Sylva Consultancy
expert arboricultural advice

ARBORICULTURAL REPORT

St Mary's University
Waldegrave Road
Strawberry Hill
Twickenham
London
TW1 4SX

June 2021

Ref: 21120

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APPENDICES

1. INTRODUCTION

1.1 Instructions

1.1.1 This Arboricultural Impact Assessment has been prepared to assess the likely impact and effect regarding the proposal to construct an infill extension to provide an extended entrance into the Library at St Mary's University, Twickenham (Appendix 1).

1.1.2 This appraisal assesses the impact of the proposal in relation to the trees surveyed and discusses mitigation measures that may have to be adopted.

1.2 Arboricultural Survey

1.2.1 During June 2021 a tree survey was carried out in accordance with British Standard 5837:2012 'Trees in relation to Design, Demolition and Construction-Recommendations' and good arboricultural practice. This is a basic data collection exercise and a record of the trees condition at the time of surveying. The tree survey data can be viewed at Appendix 2, root protection area (RPA) data at Appendix 3 with the tree constraints plan provided at Appendix 4.

1.3 Tree Protection

1.3.1 A desk top study of information posted on London Borough of Richmond upon Thames website details that the site is not located within a Conservation Area. No information is currently available on the website to determine whether any of the trees are subject to a Tree Preservation Order (TPO). It is recommended that the London Borough of Richmond upon Thames to confirm the presence of any TPO's.

1.4 Site Description

1.4.1 The area surveyed is located in front of St Mary's University Chapel. In front of the Chapel are two raised planters with a number of trees growing within the Piazza in front of the library entrance.

1.5 Proposed Development

1.5.1 It is proposed to construct an infill extension to provide an extended entrance into the library. In addition, two raised flower beds within the piazza which are outside the Library and Chapel will be removed to create a clear walkway into the library. Post development soft and hard landscaping will also be carried out. The purpose of this report to assist with the design process.

1.5.2 All tree numbers referred to in this document relate to the tree numbers annotated on the tree constraints plan and arboricultural impact assessment plan (Appendix 5).

2. ARBORICULTURAL SURVEY

2.1 Six trees have been recorded within this assessment. The tree quality is assessed as follows:

U: Trees that are considered to be of such condition that any existing value would be lost within 10 years, and which should, in the current context, be removed for reasons of sound arboriculture management. However, if category 'U' trees are placed in an inaccessible location such that concerns over public safety are reduced to an acceptable level, it may be preferable or possible to defer this recommendation.

A: Trees of the highest quality and value and are considered to be of such a condition as to be able to make a substantial contribution (e.g., 40 years +).

B: Trees of moderate to high value and are considered to be of such a condition as to be able to make a significant contribution (e.g., 20 years +).

C: Trees of low quality with an estimated life expectancy of at least 10 years. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories. Young trees with a stem diameter of less that 150mm should be considered for relocation or replacement through mitigation (e.g., 10 years).

Category A, B & C trees are further divided into sub-categories. These sub-categories carry equal weight and are selected for either arboricultural values, landscape values or cultural values, including conservation. Within the British Standard 5837:2012 it is recommended to record hedge and shrub masses, however in the context of the standard it is not necessary to assess the quality of these or to provide a category classification.

The numbers of trees falling under each classification within the arboricultural survey are as follows:

U: 0 trees

A: 0 trees

B: 3 trees

C: 3 trees

3. PRINCIPLE ARBORICULTURAL IMPLICATIONS

3.1 Introduction

3.1.1 Consideration is given to the significance of the trees identified in the arboricultural tree survey, the constraints that they are likely to pose to any development that may occur, post development implications (if any) and work requirements to trees for reasons of sound arboricultural management in order to facilitate the development (BS5837:2012 Section 5.4).

3.1.2 This appraisal assesses the impact of the potential to re-develop the site in relation to the trees and discusses mitigation measures that may have to be adopted.

3.2 Trees

3.2.1 The trees recorded are growing within existing landscape areas which have been regularly managed.

3.2.2 The Wildlife & Countryside Act 1981, as amended by the Countryside Rights of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit trees. These have the potential to pose additional constraints on the use and timings of works that may occur to trees located at the site. These issues are beyond my expertise, and it is recommended that appropriate advice is sort prior to the implementation of any works considered within this report.

3.3 Overview

3.3.1 The tree survey data identifies that the most notable trees within influencing distance of the proposals are the category ‘B’ trees. As such the report recommends that due consideration to retain these trees in the event of any re-development is given.

3.3.2 The appended arboricultural impact plan illustrates the proposals in relation to the tree stock. In addition to pre-development concerns, post development concerns such as debris and concerns of the trees’ proximity and juxtaposition to the proposal have also been considered during the design process.

3.3.3 An assessment of the design on the tree stock reveal that two category ‘C’ trees require removal to implement the proposal.

3.3.4 The scheme has undergone a careful design process to ensure an efficient use of the site, whilst safeguarding the continued contribution to the greening of the immediate landscape. On the bases of the appraisal, it is considered that the arboricultural impact of the scheme on the tree stock will not result in an adverse impact on the character and appearance of the site or wider landscape.

3.4 Impact of the proposal on the tree stock

Overview

3.4.1 Whilst trees in categories ‘A’, ‘B’ and ‘C’ are all a material consideration in the development process, the retention of category ‘C’ trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary where they impose a significant constraint on development. Furthermore, BS 5837:2012 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature “*need not necessarily be a significant constraint on the site’s potential*”.

3.5 Proposed Development

3.5.1 To implement the proposal two category ‘C’ trees (T3 & T4 palm x 2) will be removed. Category 'C' trees are assessed as being either of low quality, limited merit, low landscape benefits, no material cultural or conservation value, or only limited or short-term potential; or young trees with trunk diameter below 150mm; or a combination of these. These trees are not considered as a constraint to the re-development of the site and consequently their tree removal is warranted.

3.5.2 The removal of the raised planters enables the reconfiguration of the entrance into the library with new paths providing a clear walkway to the Library across the Piazza. In addition, new low level soft landscaped areas will also be created to replace the soft landscaping currently growing in the planters.

3.6 Construction

3.6.1 Careful consideration has been given regarding the buildability of the proposals. The arboricultural impact plan illustrates that sufficient room exists to locate the site compound and contractor parking outside the RPA’s of the retained trees.

3.6.2 Fence protection is required for retained trees T1, T2, T5 & T6. The fencing will comprise of Heras fencing and will be based on Figure 2 ‘Default Specification for Protective Barrier’ as recommended within the British Standard 5837:2012. Where appropriate the fencing will be braced to withstand impacts.

3.6.3 A tree pruning works schedule to facilitate the proposal has not yet been finalised. Where pruning works to trees are required, it is judged that trees can be pruned to acceptable standards in accordance with British Standard 3998:2010 ‘Tree Works - Recommendations’.

3.6.4 No new services are required for the scheme.

4. SUMMARY

4.1 Conclusions

4.1.1 The British Standard 5837:2012 states that there is the need to avoid misplaced tree retention; for example, to attempt to retain too many unsuitable trees on a site may result in excessive pressure on the trees during the development work and subsequent demands for their removal post development. To facilitate the proposal two category 'C' trees will be removed. The scheme enables three category 'B' trees and one category 'C' tree to be retained.

4.1.2 It is acknowledged that consideration for both the direct impact and indirect impact of a development with respect to retained trees needs to be assessed. With respect to the retained tree stock it is considered that their successful integration into the layout can been achieved.

4.1.3 Careful planning of site operations must be carried out to avoid any adverse impact to the retained trees. To safeguard the trees through the development it is advised that a site specific Arboricultural Method Statement is drawn up and implemented.

4.2 Post development tree management.

4.2.1 Section 8.8.2 of the British Standard 5837:2012 recommends post development aftercare of trees following the completion of development works. It is recommended the following is considered with regard to post development inspection of retained trees:

1. Trees that grow on a site prior to development may, if adversely affected, be in decline over a period of several years before they die. This varies due to age, species, condition prior to development, extent of damage during development, soil conditions and climate. It is recommended that regular inspections are undertaken.

2. Where trees are protected by planning controls, it is recommended that the Local Planning Authority is informed, and necessary agreements obtained prior to any remedial works.

3. Following completion of a development it is recommended that the arboricultural consultant inspects the trees for signs of intolerance to the change of conditions and the effect of the development. There may be a need for additional tree works to those originally specified.

APPENDIX 1

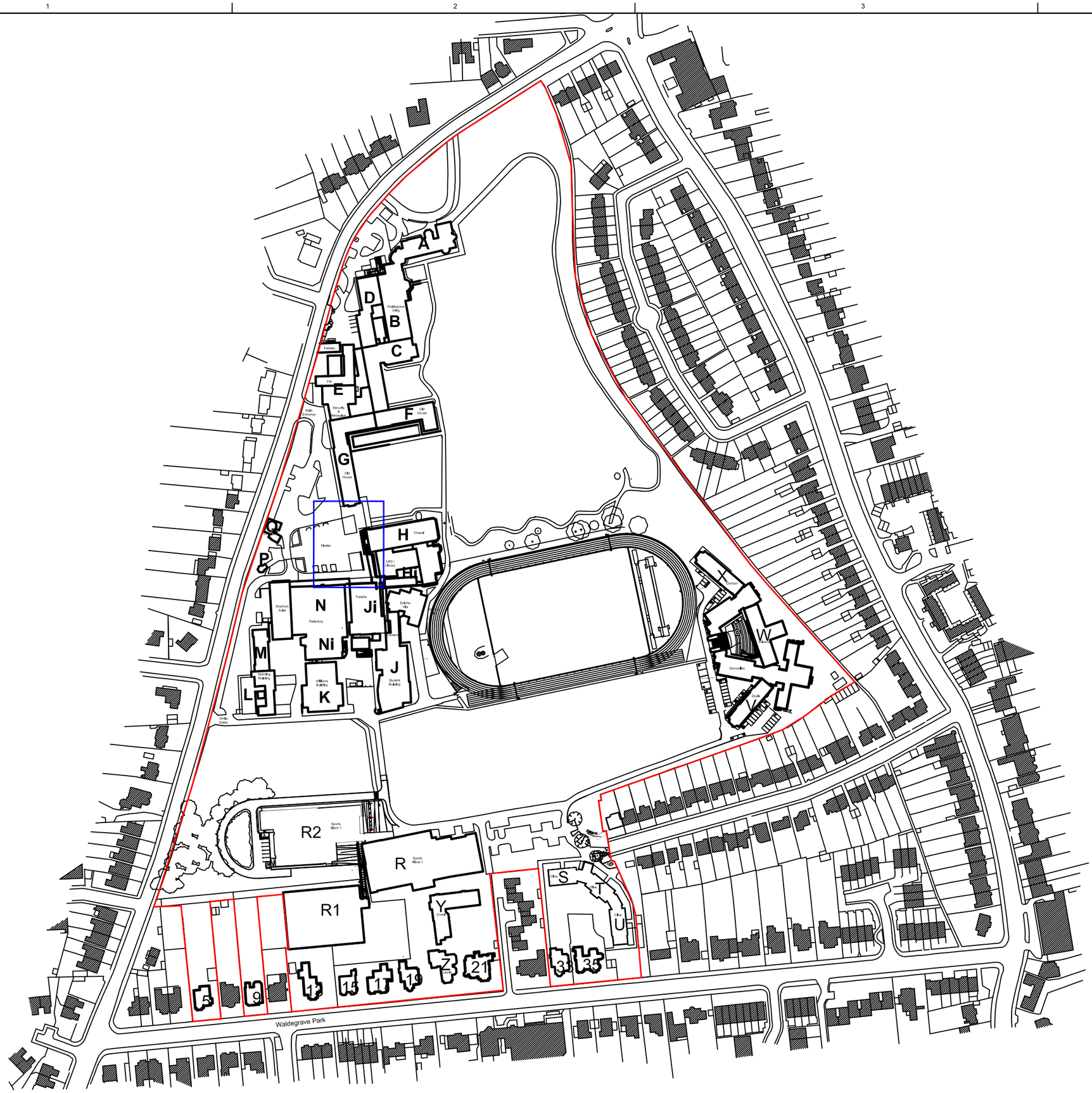
SITE LOCATION PLAN

DO NOT SCALE

The written dimensions are in all cases to be preferred to the scaled dimensions. Contractors, Sub-contractors and Suppliers MUST verify all dimensions on site.

SITE BOUNDARY LINE

APPLICATION AREA



Rev.	Purpose of issue	Date	Authorised
0	PLANNING	10.02.21	MRB

St Mary's University Twickenham London

Project
LIBRARY ENTRANCE INFILL EXTENSION AND REMOVING RAISED FLOWER BEDS

Drawing
SITE PLAN

Original Scale	Drawn	Checked	Authorised
1/2500	MRB	MRB	MRB
	Date 10.02.21	Date 10.02.21	Date 10.02.21

Drawing Number P005

Rev -

A3

APPENDIX 2

TREE SURVEY DATA

KEY TO TREE SCHEDULE

Tree No:	Relates to individual trees identified within the Tree Survey Schedule and Tree Constraints Plan
Species:	Common name
Height:	Estimated height expressed in meters
ST:	Stem diameter of the main trunk taken at 1.5m above ground level or in accordance with Annex C BS5837:2012.
Height in M of Canopy:	Information of the first significant branch and direction of growth in order to inform on ground clearance.
Abbreviations:	#: Estimated Ave: Average A.G.L: Above ground level SULE: Safe Useful Life Expectancy
Branch Spread:	Estimated crown radius expressed in meters, taken for each cardinal compass point.
Age Class:	Y Young - Less than one third of natural life expectancy SM Middle aged - One to two thirds of natural life expectancy M Mature - More than two thirds of natural life expectancy OM Over mature NP Newly Planted
Physiological Condition:	G Good F Fair P Poor D Dead

Notes:

Root Protection Area: This is a layout tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority (detailed in paragraph 3.7 British Standard 5837:2012 'Trees in relation to Construction-Recommendations').

Young trees with a stem diameter of less than 150mm: Whilst the presence of young trees of good form and vitality is generally desirable (i.e those which have the potential to develop into quality mature specimens), they need not necessarily be a significant constraint on the site's potential (detailed in paragraph 4.5.10 British Standard 5837:2012 'Trees in relation to Construction-Recommendations').

CASCADE CHART FOR TREE QUALITY ASSESSMENT

Category and definition Criteria (including subcategories where appropriate)				Identification on plan
Trees unsuitable for retention (see Note)				
Category U 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	• 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 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**.*			Dark Red
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good 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)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Light Green
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in 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	Trees present in numbers, usually growing 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	Trees with material conservation or other cultural value	Mid Blue
Category C **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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey

TREE SURVEY BS5837:2012

TREE NO.	SPECIES	Height in (M)	CALCULATED STEM DIA (MM)	BRANCH SPREAD				HEIGHT IN M OF CANOPY	AGE CLASS	PHYS. COND	COMMENTS	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY GRADING
	(Latin)			N	E	S	W				Recommendations		
T1	Birch 'Youngii' *Betula* 'youngii	6.5	255	4.5	3	4	4	2.5	MM	F	Growing in an area of hard landscaping. Pleasant feature. Recommend to increase planting pit size as part of landscaping works. No Work	20 to 40	B2
T2	Birch 'Youngii' *Betula* 'youngii	6	310	3	3	4	4	2.5	MM	F	Growing in an area of hard landscaping. Growing adjacent to the existing library entrance. Pleasant feature. Canopy overhangs raised landscape bed. Recommend to increase planting pit size as part of landscaping works. No Work	20 to 40	B2
T3	Palm *Trachycarpus fortunei*	5.5	160	1	1	1.5	0.5	N/A	MM	F	One of 2 palm trees growing within close proximity to the existing library entrance. Minor dieback. Not a constraint. No Work	10 to 20	C2
T4	Palm *Trachycarpus fortunei*	6	190	1	1	0.5	1.5	N/A	MM	F	One of 2 palm trees growing within close proximity to the existing library entrance. Not a constraint. No Work	10 to 20	C2
T5	Birch 'Youngii' *Betula* 'youngii	7.5	240	3.5	2.5	2.5	3.5	3	MM	F	Growing in an area of hard landscaping. Growing within close proximity to the existing library entrance. Pleasant feature. Recommend to increase planting pit size as part of landscaping works. No Work	20 to 40	B2
T6	Cherry *Prunus sp*	7.5	450	3.5	3.7	2	3	1.5	M	F	Growing in an area of hard landscaping. Small planting pit. Grafted specimen - topped worked. Minor scattered deadwood, possibly an indication that the tree is under stress. Recommend to increase planting pit size as part of landscaping works. Canopy overhangs existing raised planter. Crown clean	10 to 20	C2

APPENDIX 3

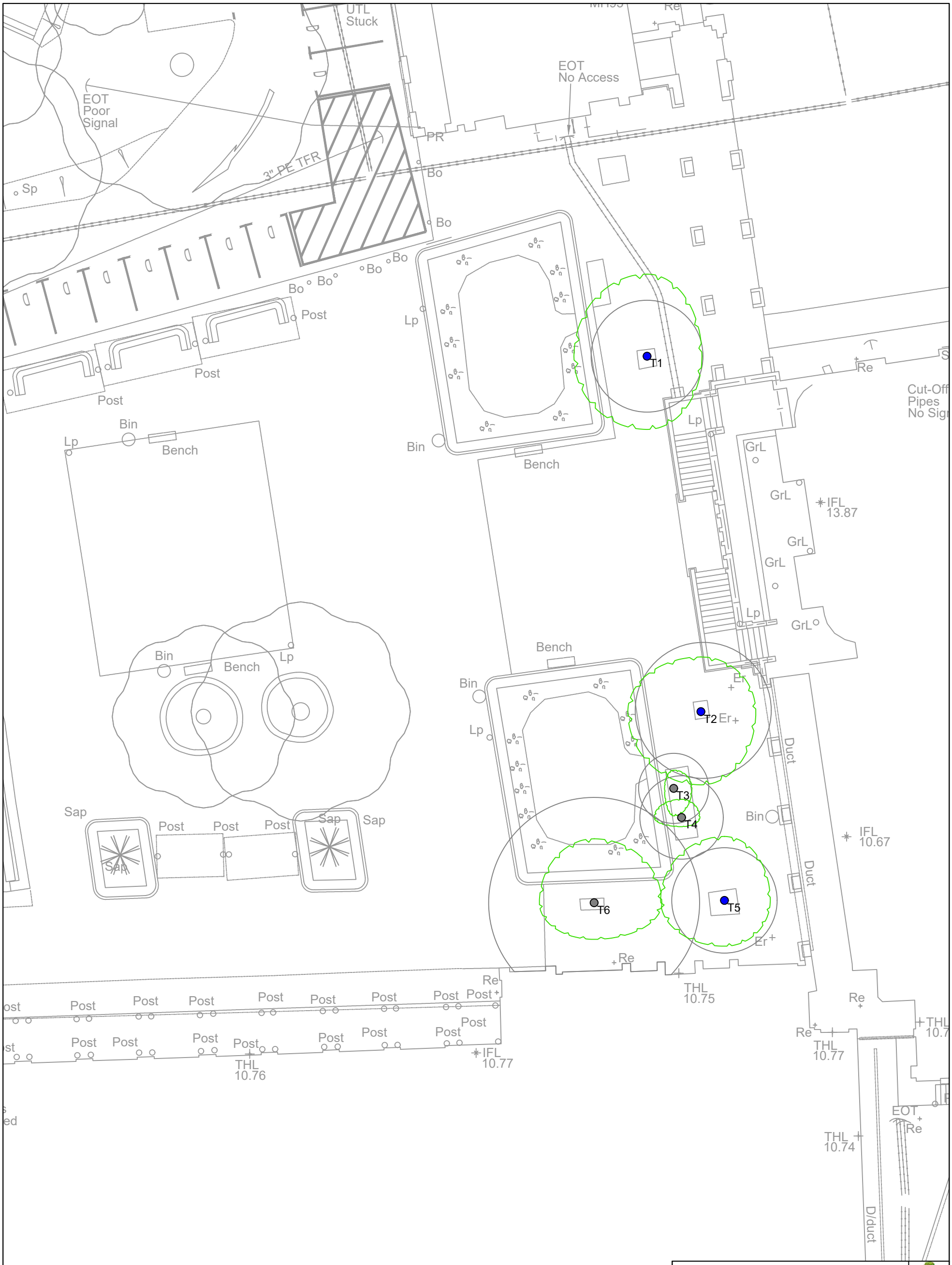
ROOT PROTECTION AREA

ROOT PROTECTION AREA

TREE NO.	SPECIES	NO. OF STEMS	SINGLE STEM DIA (mm)	2-5 STEMS					> 5 STEMS	ROOT PROTECTION AREA - RPA (RADIUS IN M)	RPA (M^2)	LIFE EXPECTANCY (EST YEARS)	BS5837:2012 CATEGORY
				STEM 1 (mm)	STEM 2 (mm)	STEM 3 (mm)	STEM 4 (mm)	STEM 5 (mm)	MEAN STEM DIA (mm)				
T1	Birch 'Youngii'	1	255							3.06	29	20 to 40	B2
T2	Birch 'Youngii'	1	310							3.72	43	20 to 40	B2
T3	Palm	1	160							1.92	12	10 to 20	C2
T4	Palm	1	190							2.28	16	10 to 20	C2
T5	Birch 'Youngii'	1	240							2.88	26	20 to 40	B2
T6	Cherry	1	450							5.40	92	10 to 20	C2

APPENDIX 4

TREE CONSTRAINTS PLAN



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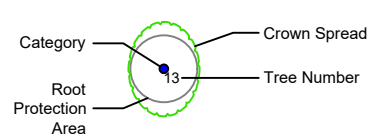
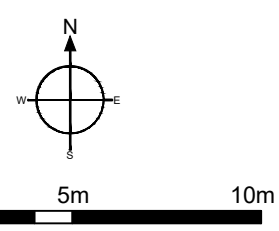
Site: St Mary's University Library	1:200 @ A3
Drawing Title: Tree Constraints Plan	June 2021

Key:

- Category A
- Category B
- Category C
- Category U



NOTE: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.



APPENDIX 5

ARBORICULTURAL IMPACT ASSESSMENT PLAN

Raised planters will be removed and soft landscaping provided at existing ground levels

NEW YORK PAVING TO MATCH THE EXISTING

NEW BRICK PAVING TO MATCH THE EXISTING

5m 10m

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Site: St Mary's University Library	1:200 @ A3
Drawing Title: Arboricultural Impact Assessment	June 2021

Key:

- Category A
- Category B
- Category C
- Category U
- Tree Proposed for Removal
- Remove Raised Planter

Category / Crown Spread / Tree Number / Root Protection Area

NOTE: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

APPENDIX 6

PHOTOGRAPHS

Photograph 1

View of tree T1.

Raised planter to be removed and a new soft landscaping area to be created.

Photograph 2

Trees T2 – T6

Photograph 3

View of the existing library entrance.

Raised planter will be removed and a new soft landscaping area and path network to be created.

Trees T2, T5 & T6 retained

Photograph 4

Trees T3 & T4 to be removed to improve the library entrance access.

APPENDIX 7

QUALIFICATIONS

QUALIFICATIONS

Fiona Bradshaw

MicFor; RFS Dip Arb;F. Arbor.A; Tech Cert (Arbor.A)

I have over 22 years' experience of arboriculture and I am the principal consultant at Sylva Consultancy. I hold the Royal Forestry Society's Professional Diploma in Arboriculture and the Arboricultural Associations Technicians Certificate. I am a Fellow member of the Arboricultural Association and a professional member of the Institute of Chartered Foresters, of which I am also a registered Consultant.

I have the benefit of both a local authority and private practice background and I am frequently instructed to provide advice and assistance relating to trees and the planning process. I am also experienced at compiling expert reports, providing evidence and also appearing as an expert witness at Public Inquires.

I am committed to my continued professional development which is reflected in my regular attendance of seminars and workshops.