ltd*.

Appendix One

Tree Survey Schedule



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TREE SURVEY SCHEDULE (BS5837: 2012)

HARRISON HOME, LIVERPOOL RD SOUTH, MAGHULL, L31 8BS SITE: CLIENT: MIKHAIL HOTELS & LEISURE HOLDINGS LTD BRIEF: ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR: R.PEARCE ASSESSMENT DATE: 20/02/2021 VIEWING CONDITIONS: CLEAR JOB REFERENCE: 21/AIA/SEFTON/22

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TREE NO. T - Tree G - Group	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION		CR(SPF	DIAL OWN READ m)		VITALI VITAN/ STEM/ MULTI-STEM* DIA. (mm)	VITALITY	VITALITY COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m)
H- Hedge			OF GROWTH (N.S.E.W)	N	s	E	W	Ą				B3 3031	(m²)
T1	English Oak	SM	13 1	2	8	0	7	470	G	Asymmetric crown – suppressed by adjacent trees Deadwood in crown E.R.C - 20	Remove for car park	B1	5.6 100m²
T2	Field Maple	EM	14 6	3	6	2	5	470	G	 Upright woodland form Deadwood throughout crown Asymmetric crown E.R.C - 20 	Remove for car park	B1	5.6 100m²
Т3	Beech	SM	14 4	2	3	2	3	240	G	 Stem with upright woodland form Acute unions E.R.C - 10 	No action required	C1	2.9 26m²
T4	Alder								М	 Twin-stemmed at base with x1 dead Small, suppressed crown Necrotic bark around base 	Remove	U	N/A
T5	Beech	SM	20 3	4	5	4	5	490	G	 Multiple dynamic braces within crown – crossing and fused branches Codominant at 2.25m with included union Multiple occluded stem wounds E.R.C - 20 	Monitor union	B1	5.9 109m²

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 5837CATEGORY & 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

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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)	N	CR: SPF	DIAL OWN READ m)	w	STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
Т6	Field Maple	SM	18 5	3	2	2	2	260	G	 Upright woodland form Straight single stem Minor deadwood E.R.C - 10 	No action required	C1	3 31m²
T7	Norway Maple	SM	16 4	2	2	3	2	310	М	 Small crown Stem exudations below 2m Minor deadwood throughout E.R.C - 10 	Monitor for decline	C1	3.7 43m²
Т8	Norway Maple	SM	16 2	3	3	4	6	370 390 (538)	G	 Twin-stemmed at 1.25m – codominant E.R.C - 20 	No action required	B1	6.5 131m²
Т9	Norway Maple	SM	15 4	3	3	2.5	3	320	G	 Pruning wounds from previous crown lifts Minor deadwood in crown E.R.C - 20 	No action required	B1	3.8 46m²
T10	Sycamore	Y	8 1	0	3	0	4	190	G	 Heavily suppress tree Poor form Low aesthetic value E.R.C - 10 	Remove for pedestrian footpath	C1	1.3 16m²
T11	Beech	SM	18 6	4	4	5	3	460	G	Trifurcation at 2m with slender stems E.R.C - 20	No action required	B1	5.5 96m²
T12	Norway Maple	SM	18 5	3	3	3	3	310	G	 Buttressing encroaches into footway Codominant at 2m Slender stems Minor deadwood in crown E.R.C - 20 	No action required	B1	3.7 43m²
T13	Norway Maple	SM	17 4	3	2	3	2	400	G	 Stem with minor lean to east Buttressing encroaches into footway Codominant at 6m E.R.C – 20 	No action required	B1	4.8 72m²

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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)	N	RAI CRC SPR (r	EAD	w	STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
T14	Norway Maple	EM	17 2	4	6	8	6	560	G	 Buttressing encroaches into footway Multiple mechanical wounds to buttressing Large, included union at 2.5m with ear forming Deadwood throughout crown E.R.C - 10 	 Remove deadwood Monitor included union 	C1	6.7 142m²
T15	Sycamore	SM	16 2.5	0	4	2	5	340	G	 Partially occluded stem wound at base on north side Acute union at 6m Codominant at 6m E.R.C - 20 	No action required	B1	4 52m²
T16	Field Maple	Y	11 2	2	2	2	2	200 220 180 (348)	G	 Well balanced woodland edge tree Minor deadwood throughout crown E.R.C - 10 	No action required	C1	4 44m²
T17	Downy Birch	EM	14 6	4	4	5	4	450	G	 Well balanced tree E.R.C - 20 	No action required	B1	5.4 92m²
T18	Field Maple	Y	8 2	2	2	3	4	170 160 (233)	G	 Well balanced woodland edge tree Minor deadwood throughout crown E.R.C - 10 	No action required	C1	2.7 25m²
T19	Downy Birch	Y	9	2	.15	0	4	250	М	 Sparse crown Minor deadwood throughout E.R.C - 10 	No action required	C1	3 28m²
T20	Field Maple	EM	14 1.5	2	5	6	3	460	G	 Slightly suppress by adjacent trees E.R.C - 20 	No action required	B1	5.5 96m²
T21	Alder	SM	12 1.5	1.5	3	2	4	290	G	 Upright woodland form Stem with minor lean to west E.R.C - 20 	No action required	B1	3.5 38m²

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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)	N	CR0 SPR	DIAL DWN EEAD n)	w	STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
T22	Sycamore	Y	14 4	2.5	3	3	2	200	G	Upright woodland form Small sparse crown E.R.C - 10	No action required	C1	2.4 18m²
T23	Silver Birch	SM	15 5	3	3	3	2	260 280 (382)	М	 Codominant at 1m with cup union Sparse crown Partially occluded stem wound at 0.2m on west side Pruning wound with decay pocket close to primary union E.R.C - 10 	No action required	C1	4.5 66m²
T24	Birch	EM	18 5	5	2	4	2	390	G	 Stem with minor lean to east Minor deadwood within crown E.R.C - 20 	No action required	B1	4.6 69m²
T25	Birch	SM N	17 6	4	3	1	1.5	290	G	 Suppressed tree with small crown Codominant at 2m with slender stems E.R.C - 10 	No action required	C1	3.5 38m²
T26	Beech	SM	17 2	4	4	5	4	480	G	No defects noted E.R.C - 20	No action required	B1	5.7 104m²
T26a	Beech	EM	20 2	7	6	9	7	690	G	 Good form with well-balanced crown Excellent specimen E.R.C - 40 	No action required	A1	8.2 215m²
T27	Birch	SM	18 14	2	2	2	2	260	G	Small crown Slender stem E.R.C - 10	No action required	C1	3 31m²
T28	Lime								D	 Fungal mycelium covering lower 0.5m of stem Percussion test indicates significant decay 	• Remove	U	N/A

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T29	Sycamore	SM	15 4	4	5.5	3	5	470	G	Crossing stems and branches within crown E.R.C - 20	No action required	B1	5.6 100m²
T30	Lawsons Cypress	Y	10 0	2	2	2	2	250	G	No defects noted E.R.C - 10	No action required	C1	3 28m²
T31	Cherry	SM	15 1.5	4	6	5	3	230 180 x2 (343)	G	 Minor suppression by adjacent trees Imbalanced crown E.R.C - 10 	No action required	C1	4 53m²
T32	Cherry									 Percussion test indicates significant decay in stem Large area of bark missing form lower half of stem Crown retrenching Deadwood throughout crown 	Remove	U	N/A
T33	Cherry	EM	16 1	6	6	6	4	300 320 380 (580)	G	Dense vegetation limited access to stem E.R.C - 20	No action required	B1	7 152m²
T34	Laburnum									 Deadwood throughout crown Lesions covering large areas of primary branch framework Tree in decline 	Remove	U	N/A
T35	Ash	EM	15 1	7	8	6	5	480 est	G	 Dense vegetation limited access to stem Multiple large, occluded stem woods Some epicormic growth in centre of crown E.R.C – 20 	No action required	B1	5.7 104m²

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TREE SURVEY SCHEDULE (BS5837: 2012)

SITE: HARRISON HOME, LIVERPOOL RD SOUTH, MAGHULL, L31 8BS

CLIENT: MIKHAIL HOTELS & LEISURE HOLDINGS LTD

BRIEF: ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	R.PEARCE
ASSESSMENT DATE:	20/02/2021
VIEWING CONDITIONS:	CLEAR
JOB REFERENCE:	21/AIA/SEFTON/22

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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)	N	CR0 SPR	DIAL DWN EAD n)	w	STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
T36	Ash	SM	15 1	6	6	5	5	390 est	G	 Dense vegetation limited access to stem No defects noted E.R.C - 20 	No action required	B1	4.6 69m²
T37	Scots Pine	EM	14 2.5	7	9	10	7	650	G	 Good specimen with good potential to reach 'A' category Stem with minor lean to the east Forming mature flattened crown E.R.C - 20 	No action required	B1	7.8 191m²
T38	Scots Pine	EM	14 2.5	5	8	5	6	710	G	 Good specimen with good potential to reach 'A' category Stem with minor lean to the south east Forming mature flattened crown E.R.C - 20 	No action required	B1	8.5 228m²
T39	Weeping Birch	SM	5 0.5	3	5	4	4	300	G	 Partially occluded stem wound at base on north side E.R.C - 20 	No action required	B1	3.6 41m²
T40	Weeping Ash								D	Dead tree	Remove	U	N/A
T41	Flowering Crab Apple (weeping)	SM	3.5 0.5	3.5	3.5	3.5	3.5	270	G	 Well balanced crown No defects noted E.R.C - 20 	No action required	B1	3.2 33m²
T42	Lawsons Cypress	Υ	5 0	2	2	2	2	120	G	 Located in raised planting bed with compacted rooting environment E.R.C - 10 	No action required	C1	1.4 7m²
T43	Lime	SM	14 1.5	2.5	4	4	2	300	G	No defects noted E.R.C - 20	No action required	B1	3.6 41m²

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T44	Elm								D	Dead treeDutch Elm DiseaseHoney fungus present	Remove	U	N/A
T45	Lime	EM	18 2	4.5	6	3	4	430 440 (615)	G	 Twin-stemmed at base with acute unions Minor deadwood within crown E.R.C - 20 	No action required	B1	7.3 171m²
T46	Norway Maple	Y	11 2	3.5	0	3.5	3	220	G	 Slightly suppressed with imbalanced crown Partially occluded stem wound at 1.25m E.R.C - 10 	Remove for proposed development	C1	2.6 22m²
T47	Horse Chestnut	SM	17 1.5	5	6	7	7	630	G	 Good specimen with open balanced crown E.R.C - 20 	No action required	B1	7.5 180m²
T48	Sycamore	Y	12 2	4	0.5	2	2	230	G	No defects noted E.R.C - 10	No action required	C1	2.7 24m²
T49	Sycamore	EM	14 2	4	6	5	5	570	G	Well balanced tree Dense ivy throughout centre of crown E.R.C - 20	No action required	B1	6.8 147m²
T50	Beech	SM	19 0.5	8	5	7	7	510	G	 Good specimen with well-balanced crown Good potential to reach 'A' category E.R.C - 20 	No action required	B1	6 118m²
T51	Sycamore									Dead tree	Remove	U	N/A

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T52	Lime	SM	18 0	5.5	5	2	5	420 est	G	 Dense basal epicormic growth prevented access to stem Straight slender stem E.R.C - 20 	No action required	B1	5 80m²
T53	Sycamore	EM	16 2	4.5	5	4	4	480	G	Well balanced open crown E.R.C - 20	No action required	B1	5.7 104m²
T54	Ash	SM	15 2	4	5	4	2	430	G	 Minor asymmetry to crown Shaded by adjacent trees E.R.C - 20 	Remove for new access	B1	5 84m²
T55	Lime	SM	17 0	5.5	5	3	5	450 est	G	 Well balanced crown Dense basal epicormic growth prevented access to stem Straight slender stem E.R.C - 20 	Remove for new access	B1	5.4 92m²
G1	Alder	Y	4-5 0	2	2	2	2	110 avg	G	Young low value treesE.R.C - 10	Remove for car park	C1/2	1.3 5m²
G2	Lime	SM	12-14 2	5	5	5	5	370 avg	G	 Upright woodland form Deadwood within crowns E.R.C - 20 	Remove for car park	B1/2	4.4 62m²
G3	Beech	SM	18 1	4	5	5	4	340 avg	G	 Upright woodland form Deadwood throughout crowns E.R.C - 20 	Remove for car park	B1/2	4 52m²
G4	Mixed	Y	12 4	3	3	3	3	220 avg	Р	 x2 Birch & x2 Field maple Scrubby suppressed trees in decline, directly adjacent to footpath Deadwood throughout crowns Reduced density crowns Multiple bark wounds Birch polypore present E.R.C - 20 	• Remove	U	N/A

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G5	Lawsons Cypress	Υ	2 0	1.5	1.5	1.5	1.5	90 avg	G	Small low value trees E.R.C - 10	Remove for pedestrian footpath	C1	1 4m²
G6	Maple	EM	16 3	2	3	1	5	410 avg	G	 Large deadwood within crowns Phototropic woodland form Acute included unions present Partially occluded stem wounds Mechanical damage to exposed roots E.R.C - 20 	Remove deadwood	B1/2	5 76m²
G6a	Sycamore	SM	14 4	1	3	3	3	280 avg	G	 Slender limbs Small crowns Old pruning wounds with minor cavitation – limited to branch cones. E.R.C - 20 	No action required	B1/2	3.4 35m²
G7	Norway maple	SM	18 5	3	3	3	3	635 avg	G	 Acute unions with slender stems/limbs E.R.C - 20 	No action required	B1/2	7.6 182m²
G8	Mixed	Y	6-12 0.5	2	2	4	1	210 avg	G	 x6 trees inclusive of sycamore, birch, holly oak, charry and oak Suppressed understory group Low value trees with imbalanced crowns Minor deadwood throughout crowns E.R.C - 10 	No action required	C1/2	2.5 20m²
G9	Alder	EM	12-14 1.5	5	5	5	5	420 avg	G	 Upright straight single stemmed trees E.R.C - 20 	Remove 1 tree to south for car park	B1/2	5 80m²
G10	Sycamore	SM	17 2	3	3	5	3	340 avg	G	Upright woodland formSlender stems/limbsE.R.C - 20	No action required	B2	4 52m²

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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)	Z	CR(SPR	DIAL DWN EAD n)	w	STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
G11	Sycamore	Υ	8-10 2	2	2	2	2	160 avg	F	Suppressed weedy trees of low value E.R.C - 10	No action required	C1/2	2 12m²
G12	Alder	Y	10-12 0	3	3	3	3	140 est avg	G	 No access to trees due to heavily waterlogged ground No defects noted Young low value group E.R.C - 10 	No action required	C1/2	2 12m²
G13	Cherry	SM	14 2	3	3	3	3	270 avg	G	 Slender stems with upright woodland form E.R.C - 10 	No action required	C1/2	3.2 33m²
G14	Holly	SM	12-14 0	4	4	4	4	400 avg	G	 Woodland understory group Multi-stemmed trees Upright woodland form with acute unions E.R.C - 20 	No action required	B2	4.8 72m²
G15	Sycamore	EM	16-17 4	5	5	5	5	485 avg	F	 Deadwood through crowns Trees appear to be retrenching E.R.C - 10 	Remove deadwood and monitor for decline	C1/2	5.8 106m²
G16	Sycamore	SM	10-14 3	5	5	5	5	430 avg	F	 x2 trees adjacent to Liverpool Road South are lapsed pollards with slender regrowth and have large deadwood within crown Some branch cavities within pollard regrowth Located in tarmac surface yard E.R.C - 20 	Re-pollard x2 trees	B2	5 84m²
G17	Sycamore	SM - EM	14-17 2	5	5	5	5	460 avg	G	 Large deadwood with crowns Pruning wounds from previous crowns lifts E.R.C - 20 	No action required	B1/2	5.5 96m²

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Tree Solutions

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TREE NO. T - Tree G - Group	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION		CR: SPF	DIAL OWN READ m)		STEM/ MULTI-STEM* DIA. (mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB- CATEGORY GRADING BS 5837	BS 5837 RADIUS (m)
H- Hedge			OF GROWTH (N.S.E.W)	N	s	E	W	ş				B3 3037	(m²)
G18	Elm	Y - SM							D	 Group of x6 dead trees from Dutch Elm Disease E.R.C - 20 	Remove	U	N/A
G19	Mixed	Y – SM	8	4	4	4	4	340 avg	G	 x12 trees inclusive of sycamore, lime, beech & ash No defects noted E.R.C - 10 	Remove 1 tree to north for car park	B1/2	4 52m²
G20	Sycamore	Y	8 1	2	2	2	2	150 avg	G	 Group of multi stemmed young trees No defects noted E.R.C - 10 	Remove for car park	C1/2	1.8 10m²
G21	Leyland cypress & Beech	SM	8-12 0	3	3	3	3	160 est avg	G	 Lapsed boundary hedging previous maintained at 2m E.R.C - 10 	Remove for car park	C1/2	1.9 12m²
G22	Alder	Y	4 0	2	2	2	2	<75	G	 Group of approximately 50 young whip size trees E.R.C - 10 	Remove for car park	C2	1 3m²
G23	Mixed	Y – SM	2-4 0	1	1	1	1	90 est avg	G	 Well maintained shrub layer group inclusive of cherry laurel, Portuguese laurel, lonicera, box, elaeagnus, cypress cultivars E.R.C – 10 	No action required	C2	1 3m²

Table 1

Cascade chart for tree quality assessment

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Category and definition	Criteria (including subcategories where appropriate)				
Trees unsuitable for retention	(see Note)				
Category U	Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse,				
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	including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)				
	 Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline 				
	 Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality 				
	NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.				
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation		
Trees to be considered for rete	ention				
Category A	Trees that are particularly good	Trees, groups or woodlands of particular	Trees, groups or woodlands	See Table 2	
Trees of high quality with an estimated remaining life expectancy of at least 40 years	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)	visual importance as arboricultural and/or landscape features	of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)		
Category B	Trees that might be included in	Trees present in numbers, usually growing Trees with material	See Table 2		
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	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	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	conservation or other cultural value		
Category C	Unremarkable trees of very limited		Trees with no material	See Table 2	
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	merit or such impaired condition that they do not qualify in higher categories	without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	conservation or other cultural value		

Appendix Two

Preliminary Tree Constraints Plan



Appendix Three

Impact Assessment Plan



Appendix Four

Tree Protection Plan



Appendix Five

Tree Protective Measures/Method Statement

SEQUENCE OF OPERATIONS

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

- Pre-contract site meeting
- Tree surgery works
- 3. Erect temporary protective fencing
- 4. Install Ground Protection within RPA of Tree Numbers 39, 45 & 47
- 5. Main demolition/construction phase
- 6. Installation of No-Dig sections
- 7. Removal of temporary fencing
- 8. Landscaping within RPA's
- Arboricultural site supervision

1. Pre-Contract Site Meeting

- In order 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
- Main Contractor
- Project Arboricultural Consultant

2. Tree Surgery Works

- Before the erection of the temporary protective fencing, all tree removal shall be implemented in accordance with the approved Tree Survey Schedule at *Appendix* 1 of the Ascerta Arboricultural Method Statement Ref: 1144.19
- 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'
- 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.
- 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
- Any additional access facilitation pruning required shall be undertaken by qualified tree contractors and conform to the recommendations of BS 3998 (2010) 'Recommendations for Tree Work'

3. Erect Temporary Tree Protective Fencing

- Prior to commencement of any site demolition and subsequent 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.
- Council Tree Officer is to be given 5 days' 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. Install Ground Protection within RPA of Tree Numbers 39, 45 & 47

- Ground protection shall be installed prior to commencement of any construction work on site and shall be in accordance with the specification in plate 1 below.
- The ground beneath any protection boarding will be left undisturbed and will be protected with a porous geotextile fabric and side butting scaffold boards on a 100mm compressible layer such of sharp sand
- 3. Boards will remain in-situ until the construction of the building has been completed

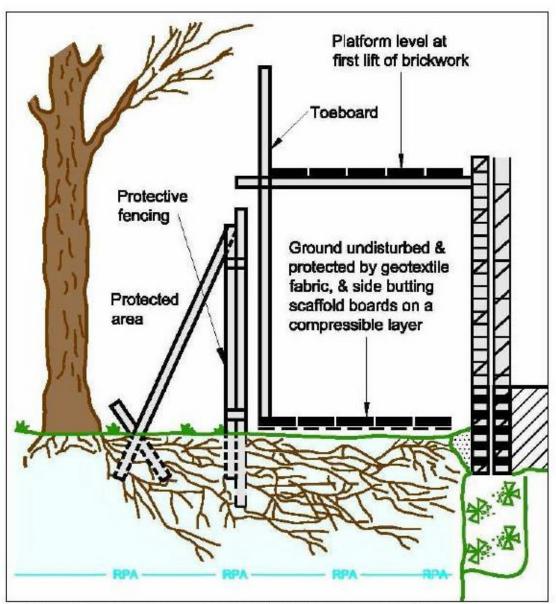


Plate 3- protective boards & scaffolding to be installed

5. Main Demolition/Construction Phase

- 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
- 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
- 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

6. Installation of No-Dig Sections

- The no-dig sections as indicated with a blue 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
- Construction shall ideally be undertaken in dry weather when ground is driest and least prone to compaction
- 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
- Permeable matting will then be laid, and the cellular confinement system laid on top and pegged in place.
- The cellular confinement system will then be installed in accordance with the manufacturer's guidelines using <u>no-fines</u> 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
- 7. Edging will be constructed with tantalised 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 placed on the aggregate. Paving slabs or brick paving should be dry bedded on the sub-base and joints left unsealed
- 9. Under no circumstances is limestone aggregate to be used

7. 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.

8. Landscaping within RPA of Trees

- 1. There shall be <u>no rotovating</u> of ground within any area designated as a Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing.
- 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

9. 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.

Sefton Council Arboricultural Officer

Useful Contacts

Arboricultural Consultant

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Name: Γel:	Alistair Henderson	Name: Carl Salisbury Tel:		
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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.
- 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 daily; 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

The fence types are shown on the Tree Protection Plan with the following colour key: -

Magenta (Trees)

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



Tree Protective Fencing Specification