



WE KNOW SERVICES

ARBORICULTURAL IMPACT ASSESSMENT

VALLEYFIELD
NORTH END LANE
HALEWOOD
KNOWSLEY
L26 5QB

MARCH 2021

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1.0 Introduction

- 1.1 We Know Services were instructed to carry out an arboricultural survey of trees on land at Valleyfield, North End Road, Halewood.
- 1.2 This report details the arboricultural implications of developing the site, including:
 - A survey of the trees on and near the development which may impact the proposal- from ground level, noting their location, species and all relevant parameters, i.e. stem diameter, height, crown spread, condition etc.
 - A tree schedule.
 - Advice on the removal, retention, and management of trees.
 - Assessment of the potential effects of the proposal on retained trees and vice versa.
 - Assessment of the requirement for tree protection for the duration of the works.
 - A mitigation proposal for any loss.
- 1.3 The survey was carried out on 25th January 2021 by means of inspection from ground level by an experienced and qualified arboriculturalist. The inspection can be restricted in cases where trees were Ivy clad or surrounded by vegetation.
- 1.4 The supplied drawing did not include tree positions plotted. All trees have been added to the drawing indicatively. Any dimensions regarding tree positions and protective fencing must be checked on site.
- 1.5 Under *BS5837: 2012 Trees in Relation to Construction - Recommendations*, the assessment of trees is made objectively. The tree categorisation method identifies the quality and value of the existing tree stock, allowing informed decisions to be made concerning development design layout.
- 1.6 The survey was carried out noting the conditions of the trees at the time of inspection. As trees are part of the natural environment, conditions can naturally change; therefore, the contents of this report are valid for one year only. After this period, re-inspection may be required.

2.0 Survey Methodology

- 2.1 The trees were surveyed (prefixed T, or G for group) and recorded in the tree schedule in Appendix 1.0. Where groups are recorded, average height and diameter at breast height (DBH) of the trees in the group are reported. Where access to the base of any trees was limited, stem size was estimated.
- 2.2 All the trees were assessed using: a grading A to C (retention) and U (removal); condition and age class as defined in Appendix 2.0.
- 2.3 Where appropriate, canopy spread for each tree was recorded at four cardinal points in order to reproduce an accurate representation of the crown shape of the tree on the tree plan in Appendix 3.0.
- 2.4 The survey included all trees within the proposal area and trees near to the proposal.

3.0 Proposals and Impact Assessment

- 3.1 The site layout plan within Appendix 3.0 identifies the trees in relation to the proposed redevelopment.
- 3.2 In order to fully assess the impact of the proposals an Impact Table (**Table 3.1**) has been created detailing each tree, which shows the proximity of the associated works.
- 3.3 This can then be assessed in accordance with BS 5837:2012 to determine whether proposals will have a detrimental impact on the health of each tree. Once this has been determined remedial measures can be detailed to reduce the impact the proposals will have on the treescape.

Table 3.1: Impact Table

Tree No.	Root Protection Area identified in table 2 of BS5837:2012		Distance to proposed drive and garage / (m)	Distance to proposed dwelling (m)	Can the tree/s be successfully retained?
	Area (m ²)	Equal to a circle with radius (m)			
T1	5	1.32	24.4	11.5	Yes
T2	18	2.4	19.4	13.5	Yes
T3	69	4.68	23.6	14.7	Yes
T4	168	7.32	40.7	29.3	Yes
T5	180	7.56	41.4	27.2	Yes
T6	163	7.2	45.6	31.6	Yes
T7	72	4.8	52.7	38.4	Yes
T8	3	0.96	7.2	2.7	Yes, but to be relocated to rear of garden

Tree No.	Root Protection Area identified in table 2 of BS5837:2012		Distance to proposed drive and garage / (m)	Distance to proposed dwelling (m)	Can the tree/s be successfully retained?
	Area (m ²)	Equal to a circle with radius (m)			
T9	5	1.32	0	4.1	No, but will be transplanted
T10	3	0.9	0	6.2	No
T11	28	3.0	0	7.7	No, but will be transplanted
T12	10	1.8	0	9.2	No
T13	18	2.4	5.9	10.6	Yes
T14	5	1.2	6.1	5.7	Yes
T15	55	4.2	10.3	22.1	Yes
T15	41	3.6	45.4	30.5	Yes, but relocated to rear of garden
G1	5	1.2	11.3	2.0	Yes
G2	18	2.4	20.1	7.2	Yes
G3	18	2.4	26.2	15.8	Yes
G4	28	3.0	49.6	34.1	Yes
G5	18	2.4	21.3	10.9	Yes
H1	10	1.8	0	14.5	Yes, but part removal

Table 3.2: Impact Assessment

	Trees to be retained		Trees to be removed	
	With no impact	With detailed construction	Due to condition	Due to development
Tree No.	T1, T2, T3, T4, T5, T6, T7, T13, T14, T15, T16, G2, G3, G4 and G5	N/A	N/A	T8, T9, T10, T11, T12 & G1

- 3.4 A total of seven young fruit trees will be relocated as part of the proposals to create an orchard to the rear of the garden. In addition, the two Magnolia's will also be transplanted to elsewhere in the garden. To minimise shock to these trees, advice on how to carry out the transplanting is provided in the accompanying method statement.
- 3.5 Approximately 15 metres of H1 will be removed to accommodate the new garage. In addition, two ornamental conifers (T10 and T12) will be removed.

4.0 Mitigation Proposals

4.1 Replacement Tree Planting

- 4.1.1 Due to the loss of T10 and T12, it is recommended that replacement trees are planted as part of the proposals. The extent of mitigation planting required will need to be confirmed in agreement with the Local Planning Authority once the development proposal is finalised.
- 4.1.2 Requirements usually involve replacement of trees on a two for one basis. This is based on tree sizes of 12-14cm girth, however for replacements that are significantly larger (20-25cm girth), it is considered that an increased size will mitigate for the tree loss in the form of replacements on a one for one basis.

5.0 Conclusions and Arboricultural Recommendations

- 5.1 The tree categorisation method identifies the quality and value of the existing tree stock, but it is not meant to be interpreted rigidly and is presented in order to form a balanced judgement on tree retention and removal.
- 5.2 A precautionary method of working near trees is detailed in the accompanying Arboricultural Method Statement.
- 5.3 Following site development, regular (annual or biannual) inspections of all retained trees should be undertaken by a qualified arboricultural consultant.
- 5.4 It is considered that in following the advice in this document, any negative factors affecting trees on the site will be minimised.

Appendix 1.0

Tree Survey Schedule

TREE SURVEY SCHEDULE

Arboricultural Data Sheet: Valleyfield, North End Road, Halewood									Date of Survey: 26/02/2021		Surveyor: Nicola Wallbank		
Tree No.	Species	DBH (mm)	Height (m)	Age	Crown Spread (m)				Crown clearance	Condition rating	Comments and preliminary management recommendations	Estimated remaining contribution	Tree quality category rating
					N	E	S	W					
T1	Hawthorn	110	7.5	EM	2.0	2.0	1.0	2.0	2.0	1	Individual specimen on the site boundary. Bifurcated. Reasonable form. Tree is sound with no visible defects	20+	C3
T2	Maple	200	6.5	EM	3.0	3.0	3.0	3.0	1.5	1	Individual specimen with a balanced form. Tree is sound and functioning well	20+	C1
T3	Cedar	390	16.0	M	2.0	3.0	4.0	3.0	2.0	1	Individual specimen with good form. Tree is sound with on visible defects	20+	B1
T4	Eucalyptus	610	18.0	M	4.0	4.0	4.0	4.0	3.0	1	Individual specimen with good form and vigour. Tree is sound and functioning well	20+	B1
T5	Pine	630	22.0	M	4.0	3.0	4.0	6.0	2.0	1	Individual specimen with good form and large spreading canopy. Tree is sound and functioning well	20+	B1
T6	Cypress	600	17.0	M	3.0	3.0	3.0	3.0	3.0	2	Individual specimen with reasonable form. Multi-stemmed with included union and minor stem decay	10+	C1
T7	Oak	400	15.0	EM	3.0	6.0	3.0	3.0	4.0	1	Individual specimen on the site boundary with good form. Tree is sound and no defects were observed	20+	B1
T8	Cherry	80	3.0	Y	1.0	1.0	1.0	1.0	1.0	1	Individual newly planted tree in good health	20+	C1
T9	Magnolia	110	5.0	M	1.5	1.5	1.5	1.5	1.0	1	Individual with good form and no visible defects	20+	B1

Arboricultural Impact Assessment – Valleyfield, North End Road, Halewood

Arboricultural Data Sheet: Valleyfield, North End Road, Halewood									Date of Survey: 26/02/2021		Surveyor: Nicola Wallbank		
Tree No.	Species	DBH (mm)	Height (m)	Age	Crown Spread (m)				Crown clearance	Condition rating	Comments and preliminary management recommendations	Estimated remaining contribution	Tree quality category rating
					N	E	S	W					
T10	Cypress	75	3.0	Y	1.0	1.0	1.0	1.0	1.0	1	Individual with good form and no visible defects	10+	C1
T11	Magnolia	250	4.5	M	2.0	2.0	2.0	2.0	1.0	1	Individual with good form and no visible defects	10+	C1
T12	Cypress	150	8.0	EM	0.5	1.0	1.5	1.5	2.5	1	Individual with good form and no visible defects	10+	C1
T13	Laburnum	200	6.0	M	1.0	1.0	2.0	1.0	1.5	2	Individual specimen situated off-site in neighbouring garden. Tree is sound	10+	C1
T14	Conifer	100	4.5	EM	1.0	1.0	1.0	1.0	0.5	1	Individual specimen situated off-site in neighbouring garden. Tree is sound	10+	C1
T15	Ash	350	11.0	EM	4.0	4.0	4.0	4.0	2.0	1	Individual specimen situated off-site on neighbouring land. Limited inspection but the tree appears sound based on crown signs	10+	C1
T16	Willow	300	9.0	M	2.5	4.0	2.5	4.0	2.0	1	Individual specimen situated off-site in neighbouring garden. Limited inspection but the tree appears sound based on crown signs	20+	B1
G1	6 Fruit trees	100 Avg.	5.0	Y	-	-	-	-	1.0	1	Mixed group of fruit trees comprising predominantly of Apple and Cherry. All trees are sound, and no defects were observed	20+	C2
G2	Cypress	200 Avg.	7.5	M	-	-	-	-	0.25	1	Group of ornamental conifers with good form. All trees are sound	10+	C2

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Arboricultural Data Sheet: Valleyfield, North End Road, Halewood									Date of Survey: 26/02/2021		Surveyor: Nicola Wallbank		
Tree No.	Species	DBH (mm)	Height (m)	Age	Crown Spread (m)				Crown clearance	Condition rating	Comments and preliminary management recommendations	Estimated remaining contribution	Tree quality category rating
					N	E	S	W					
G3	3 Cypress & 1 Cherry	200 Avg.	9.0	M	-	-	-	-	0.25	1	Mixed species group within planting bed. Cherry is stretching for light and some minor deadwood in conifers but otherwise the trees are sound	10+	C2
G4	Mixed species	250 Avg.	10.0	EM	-	-	-	-	1.5	1	Mixed species group along the garden boundary. Limited access due to presence of pond but all trees appear to be sound	10+	C2
G5	1 Elder & 2 Cypress	200 Avg.	7.0	EM	-	-	-	-	1.5	1	Group within neighbouring garden. Limited inspection but trees appear to be sound based on crown signs	10+	C2
H1	Leylandii	150	2.0	M	-	-	-	-	0.25	1	Conifer hedge on the site boundary which has a formal appearance and is well maintained	10+	C2

Appendix 2.0

Tree Survey Key

Arboricultural Impact Assessment – Valleyfield, North End Road, Halewood

Trees for removal				
Category and definition		Criteria		
Category U Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management		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 R category trees (i.e. 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 (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality Note – Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).		
Trees to be considered for retention				
Category and definition		Criteria - Subcategories		
		1 Arboriculture values	2 Landscape values	3 Conservation values
Category A Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum 40 years is suggested)		Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboriculture features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture)
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)		Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboriculture features (e.g. trees of moderate quality within avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits
Category C Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm		Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits
		Note - Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation		

Age Class

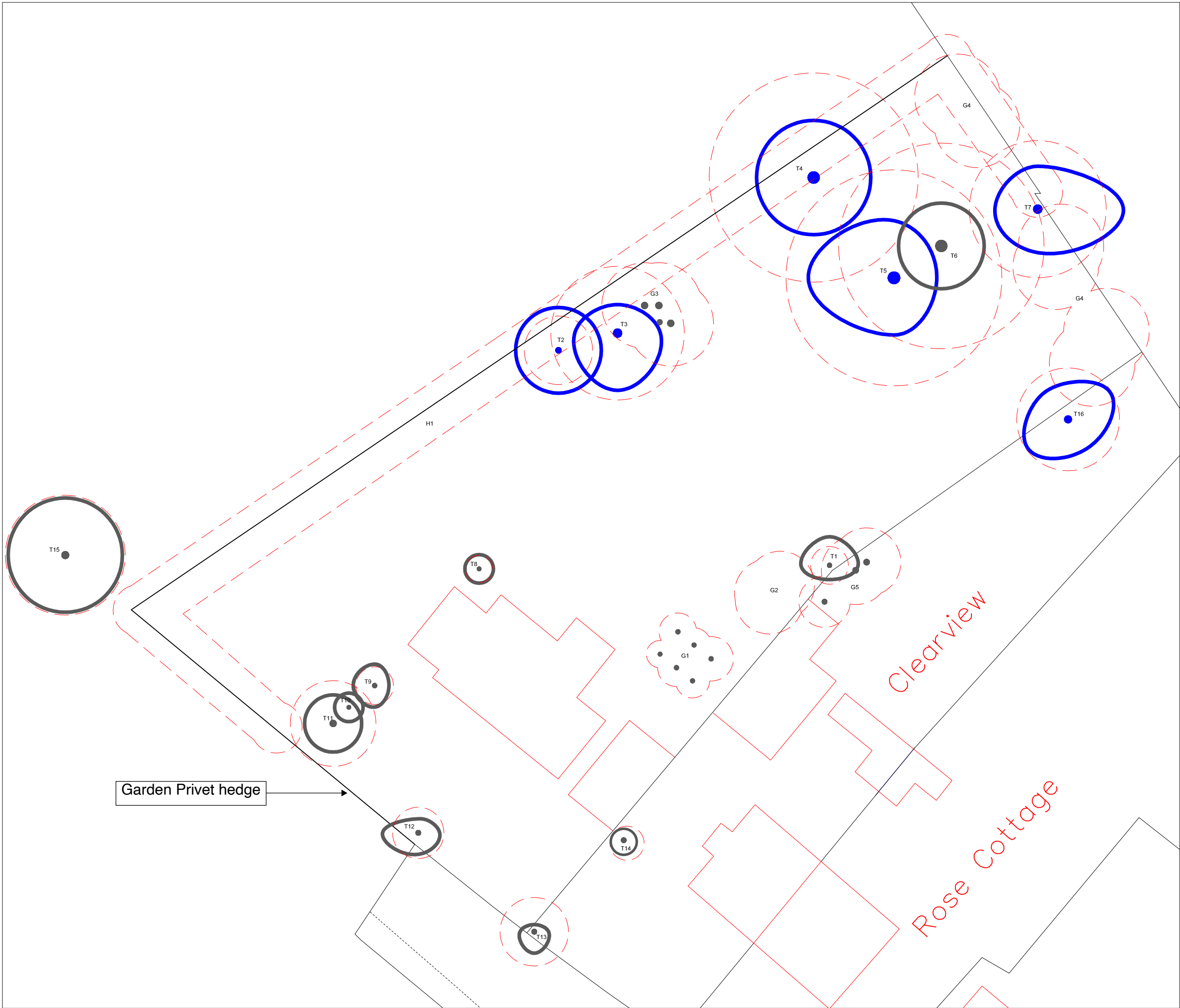
Y	Young	Trees that have not yet established
SM	Semi-Mature	Established trees up to 1/3 of expected height and crown
EM	Early mature	Between 1/3 and 2/3 expected height and crown
M	Mature	Between 2/3 and full expected height and crown
FM	Fully Mature	Full expected height and crown
OM	Over-Mature	Crown beginning to break up and decrease in size
S	Senescent	Crown in advanced stage of break-up

Condition

1	Good
2	Fair
3	Poor
4	Dead

Appendix 3.0

Plans



-  Category A Trees
-  Category B Trees
-  Category C Trees
-  Category U Trees
-  Root protection area



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Roby Road
Huyton
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Site Address:
Valleyfield,
North End Road,
Halewood,
L26 5QB

Drawing Title: BS5837 Plan
Drawing No: 20/00003/BS

Date: 04/03/2021
Scale: 1:250@A3
Drawn by: NW

Note: Dimensions are not to be scaled from this drawing.
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