



WE KNOW SERVICES

ARBORICULTURAL IMPACT ASSESSMENT

Site

St Luke's RC Primary School

Client

Knowsley Metropolitan Borough Council

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Arboricultural Impact Assessment – St Luke's RC Primary School



A photograph showing T1 and T2.

Quality Assurance

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1 Introduction

We Know Services were instructed by Knowsley Metropolitan Borough Council to undertake an BS5837:2012 arboricultural survey of the tree features within and adjacent to the red line boundary at St Luke's RC Primary School, Shaw Lane, Prescott L35 5AT.

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) A tree schedule.
- b) Advice on the removal, retention, and management of trees.
- c) Assessment of the potential effects of the proposal on retained trees and vice versa.
- d) Assessment of the requirement for tree protection for the duration of the works; and
- e) A mitigation proposal for any loss.

The survey was carried out on 1st December 2021 by means of visual 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.

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.

The following document was made available by the client:

- Drawing – PD 125 2018 – St Lukes.

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.

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 Statutory Designations

A check for tree preservation orders and conservation areas was undertaken on 07/12/21 using Knowsley Council's Online My Neighbourhood Map, the results showed that there are no tree preservation orders on site and the site is not within a conservation area.

3 Survey Methodology

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.

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.

Where appropriate, canopy spread for each tree was recorded at four cardinal points to reproduce an accurate representation of the crown shape of the tree on the tree plan in Appendix 3.0.

The survey included all trees within the proposal area and trees near to the proposal.

4 Survey Results

The survey identified ten tree features on site consisting of four individual trees and six groups. Of these, two tree features were classed as category B and the remaining eight tree features were classed as category C.

All tree features found on site were identified as being in good condition.

5 Impact Assessment

Table 5.1: Impact Table

Tree No.	RPA Radius	Distance to Proposed Development A (m)	RPA Incursion (m ²)	RPA Incursion (%)	Can the tree/s be successfully retained?
T1	1.92	13.9	0	0.0%	Yes
T2	1.44	14.4	0	0.0%	Yes
G3	3.36	0	4.4	30.2%	No
G4	3.60	0	10.7	14.7%	Yes
G5	3.00	0	51.8	12.8%	Yes, but remove to facilitate installation.
G6	3.36	0	17.9	19.0%	Yes, but remove to facilitate installation.
T7	2.63	1.5	5.1	23.5%	No
T8	5.69	2.5	12.7	12.5%	Yes, but remove to facilitate installation.
G9	3.60	0	54.1	5.4%	Yes, In Part
G10	1.44	0	4.4	13.0%	Yes, but remove to facilitate installation.

Table 5.2 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, G4, G9 (In Part).			G3, G5, G6, T7, T8, G9 (In Part), G10.

Due to the proposals, a total of two individual trees, four groups and one group in part are proposed for removal.

The proposed fence will be installed within the root protection areas (RPA) of G3 and T7 and will cover more than the recommended 20% RPA incursion, therefore it is recommended that these features are removed to accommodate the proposals. Because of the overall value of these features to the area, it is considered that the loss of these features will not have a detrimental impact to the area.

The proposed fence will be installed within the root protection areas of G5, G6, T8, G9 (In Part) and G10, will cover less than the recommended 20% RPA incursion. However, due to the locations of the trees within the groups averagely being 1m from the existing fence, it is recommended that they are removed to accommodate access to install the proposed fence. Because of the overall value of these features to the area, it is considered that the loss of these features will not have a detrimental impact to the area.

Because of the type of fencing that is proposed to be installed (Appendix 3.0), it is considered that the impact on the RPA of G4 is within the acceptable limits as set by BS5837:2012. However, to accommodate the proposed installation of the fence, it is recommended that all the trees within the group have the crowns raised to 5m above ground level.

Precautionary measures including working in proximity to trees are detailed in the accompanying method statement (Ref: 21/0093/AMS).

6 Mitigation Proposals

6.1 Replacement Tree Planting

Due to the loss of the trees identified in the Impact Table, it is recommended that replacement trees are planted as part of the proposed landscaping scheme. The extent of mitigation planting required will need to be confirmed in agreement with the Local Planning Authority once the development proposal is finalised.

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.

This will have several benefits for the character of the area. These are:

- Give a greater diversity of age class on the site, increasing sustainability.
- Give a greater diversity of species and therefore wildlife habitat.

The trees proposed are listed in *Table 6.1: Replacement Tree Specifications*

Table 6.1: Recommendations for Replacement Tree Specification

Tree Species	Tree Size
Field Maple - <i>Acer campestre</i>	20-25 cm girth
Silver Birch - <i>Betula pendula</i>	20-25 cm girth
Scots Pine - <i>Pinus sylvestris</i>	20-25 cm girth
English Oak - <i>Quercus robur</i>	20-25 cm girth
Rowan - <i>Sorbus aucuparia</i>	20-25 cm girth

7 Summary and Conclusion

The survey identified ten tree features on site consisting of four individual trees and six groups. Of these, two tree features were classed as category B and the remaining eight tree features were classed as category C.

All tree features found on site were identified as being in good condition.

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 to form a balanced judgement on tree retention and removal.

The proposals have impacted eight tree features on site, of these seven are recommended for removal and one feature is recommended for partial removal. The remaining tree features on site can be retained.

A precautionary method of working near trees is detailed in the accompanying Arboricultural Method Statement.

Following site development, regular (annual or biannual) inspections of all retained trees should be undertaken by a qualified arboricultural consultant.

It is considered that in following the advice in this document, any negative factors affecting the remaining trees on site will be minimised.

Appendix I.0 Tree Survey Schedule

Arboricultural Impact Assessment – St Luke's RC Primary School

Arboricultural Data Sheet: St Luke's Playing Field					Date of Survey: 01/12/21					Surveyor: Jonathan Henderson			
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	Lime	160	6	SM	1	1	1	1	2	Good	Reasonable shape and form. Tree has natural lean. Minor epicormic growth at base of stem. Minor deadwood in crown (>50mm diameter). No major visible defects.	10+	C1
T2	Lime	120	5	SM	1	1	1	1	2	Good	Reasonable shape and form. Tree has natural lean. Minor epicormic growth at base of stem. Minor deadwood in crown (>50mm diameter). No major visible defects.	10+	C1
G3	Mixed Broadleaf	280 AVG	14 MAX	EM - FM	See Plan				1+	Good	Reasonable shapes and forms. Likely self-seeded. Minor ivy growth on some stems within group. Minor deadwood in crowns (>50mm diameter). No major visible defects.	10+	C2
G4	Sycamore	300 AVG	14 MAX	FM	See Plan				0+	Good	Reasonable shapes and forms. Ivy on some hindering full inspection of group. Group provides good screening value. Minor deadwood in crowns (>50mm diameter).	20+	B2

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Arboricultural Data Sheet: St Luke's Playing Field					Date of Survey: 01/12/21					Surveyor: Jonathan Henderson				
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					N	E	S	W						
											Individually of lower value. Sever ivy at base from 0-1m.			
G5	Mixed Broadleaf	250 AVG	10 MAX	EM - FM	See Plan				0+	Good	Reasonable shapes and forms. Dense brambles prevented full inspection of lower stems. Crowns had no major visible defects.	10+	C2	
G6	Field Maple	280 AVG	10 MAX	FM	See Plan				0+	Good	Reasonable shapes and forms. Minor deadwood in crowns (>50mm diameter). No major visible defects.	10+	C2	
T7	Field Maple	150, 80 x6	4	M	2	2	2	2	0+	Good	Reasonable shape and form. Multi stemmed from base. Minor deadwood in crown (>50mm diameter). No major visible defects.	10+	C1	
T8	Sycamore	300, 200, 200, 180, 150, 150	8	EM	3	3	3	3	1	Good	Reasonable shape and form. Multi stemmed from base. Minor deadwood in crown (>50mm diameter). No major visible defects.	10+	C1	

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Arboricultural Data Sheet: St Luke’s Playing Field					Date of Survey: 01/12/21				Surveyor: Jonathan Henderson				
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					
G9	Mixed Broadleaf	300 AVG	14 MAX	EM – FM	See Plan				0+	Good – Fair	Reasonable shapes and forms. No access to eastern side of group due to surrounding dense vegetation which prevented full inspection of group. Minor deadwood in crowns (>50mm diameter). Group provides a reasonable screening value. Individually of lower value.	20+	B2
G10	Mixed Broadleaf	120 AVG	6 MAX	SM	See Plan				0+	Good	Reasonable shapes and forms. Likely self-seeded. Minor deadwood in crowns (>50mm diameter). No major visible defects.	10+	C2

Appendix 2.0 Tree Survey Key

Arboricultural Impact Assessment – St Luke’s RC Primary School

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

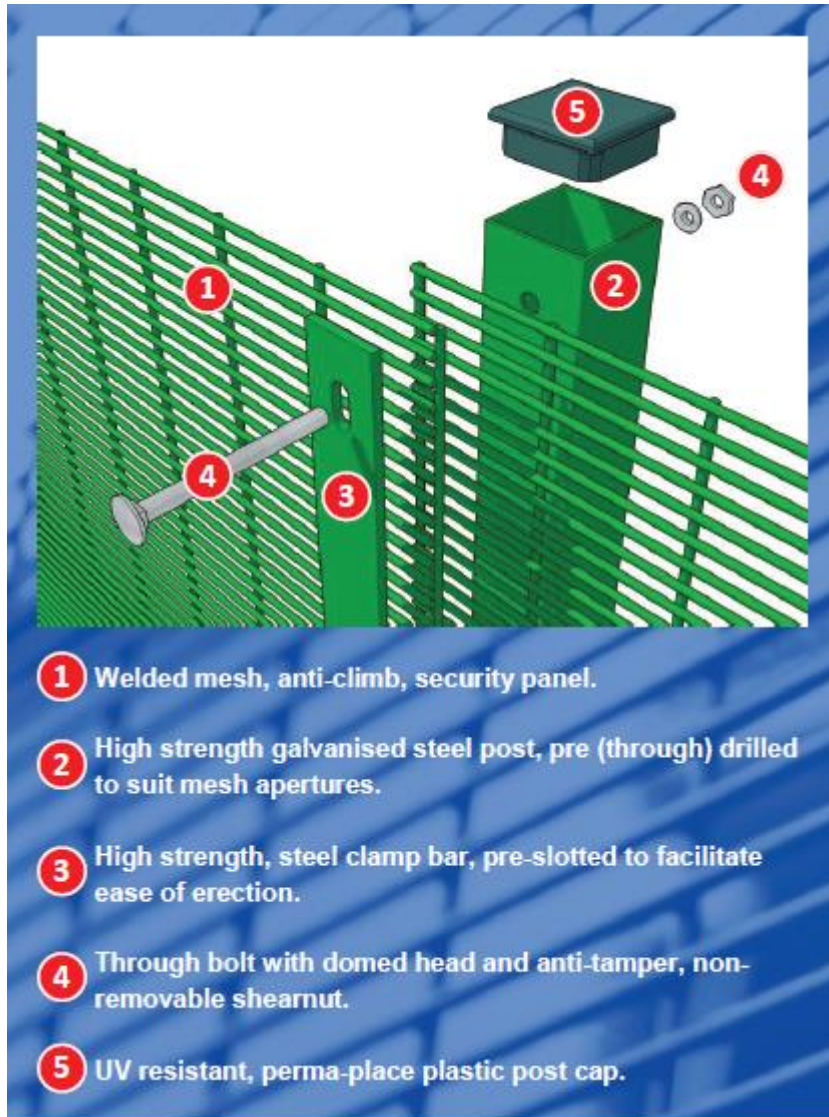
Condition

Good – Feature needs little, if any attention.
Fair – Feature has minor, but rectifiable defects.
Poor – Feature has major defects or is in late decline.
Dead – Feature is dead.

Appendix 3.0 Proposed Fencing Specifications

ST LUKES RC PRIMARY SCHOOL, PRESCOT

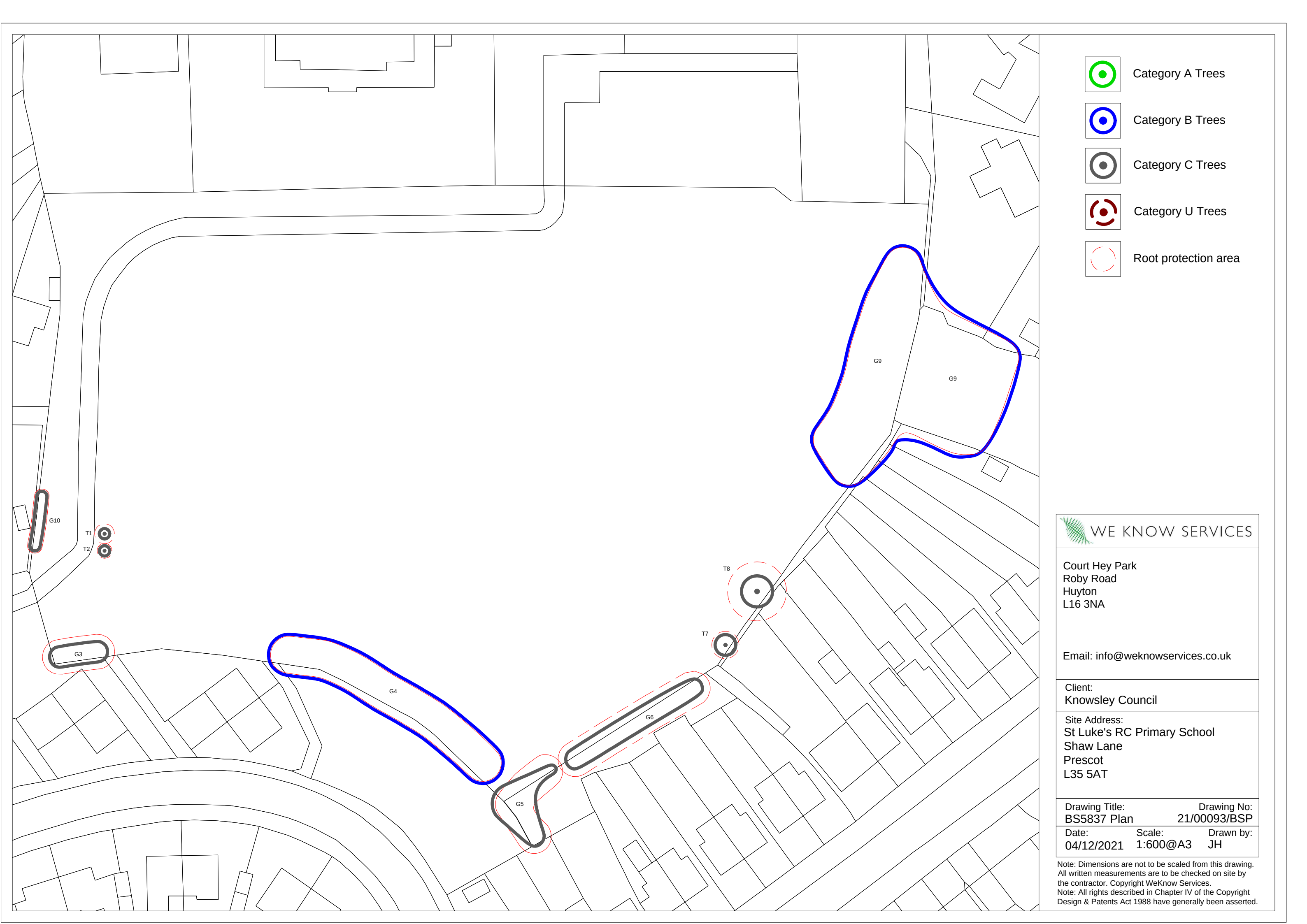
TYPICAL FENCE DETAIL: 2.4 METRE HIGH 358 MESH PANEL SECURITY FENCING SYSTEM TO BOUNDARY OF SCHOOL PLAYING FIELD



SYSTEM FEATURES:

- ANTI-CLIMB MESH CONFIGURATION
- HIGH SECURITY
- GOOD THROUGH VISIBILITY
- DURABLE/EASY TO INSTALL
- FULL-LENGTH PRE-SLOTTED CLAMP BARS
- ANTI-TAMPER FIXINGS
- MANUFACTURED TO BS 4102:1998 AND PRE-GALVANISED WITH A ZINC COAT WEIGHT TO CONFORM TO BS EN 10244-2-2009 CLASS D PRIOR TO POLYESTER POWDER COATING
- COLOUR MOSS GREEN: RAL 6005

Appendix 4.0 Arboricultural Plans



Category A Trees



Category B Trees



Category C Trees



Category U Trees



Root protection area



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Site Address:
St Luke's RC Primary School
Shaw Lane
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Drawing Title: BS5837 Plan Drawing No: 21/00093/BSP

Date: 04/12/2021 Scale: 1:600@A3 Drawn by: JH

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