WILBY&BURNETT LLP

Project Management, Architecture & Surveying

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AA/JE/2329
18th August 2011

Rochford Planning Department
Rochford District Council
Council Offices
South Street
Rochford
Essex
SS4 1BW

Dear Sirs

ESSEX: ROCHFORD, ST TERESA'S CATHOLIC PRIMARY SCHOOL
NEW SINGLE STOREY STAFFROOM EXTENSION AND REMOVAL OF TREE
Application Number: 11/00471/FUL

Please find enclosed the following documents in support of our planning application for the above project:

- Tree survey and drawings produced by Arbtech Ltd.

Should you have any queries or require any further information please do not hesitate to contact us.

Yours faithfully

A Aitchison

cc Mrs N Stevens - Headteacher

enc

Arboricultural Development Report

29 July 2011

St Teresa's Catholic Primary School, Rochford

ARBTECH

ENVIRONMENTAL SERVICES

Table of Contents

This report has been released electronically and the appendices referred to herein can be found in the annexed zip folder/s as .pdf files. If this report is released in hard copy the appendices will be bound into the back of this report. Plans may be annexed separately as A1 or A0 copies where a bound-in A3 copy is not appropriate.

Appendices

Tree Survey

Tree Constraints Plan

Tree Protection Plan

Executive Summary

This report describes the extent and effect of the proposed development at St Teresa's Catholic Primary School, Rochford on individual trees and groups of trees within and adjacent to the site.

Trees within and adjacent to the site have been surveyed by Arbtech Consulting Ltd using a methodology guided by British Standard 5837:2005 'Trees in relation to construction – Recommendations' ("BS5837").

Subsequently, this report has been produced, balancing the layout of the proposed development against the competing needs of individual trees and groups of trees within and adjacent to the site. This report comprises all of the requisite elements of an arboricultural implications assessment, method statement and supporting plans.

Checklist for Submission to Local Planning Authority

Tree survey	☒
Tree constraints plan	☒
Arboricultural implications assessment	☒
Arboricultural method statement	☒
Tree protection plan	☒

This report and its appendices follow precisely the strategy for arboricultural appraisal intended to provide local planning authorities with evidence that trees have been properly considered throughout the development process.

It is the conclusion of this report that the overall quality and longevity of the amenity contribution provided for by the trees and groups of trees within and adjacent to the site will not be adversely affected as a result of the local planning authority consenting to the proposed development. Furthermore any arboricultural matters arising as a result of this report or beyond the scope of it can be addressed satisfactorily with planning conditions if necessary

General Information

Client: Wilby and Burnett LLP

Site: St Teresa's Catholic Primary School, Ashingdon Road, Rochford, Essex,

Brief proposal description: Small extension of the main school building.

Planning application reference: N/A

Documents referred to:

Document	Reference
Topographical survey drawing	2329/4/SD2
Proposed layout drawing	2329/4/SD2
Landscape master plan drawing	N/A
LPA pre-app comments	N/A
British Standard 5837:2005	"BS5837"

Survey: Daniel Simpson is an arboricultural surveyor for Arbtech Consulting Ltd. On 22/07/2011 he undertook a BS5837 survey of all trees within impacting distance of the site.

Limitations: The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and decay detection equipment were not employed, though may form part of the survey's management recommendations. Measurements were taken using a diameter tape, laser measure and digital clinometer. Where this was not possible, measurements are estimated.

Scope: Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (*i.e. not in relation to the proposed development*).

Land use: The site is used for educational purposes.

Topography: The site is flat with no significant changes in ground level.

Locality: The tree cover and quality in the locality is moderate, with trees being a key component of the local landscape.

Relative amenity value: The trees surveyed generally contribute to the landscape amenity of the site and wider locality.

Condition, age and species diversity: The general condition of the trees was good, with a good mix of species and ages.

Status: No statutory protection check has been performed.

Further information: A full schedule including the survey data of all individual trees and groups of trees surveyed can be found at Appendix I.

Arboricultural Implications Assessment

The proposed development is relatively small in scale, and therefore the potential impact is also relatively low. However, there are a number of issues to be addressed, and broadly these are as follows –

- The effect and extent of the proposed development within root protection areas of retained trees;
- The potential conflicts of the proposed development with canopies of retained trees; and
- The likelihood and reasonableness of any future remedial works to retained trees, beyond that which would have been scheduled in the course of ordinary management.

The site is the admin section to the front of the main building of a primary school. There is an existing tarmac driveway with an access and egress to the public highway and on-site car park. And a grassed island with trees adjacent to the public highway that provides some screening.

Special Note: One of the three exemptions of a tree preservation order is detailed planning consent. Further, BS5837 does not take account of statutory protection in its survey criteria weighting. For these reasons, no distinction will be drawn between trees with and/or without statutory protection.

Category C Trees and Groups

T6, T7

The risk of damage to these trees is low, and will be controlled adequately with a construction exclusion zone, as defined within the appended Tree Protection Plan and Arboricultural Method Statement below.

Category B Trees and Groups

T1, T2, T3, T4, T5, G1

Due to their age, dominance and quality these trees provide a significant amenity contribution into the long term and must be retained and protected within the proposed development where possible.

The development requires the loss of T1, and for landscape reasons I have also recommended the removal of T2 as well. This loss must be mitigated with compensatory tree planting. It is suggested that this occurs within the grassed area to the front of the site, as trees here provide most benefit to the public by virtue of the increased exposure to passers by.

Other trees recorded and beyond the survey can be protected by a mix of tree protective fencing, construction exclusion zone, and arboricultural methodology.

No issues arise in relation to light/shading of the site as a consequence of the development as no windows of proposed buildings/annexes are unreasonably shaded by the retained trees. No further pruning is required because of future conflicts arising between trees and buildings. The leaf litter and minor twig debris is not oppressively burdensome to cope with and does not render the proposed development unsafe.

For reasons of public safety, all tree works referred to herein must be carried out prior to any site personnel commencing works or any building materials being delivered. All tree works should be carried out by suitably qualified, insured and experienced tree work contractors to British Standard number BS 3998:2010

Summary of Tree Works

Tree or Group Reference #	Remove	Canopy	Other
T1, T2	Remove to ground level.		

Protective barrier fencing is to be installed immediately following the completion of the tree works, sited and aligned in accordance with the tree protection plan. Protective barrier fencing is to remain in situ for the entire duration of the development unless otherwise agreed in writing by the council.

Protective barrier fencing should be appropriate for the intensity and proximity of the development to protect trees where development activity is in close proximity. BS5837 defines protective barrier fencing to be "*a scaffold vertical and horizontal framework, well braced to resist impact with the vertical tubes spaced at a maximum of 3.0m. Onto this, weld mesh panels should be securely fixed with wire or scaffold clamps. Weld mesh panels on rubber or concrete feet are not resistant to impact and should not be used.*" Signage denoting the words "*tree protection area*" at 5.0m intervals should be fixed to the protective barrier fencing.

- Mechanical digging or scraping is not permitted within a defined root protection area or within areas cordoned off by protective barrier fencing.
- Fires are not permitted within ten metres of any vegetation.
- Machinery, plant and vehicles are not permitted to be washed down within five metres of vegetation.
- Leaning objects against or attaching of objects to a tree is not permitted.
- Chemicals and materials are not to be transported, stored, used or mixed within a root protection area or within areas cordoned off by protective barrier fencing.

Where root protection areas extend outside of protective barrier fencing or construction exclusion zone, the area will be protected from pedestrian movements by the existing footpaths. Furthermore, all plant, equipment, or materials must be stored on hard standing such as the front driveway or footpath outside of a root protection area.

At any time, here demolition and / or other equipment with hydraulic arms, boom, cranes, and concrete pump are operated near the canopy of any retained tree:

- the operator shall take great care and avoid any collision with the tree;
- the works shall be supervised e.g. by the site manager and / or arboricultural consultant, who will provide constant feedback as required to assist the operator;
- any incidents of damage to retained trees or other breach of tree protection measures shall reported to the Council's Tree Officer and (if retained throughout development) Arbtech Consulting Ltd. Works must cease until the Council have had an opportunity to inspect the damage and where appropriate, agree a mitigation plan.

The responsibility for enforcing this zone is the site manager. Access is not completely restricted in case any site users require access to that area of the grounds. However,

this does not extend to those onsite in connection with the development. The zone is to be maintained at all times from after the initial tree works are completed and before demolition or any development commences, until all development has ceased. The zone may not be accessed by staff, contractors, equipment, plant or materials at any time for any reason.

The ratio of trees removed to trees replanted should be at least 1:1. Consideration of the available space for tree growth is required when selecting a planting location and species. The landscape scheme should include a scale plan indicating the precise location of trees. And a schedule of the number of trees to be planted, the size and species.

The development's tree protection can be monitored by Arbtech Consulting Ltd, who may be retained to record and report observations to the council at appropriate intervals. As a suggested minimum, the company should visit once to brief site personnel prior to any works commencing; once to sign off the installation of tree protective measures; once per month during the development; and once to sign the development off and recommend that non-permanent tree protective measures can be removed.

ARBTECH

Document Production, Approval and Distribution Record

Status	Issue #	Editor	Position	Date
Final	1.0	Daniel Simpson	Arboricultural Consultant	29/07/2011

Limitations

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ARBTECH

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Essex CB10 2AJ

29/07/11

St Teresa's Catholic School, Tree Survey

You recently appointed us to undertake a BS5837 Tree Survey and Tree Constraints Plan. Our arboricultural consultant, Mr. D. Simpson undertook the survey on 22/07/2011 and subsequently we have produced this summary of our findings. Mr. Simpson HND (For) NDip (Arb) MArborA is a professional member of the Arboricultural Association and has over 10 years experience in both local authority and private practice environments.

The advice below and appended is underwritten by our Professional Indemnity insurance for the business practice of Arboricultural Consultancy in the sum of one million Pounds Sterling in each and every claim.

Tree Survey Executive Summary

A total of 8 items were surveyed, these were all individual trees except for one group. The tree stock recorded is early-mature to mature in age range. Due to the small scale of the proposal, localised to the front of the main building adjacent to the driveway, it is not considered necessary to survey the whole site. However, trees beyond the immediate area of construction that could be affected by construction activity have been included. With the exception of two younger trees, all items surveyed were of moderate quality (Category B). All are in good condition except for T2, which appears to be suppressed by the more dominant T1, but also contributes to the amenity of the trees adjacent to the building which form a small group, yet for this report are recorded individually.

The trees have been surveyed using techniques demanded by BS5837. The proposed development is a small extension to the existing building.

The arboricultural impacts could be addressed with arboricultural methodology and replacement planting.

Individual notes on each tree's structural and physiological condition are found in the Notes section of the survey schedule.

BS5837 Scope

This standard recognizes that there can be problems of development close to existing trees which are to be retained, and of planting trees close to existing structures. This standard sets out to assist those concerned with trees in relation to construction to form balanced judgements. It does not set out to put arguments for or against development, or for the removal or retention of trees. Where development, including demolition, is to occur, the standard provides guidance on how to decide which trees are appropriate for retention, on the means of protecting these trees during development, including demolition and construction work, and on the means of incorporating trees into the developed landscape.

Definitions

An arboriculturist (or arboricultural consultant) is a person who has, through relevant education, training and experience, gained recognized qualifications and expertise in the field of trees in relation to construction.

A tree survey should be undertaken by an arboriculturist and should record information about the trees on a site independently of and prior to any specific design for development. As a subsequent task, and with reference to a design or potential design, the results of the survey should be included in the preparation of a tree constraints plan, which should be used to assist with site layout design.

A TCP is plan, typically delivered as an AutoCAD drawing (.dwg file format), prepared by an arboriculturist for the purposes of layout design showing the root protection area and representing the effect that the mature height and spread of retained trees will have on layouts through shade, dominance, etc.

An RPA is a layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m^2.

A construction exclusion or tree protection zone is an area based on the RPA (in m^2), identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

A TCP is plan, typically delivered as an AutoCAD drawing (.dwg file format), prepared by an arboriculturist showing the finalized layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement, which can be shown graphically.

This is a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

This is a methodology for the implementation of any aspect of development that has the potential to result in loss of or damage to a tree. The AMS is likely to include details of an on-site tree protection monitoring regime.

Methodology

The methodology used to assess the trees was the British Standard 5837:2005 'Trees in Relation to Construction' tree survey method. The aim of the survey is to establish which trees are moderate and good quality; suitable for retention and

justifying protection. And, which trees are low or poor quality; either undesirable or unsuitable to retain and protect.

The tree survey includes all trees included in the land survey red line boundary plan, as well as any that may have been missed, and it should categorize trees or groups of trees, including woodlands for their quality and value within the existing context, in a transparent, understandable and systematic way. Where the arboriculturist has deemed it appropriate, the trees have been tagged with small metal or plastic tags, placed as high as is convenient on the stem of each tree.

Whilst master plan proposals for the development of the site might be available, the trees have been surveyed without taking these into consideration. All detailed design work on site layout should take into consideration the results of the tree survey (and the TCP).

Trees forming groups and areas of woodland (including orchards, wood pasture and historic parkland) are identified and considered as groups where the arboriculturist has determined that this is appropriate, particularly where they contain a variety of species and age classes that could aid long-term management. It is often expedient to assess the quality and value of such groups of trees as a whole, rather than as individuals. However, an assessment of individuals within any group has been undertaken if they are open-grown or if there is a need to differentiate between them.

The quality and value of each tree or group of trees has been recorded by allocating it to one of the four categories; A, B, C, or R (highest to lowest quality respectively). The categories are differentiated on the tree survey plan by colour, or by suffixing the category adjacent to the tree identification number on the TCP.

The survey schedule lists all the trees or groups of trees. The following information is also provided:

I. reference number (to be recorded on the tree survey plan);
II. species (common or scientific names);
III. height in metres;
IV. stem diameter in millimetres at 1.5 m above adjacent ground level or immediately above the root flare for multi-stemmed trees;
V. branch spread in metres taken at the four cardinal compass points;
VI. height in metres of crown clearance above adjacent ground level;

VII. age class (young, middle aged, mature, over-mature, veteran);
VIII. physiological condition (e.g. good, fair, poor, dead);
IX. structural condition, e.g. collapsing, the presence of any decay and physical defect;
X. preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat; and
XI. category grading to be recorded in plan on the tree survey plan.

Limitations

Trees were inspected from using visual observation from ground level only. Trees were not climbed or inspected below ground level. Inaccessible trees will have best estimates made about the location, physical dimensions and characteristics. Trees have been grouped where BS5837 guides us that it is expedient to do so. Trees have been excluded from the survey if they are found by us to be sufficiently far away from the proposed developable area or if they are outside of the red line boundary plan showing the expectations of our Client for the extent of the survey. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

Recommendations

Having already had a chance to assess your planning proposals, we make the following recommendations:

a) The proposal requires the loss of T1, and in my opinion it is also advisable to remove T2. Without the presence of T1 the shape of the canopy would be awkward, imbalanced, and unattractive. The tree surgery required to address this would require the loss of the majority of the canopy. Compensatory tree planting is recommended to assist with getting planning permission.

b) In our opinion, based on our experience of the local planning authority, a report including an arboricultural impact assessment, arboricultural method

statements and a tree protection may be required to determine your planning application at this site. It is our recommendation that you obtain such a report.

Arbtech Consulting Ltd 5678552 GB903660148 Directors: R. M. Oates
Murlain House, Union Street, Chester, Cheshire CH1 1QP
New Broad Street House, 35 New Broad Street, London EC2M 1NH
118-120 High Street, Esher, Surrey KT120 9QJ
Tel. 08450 176950 Web. www.arbtech.co.uk E-mail. email@arbtech.co.uk

Appendices

The following documents were released to the Client as appendices to this report:

- Survey Schedule (PDF)
- Survey Schedule key (PDF)
- Tree Constraints Plan drawing (PDF)

If you require clarification of information contained herein, please do not hesitate to contact us via 08450 176950.

Yours Sincerely,

Daniel Simpson

Arboricultural Consultant

ds@arbtech.co.uk

Document Production and Approval Record

Status	Issue #	Surveyor	Edits	DD/MM/YYYY
Final	1.0	Daniel Simpson – Consultant	Draft	26/07/2011

Arbtech Consulting Ltd has prepared this Report for the sole use of the above named Client/Agent in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us. This Report may not be relied upon by any other party without the prior and express written agreement of Arbtech. The assessments made assume that the sites and facilities will continue to be used for their current purpose without significant change. The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from third parties has not been independently verified by Arbtech.

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Arbtech Consulting Ltd
BS5837:2005 Trees in relation to construction
Tree Survey Schedule

Date 22/07/2011
Surveyor D. Simpson
Site address St Teresa's Catholic Primary School, Ashingdon Road, Rochford, Essex SS4 1RF

Key

Item reference	*A unique number or reference to identify trees or groups (T/G) using the Tree Constraints Plan.*
Species	*Common and taxonomic names.*
Age	*Age classification; Young (Y), Early-mature (EM), Mature (M), Late Mature (LM).*
Vitality	*The general physiological condition of the tree; Dead, Poor or Normal.*
BS5837 retention category	*The retention category referring to useful contribution in years; R=<10yrs, C=10-20yrs, B=20-40yrs or A=>40yrs.*
	The retention sub-category referring to the type of amenity; 1=Individual, 2=Landscape/Group or 3=Biodiversity/Cultural.
Ground clearance	*The height of ground clearance in metres.*
Height	*The height of the tree in metres.*
Diameter	*The stem diameter in milli-metres at height; 1.5m for single stemmed trees; or 0m for multi-stemmed trees.*
Canopy spread NSEW	*The extent of the canopy in the principal compass points in metres; north (N), south (S), east (E), west (W).*
Notes	*Notes and general comments on the structural condition of the tree, or its environment.*
Recommendations	*Preliminary management recommendations. Note; in accordance with BS5837 guidance recommendations do* **not** *refer to your* development layout.

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email@arbtech.co.uk

Item	Species	Age	Vitality	BS Cat	BS Cat	Clr	Height	Diameter	N	S	E	W	Notes	Mgt reco's
T1	Hornbeam, *Carpinus betulus*	M	Good	B	1 / 2	1.5	16.8	450	8	8	8	6	No significant defects.	None
T2	Hornbeam, *Carpinus betulus*	M	Fair	B	1 / 2	1.5	16.8	360	8	8	8	2	Canopy sparse, approx 70% density compared to T1, possibly due to dominance of T1. This tree has an imbalanced canopy due to growing close to T1.	None
T3	Cockspur Thorn, *Crataegus crus-galli*	MA	Good	B	1	1.5	6.8	280	4	4	4	4	No significant defects.	None
T4	Cockspur Thorn, *Crataegus crus-galli*	MA	Good	B	1	1.5	5	200	3	3	3	4	No significant defects.	None
T5	Cockspur Thorn, *Crataegus crus-galli*	MA	Good	B	1	1.5	4.6	150	1	1	2	2	No significant defects.	None

G1	Sycamore, *Acer pseudoplatanus*	MA	Good	B	1 / 2	1.5	12.6	Average 300	0	0	0	0	Smallest tree of group has compression fork at 0.5m above ground level - no implications.	Remove smaller limb of main branch junction.
T6	Purple Norway Maple, *Acer platanoides*	EM	Good	C	1 / 2	1	5.6	80	2	2	3	2	Slight lean of stem approx 10 degrees - no implications.	None
T7	Ornamental Maple, *Acer platanoides 'drummondii'*	EM	Good	C	1 / 2	0.5	5.6	80	2	2	2	2	No significant defects.	None

KEY

- Tree Crown Spread
- Root Protection Area (RPA)
- Tree Stem
- 001 Tree No.

TREE CATEGORY ID.

- Category A
- Category B
- Category C
- Category R

Indicative

REV.	DESCRIPTION	DWN	CHK'D	DATE

CLIENT

Wilby & Burnett LLP

PROJECT

St Teresa's Catholic Primary School, Ashingdon Road, Rochford, Essex, SS4 1RF

TITLE

Tree Constraints Plan (TCP)

DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RCK	22/07/2011					1:500

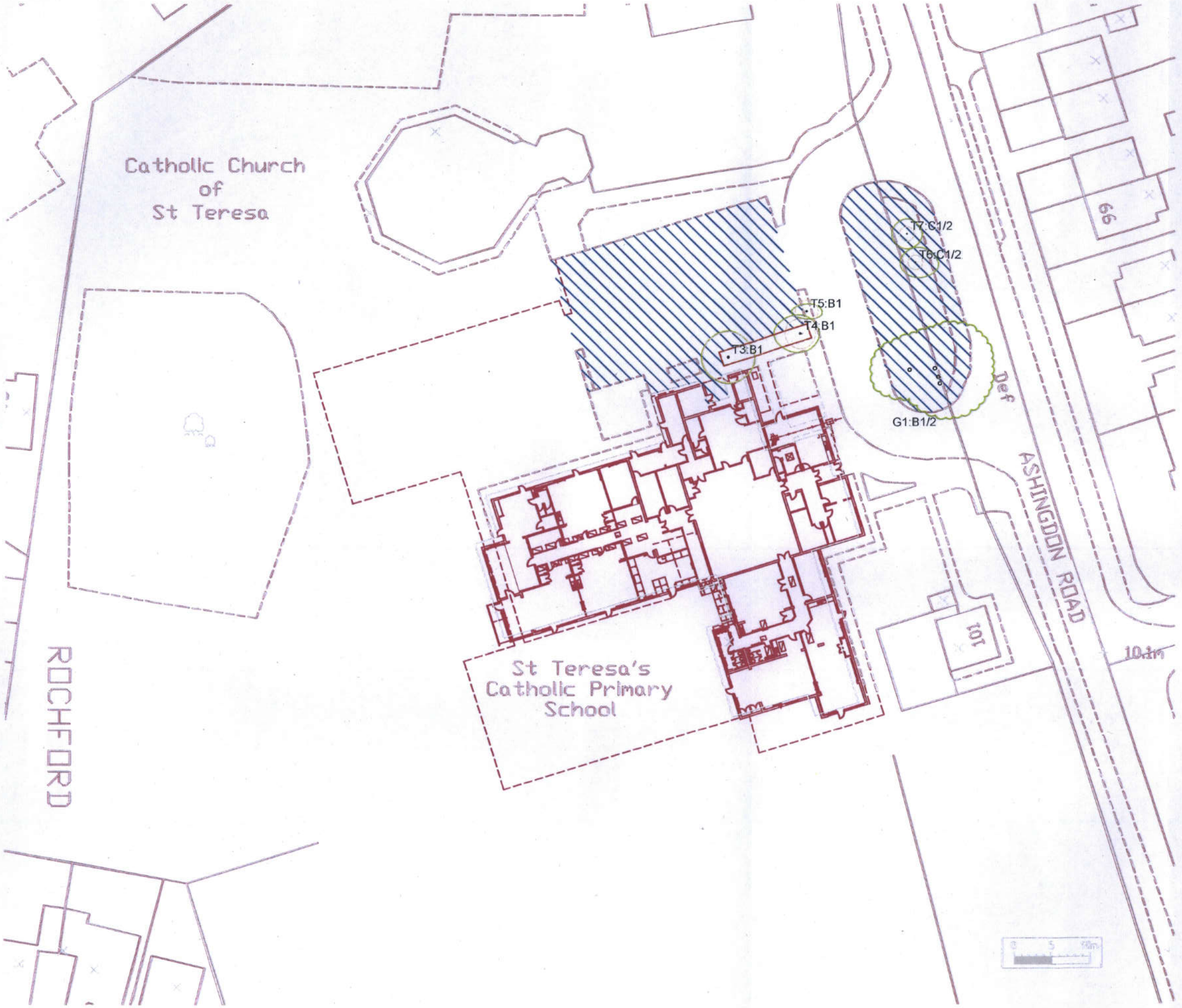
ARBTECH CONSULTING LIMITED
1/2 Charter Court
Well House Barns
Chester
CH4 0DH
Telephone: 0845 0176950

Drawing Number

TCP – 01

A3

REV.



KEY

- Protective Fencing
- Construction Exclusion Zone (CEZ)
- Root Protection Area (RPA)
- Tree Stem
- T1 Tree No.
- Proposed Building

Indicative

REV.	DESCRIPTION	DWN	CHK'D	DATE

CLIENT

Wilby & Burnett LLP

PROJECT

St Teresa's Catholic Primary School, Ashingdon Road, Rochford, Essex, SS4 1RF

TITLE

Tree Protection Plan (TPP)

DWN	DATE	CHK'D	DATE	APP'D	DATE	SCALE
RCK	26/07/2011					1:500

ARBTECH CONSULTING LIMITED
1/2 Charter Court
Well House Barns
Chester
CH4 0DH
Telephone: 0845 0176950

Drawing Number

TPP – 01

A3

REV.