Arboricultural Constraints Report

Warrender School
Old Hatch Warren

On Behalf of:

LB Hillingdon

August 2015

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Author	JD
Reviewer	JD
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1.0 Instructions

1.1 Instructions have been received to assess trees and other significant vegetation on and adjacent to Warrender School as shown on the attached plan. As such we are to assess trees and other significant vegetation in accordance with the principles of BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (The BS.

1.2 This report is prepared to assist in the design of development layouts. As such it will clearly identify the quality of trees and other significant vegetation, their contribution to public amenity and constraints they may offer to the site in terms of proposed development.

2.0 Tree Survey Assessment - General

2.1 Trees, detailed on the appended plan and survey, have been visually inspected from ground level only. No aerial inspection has been made, nor has any decay detection equipment been used.

2.2 While general comments may be made regarding lower storey trees and shrubs, only the significant vegetation has been assessed in detail. Trees are detailed in the schedule either as individuals or as part of a group/woodland as appropriate.

2.3 The trees' details include their identification number, which corresponds to their position on the site plan, species (English name), an estimated height, crown radius, given for each aspect, height above ground level of lowest branches, an assessment of the tree's maturity, a measured trunk diameter at 1.5m above ground level and calculated root protection radius and area, a general description of overall condition, an assessment of the tree's suitable longevity, a quality grading (Table 1 of The BS) and some relevant comments regarding each tree where this is helpful.

2.4 For your assistance a summary of the system used to grade trees is provided below:

U grade – trees that are dead or unsuitable for retention for more 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 and/or those estimated to be suitably retained for more than 20 years
C grade – trees of lower quality and value and/or those estimated to be suitably retained for more than 10 years and trees with a stem diameter <150mm.

2.5 Category U trees are those trees in such condition that they cannot be realistically retained as living trees in the context of the current land use for more than 10 years. Category C trees are those that would not normally be considered a reasonable constraint on proposed development. Category B and A trees are those that make a long-term and substantial contribution to the character and appearance of an area and should therefore ideally be designed around

3.0 Design Considerations

3.1 The schedule appended to this report provides, in metred radius and surface area, the volume of soil that contains sufficient rooting area to ensure the survival of a specific tree, the Root Protection Area (RPA). The most suitable way, therefore, to protect a tree is to maintain this radius or area undisturbed throughout the course of development.

3.2 Consideration should be given to existing site features, including natural and man made topography and structures that can restrict tree root growth in any direction causing deeper rooting or a concentration of growth in other directions, making it reasonable to alter the shape of the RPA.

3.3 As it is not always reasonable and practicable in planning terms to totally exclude all retained trees from the developable area, in some cases it may be appropriate to accommodate some specialized construction within the RPA but this will be subject to arboricultural assessment and implementation of specially engineered construction methods. It is imperative however, to consider at the outset of design, that continuous open trenching or lowering levels will not be acceptable within the RPA. However, subject to arboricultural advice no-dig path/road installation, foundations involving piles, pads or slabs cantilevered as appropriate may be engineered to avoid conflicts with retained trees. This will be provided that ground beams or similar are positioned at or above existing soil levels, which is likely to impact upon internal floor levels and ridge heights**.** Services, while not typically addressed at the planning stage will be required and consideration should be given to suitable routing away from trees at the outset of layout design.

3.4 In addition to physical constrains consideration should be given to the above ground impact of trees on their surroundings. Suitable un-shaded outside space should be provided and trees shading fenestration should be avoided. Trees, both new and existing, should be given room to grow and access for management should be maintained

4.0 Legal Protection

4.1 At this stage we have no information regarding Tree Preservation Order or Conservation Area. Any works to trees covered by either a TPO, Conservation Area status or are afforded protection by existing planning conditions will need to be approved by the Local Planning Authority prior to commencement.

Joanna Davies
Arboricultural Consultant

Appendix 1 Tree Survey Schedule

Warrender													Date: 27.07.15	
						Canopy Spread					General Observations			
Tree Ref. No.	Species	Height (m)	DBH (mm)	RPR (m)	RPA (m)	N	E	S	W	Ht of 1st sig branch / canopy	Life Stage	Physiological	Structural	Estimated remaining contribution (BS 5837)	BS Cat
G1	Silver Maple, Norway Maple, Alder, Cherry, Whitebeam	14	450	5.4	92	As on Plan				3/4	EM	F	Mixed belt/screen planting with raised play area beneath. Compression fork and occluded bark in Silver Maple	40+	B
T1	Sycamore	12	360	4.32	59	5	5	5	5	0/0	EM	F	Self set tree on boundary, growing through fence. No significant defects	40+	C2
T2	Ash	8	200	2.4	18	3	3	3	3	1/1	SM	F	Self set tree growing through fence on boundary	40+	C1
T3	White Poplar	20	960	11.52	417	6.5	6.5	6.5	6.5	4.5/4.5	M	F	Off site tree. No access possible but no indication of significant defect.	20+	B
G2	Purple Norway Maple, Midland Thorn	10	340	4.08	52	As on Plan				2/2	EM	F	Trees of typical form and condition	40+	B
			160	1.92	12									10+	C
T4	White Poplar	16	500	6	113	5	5	5	5	4/2	EM	F	Ivy on stem. Off site tree. No significant defects	40+	B
T5	Ash	16	500	6	113	6	6	6	6	3/4	EM	F	Off site tree. No access possible	40+	B
G3	Beech, Pear	11	360	4.32	59	As on Plan				0/0	EM	F	Off site trees … over site to 4m	40+	C
G4	Silver Maple, Purple Norway Maple	14	550	6.6	137	As on Plan				4/3	EM	F	Large linear trees. Bark damage on Silver Maple. Occluded bark. Compression fork	40+	B/C
G5	Purple Norway Maple, V Norway Maple	11	360	4.32	59	As on Plan				4/4	SM	F	Exposed shallow roots caused by erosion	40+	B
T6	False Acacia	7	120	1.44	7	1.5	1.5	1.5	1.5	2/2	Y	F	Tree of typical form and condition	40+	C

Warrender														Date: 27.07.15	
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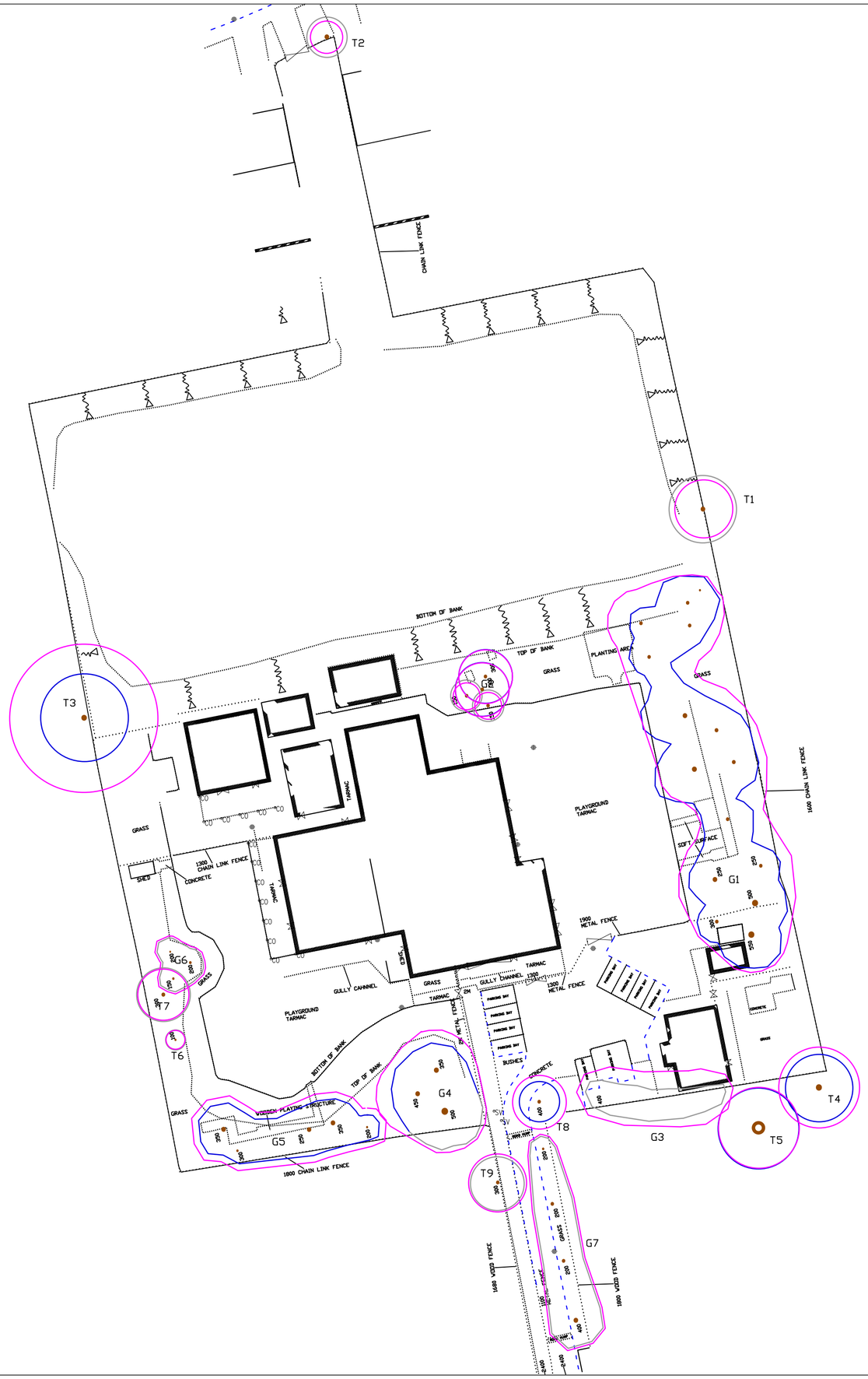
Tree Ref. No.	Species	Height (m)	DBH (mm)	RPR (m)	RPA (m)	N	E	S	W	Ht of 1st sig branch / canopy	Life Stage	Physiological	Structural	Estimated remaining contribution (BS 5837)	BS Cat
T7	Norway Maple	10	320	3.84	46	4	4	4	4	3/3.5	SM	F	Shallow roots. Tree of typical form and condition	40+	C
G6	Midland Thorn	5	190	2.28	16	As on Plan				3/3	SM	F	Tree of typical form and condition	40+	C
T8	Pine	11	340	4.08	52	3	3	3	3	5/4	SM	F	Damage to roots from road alignment. Tree of typical form and condition	40+	B
G7	Almond, Cherry	8	360	4.32	59	As on plan				2/2	EM	Physiological	Sparse crown, chlorosis, dead wood in Almond	10+	C
T9	Ash	10	360	4.32	59	4	4	4	4	4/4	SM	Physiological	Small diameter dead wood throughout. Sparse crown	10+	C

Appendix 2 Tree Constraints Plan



Arboricultural Notes

Trees differ in their tolerance of root loss or disturbance, according to their age, species and/or condition. In addition root growth, while typically concentrated in the top meter of soil, can be effected by existing site features, including natural and man made topography and structures that can restrict tree root growth in any direction. Consideration is given to all relevant factors when ascertaining the viability of tree retention.

With reference to BS 5837 2012 the plan over clearly identifies significant vegetation on and adjacent to the proposed development area and the value of that vegetation in amenity terms. More detail regarding the effect that stages of development could have on individuals and methods to mitigate any potentially negative impact are provided in the accompanying report.

- T1 G1 — Existing tree or group colour referenced in accordance with BS 5837 2012
- Green - Category A trees of high quality and value
- Blue - Category B trees of moderate quality and value
- Grey - Category C trees of low quality and value
- Red - Category U trees that are dead or showing irreversible signs of decline
- T1 G1 — Indicates tree not shown on topo., location not accurate
- Extent of Root Protection Area

Project
Warender School

Drawing Title
Tree Constraints Plan

Scale	Drawn	Date
1:500@A2	JLD	18.08.15

Drawing Ref	Rev	Date of Rev
TCP	-	-

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Location

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