

Arboricultural Report

**Assessment of trees in relation to development
for planning purposes**

Bedford Square
London
WC1B 3HH

March 2018

180309-PD-11

TIM M●YA ASSOCIATES



Project	180309
Report Type	Arboricultural Report for Planning
Checked by	TM
Date Checked	28/03/2018

CONTENTS PAGE

1	SUMMARY REPORT	4
2	INTRODUCTION	5
	INSTRUCTIONS	5
	SCOPE AND LIMITATIONS	5
	METHODOLOGY AND GUIDANCE.....	5
3	OBSERVATIONS AND CONTEXT	6
	SITE VISIT.....	6
	POLICY CONTEXT.....	6
	SPATIAL PLANNING POLICY.....	6
	LOCAL PLAN AND SUPPLEMENTARY DOCUMENTS.....	7
4	TECHNICAL INFORMATION	9
	TREE DATA	9
	LIFE STAGE ANALYSIS	9
	BS5837 (2012) CATEGORY BREAKDOWN.....	9
5	ANALYSIS OF THE PROPOSAL IN RESPECT OF TREES.....	10
	ARBORICULTURAL IMPACTS	10
	ARBORICULTURAL MITIGATION.....	11
6	DISCUSSION AND CONCLUSIONS	12
	GENERAL CHANGE	12
	HOW DO THE CHANGES RELATE TO PLANNING POLICY?	12
	CONCLUSIONS.....	12
	APPENDIX A - PLANS	13
	APPENDIX B - SCHEDULES.....	14

1 SUMMARY REPORT

- 1.1 The proposal is for the installation of an irrigation tank below ground-level and an associated pump house station atop, within the bounds of Bedford Square Gardens
- 1.2 Trees relevant to these proposals have been assessed in accordance with best-practice guidance and planning policy at national and local level.
- 1.3 Relevant impacts and potential issues relating to trees have been considered within this report and factual information is contained in the appendices.
- 1.4 This report concludes that the proposal is acceptable and will not unreasonably impact upon retained trees.

2 INTRODUCTION

Instructions

- 2.1 My name is Christopher Wright. I am an arboricultural consultant dealing with trees in relation to all forms of human activity including the built development. I am a Technician Member of the Arboricultural Association, a member of the Royal Forestry Society, hold the Level 4 Diploma in Arboriculture (ABC), and received a BSc (Hons) Conservation and Environment (2:1) from Writtle University College.
- 2.2 This arboricultural report has been commissioned, to provide information to assist all parties involved in the planning process to make balanced judgements with regards to arboricultural features in relation to the proposal.

Scope and limitations

- 2.3 The survey is not an assessment of health and safety of trees and no recommendations for works have been provided. However, trees identified as imminently dangerous will have been highlighted in the tree schedule at Appendix B, where appropriate.
- 2.4 The contents of this report are copyright of Tim Moya Associates (TMA) and may not be distributed or copied without TMA's explicit permission. Tim Moya Associates Standard Limitations of Service apply to this report and all associated work relating to this site.

Methodology and guidance

- 2.5 This report refers to *British Standard 5837:2012 Trees in relation to design, demolition and construction*, which provides a methodology for the assessment of trees and other significant vegetation on development sites.
- 2.6 BS 5837:2012 is intended to assist decision making, with regards to existing and proposed trees, and sets out the principles and procedures to be applied to achieve a harmonious relationship between existing and new trees and structures that can be sustained for the long term.

3 OBSERVATIONS AND CONTEXT

Site visit

- 3.1 The site was visited during March 2018 by Tim Moya, to survey on and off-site trees and vegetation, which may be of significance to the proposal.

Policy context

- 3.2 Planning policy at national level is set out in the government's National Planning Policy Framework (NPPF).
- 3.3 The NPPF sets out overarching planning policy and at its core is a presumption in favour of sustainable development. Sustainable development is defined in the NPPF as having economic, social and environmental strands that are interdependent and in these areas planning should meet the needs of the present without compromising the ability of future generations to meet their own needs.
- 3.4 The NPPF states that planning should be *"not only about scrutiny, but instead be a creative exercise in finding ways to enhance and improve the places in which people live their lives."* And should *"always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;"* Also that planning should *contribute to conserving and enhancing the natural environment and reducing pollution."*
- 3.5 The NPPF identifies thirteen aspects contributing to the delivery of sustainable development, including:
- establishing a strong sense of place;
 - responding to local character and history; and
 - providing developments that are visually attractive as a result of good architecture and appropriate landscaping
- 3.6 Paragraph 61 of the NPPF states *"planning policies and decisions should address the connections between people and places and the integration of new development into the natural, built and historic environment."*

Spatial Planning Policy

- 3.7 Spatial planning policy consists of the London Plan adopted 2011 (with minor amendments up to 2017) and associated policy documents including the Climate

Change Adaptation Strategy (*Managing Risks and Increasing Resilience – October 2011*).

- 3.8 The London Plan (amendment 2015) defines “*green infrastructure*” as “*an overarching term for a number of discreet elements (parks, street trees, green roofs etc.) that go to make up a functional network of green spaces and green features.*”
- 3.9 In relation to climate change adaptation the London Plan calls for the use of trees and other shading to “*increase green areas in the envelope of the building, including its roof and environs.*”
- 3.10 The London Plan sets a target of a 5% increase in trees in parks, gardens and green spaces by 2025.
- 3.11 Policy 7.21 of the London Plan 2011 calls for trees and woodlands to be protected, maintained and enhanced. The policy requires that existing trees of value should be retained and that any loss as a result of development should be replaced in sustainable locations. The policy suggests that, where appropriate, large canopied species should be planted (rather than smaller ornamental species).

Local Plan and Supplementary Documents

- 3.12 The London Borough of Camden Local Plan (adopted July 2017) contains saved policies relating to trees and landscaping.

<i>Policy Ref</i>	<i>Wording</i>
A3 Biodiversity	The Council will protect, and seek to secure additional, trees and vegetation. We will: j. resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation; k. require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 ‘Trees in relation to Design, Demolition and Construction’ and positively integrated as part of the site layout; l. expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these

	trees and vegetation has been justified in the context of the proposed development; m. expect developments to incorporate additional trees and vegetation wherever possible.
D2 Heritage	Conservation areas are designated heritage assets and this section should be read in conjunction with the section above headed 'designated heritage assets'. In order to maintain the character of Camden's conservation areas, the Council will take account of conservation area statements, appraisals and management strategies when assessing applications within conservation areas. The Council will: e. require that development within conservation areas preserves or, where possible, enhances the character or appearance of the area; f. resist the total or substantial demolition of an unlisted building that makes a positive contribution to the character or appearance of a conservation area; g. resist development outside of a conservation area that causes harm to the character or appearance of that conservation area; and h. preserve trees and garden spaces which contribute to the character and appearance of a conservation area or which provide a setting for Camden's architectural heritage.

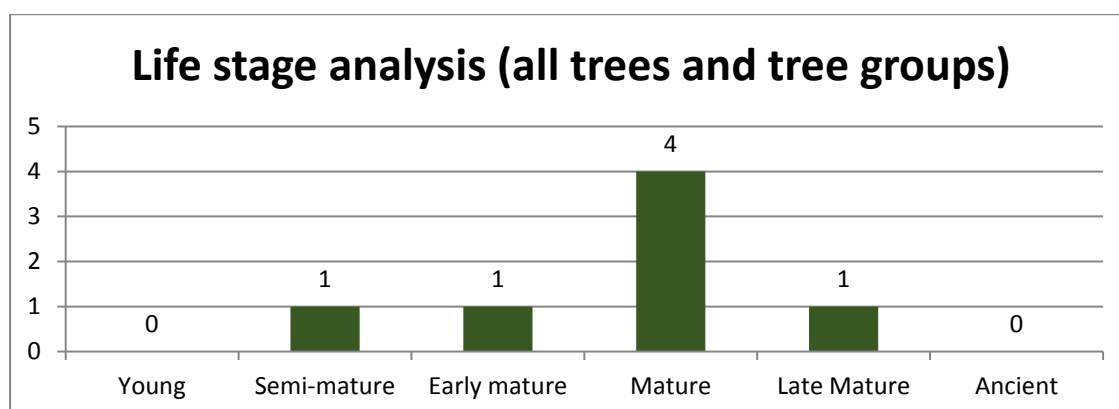
4 TECHNICAL INFORMATION

Tree Data

- 4.1 The location of trees and groups of trees are shown on the tree survey drawing at Appendix A. This plan illustrates the location of trees and the extent of the spread of their crowns. Dimensions, comments and information for each tree are given in the tree schedule at Appendix B.

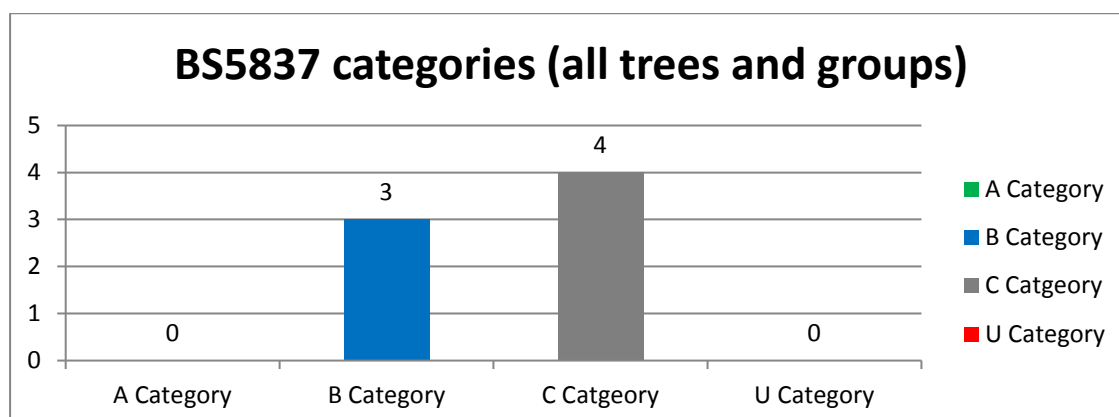
Life Stage Analysis

- 4.2 Unlike age in numerical terms (years), this description is used to describe the physical form of a tree in relation to its typical life expectancy and varies between species.



BS5837 (2012) category breakdown

- 4.3 The trees surveyed were assessed as being of good to low quality. Further details of the trees surveyed can be found in the schedule at Appendix B and the tree survey plan at Appendix A.



5 ANALYSIS OF THE PROPOSAL IN RESPECT OF TREES

Arboricultural Impacts

- 5.1 The following arboricultural impacts have been considered in relation to the proposed development:

Impact	Analysis															
Loss of trees	While some tree loss is required, in order to facilitate the proposed development, these losses have been confined to one low-quality tree on site (T135), while better quality trees have been retained. By seeking arboricultural advice and designing for tree retention, the proposals have provided the best possible chance of successfully retaining better quality trees. A schedule of all proposed tree works with reasons for the works is attached at Appendix B.															
Proposed Removals (all trees and tree groups) <table><thead><tr><th>Category</th><th>Removal Proposed (Blue)</th><th>Removal Proposed (Grey)</th></tr></thead><tbody><tr><td>Category A</td><td>0</td><td>0</td></tr><tr><td>Category B</td><td>3</td><td>0</td></tr><tr><td>Category C</td><td>3</td><td>1</td></tr><tr><td>Category U</td><td>0</td><td>0</td></tr></tbody></table>		Category	Removal Proposed (Blue)	Removal Proposed (Grey)	Category A	0	0	Category B	3	0	Category C	3	1	Category U	0	0
Category	Removal Proposed (Blue)	Removal Proposed (Grey)														
Category A	0	0														
Category B	3	0														
Category C	3	1														
Category U	0	0														
Pruning to facilitate development	Some crown pruning will be required, in order to facilitate the proposed development. However, these works are minor and will not be detrimental to the health of the trees concerned or the character and appearance of the local area. Proposed tree pruning specifications are attached at Appendix B.															
Tree works to facilitate access	It is proposed that the existing access across hard-standing to the site will be used. The use of this access will not require the removal or pruning of any existing trees.															
Future growth of retained trees	The proposals have been designed to avoid future conflicts between retained trees. The proposals do not result in any significant concerns, with regard to the need to unacceptably prune or remove retained trees															
Daylight and sunlight	Shading by trees is considered an insignificant issue, in relation to these proposals.															
Construction operations	Built development is proposed within the RPAs of retained trees. In order to avoid unacceptable physiological or structural harm to these trees,															

	special construction methods are proposed that shall minimise the damage to important roots and ensure the protection of the soil environment in which tree roots are growing. Specifically, the perimeter of the pit to be dug for the tank shall be dug manually down to a depth of 1000mm and 500mm across. This shall allow for any tree roots that will be within the footprint to be cut with a clean and sharp blade*. The remainder of the pit can then be excavated with a 3-tonne mini-digger placed upon suitable ground protection (such as TrakMat Ground Guards) and from existing hard-standing where feasible. Where the pit is to be left open for more than two hours, the sides shall be covered with hessian and kept moist, down to a depth of at least 1000mm, to prevent soil desiccation. <i>*Due to the nature of the pit, which is 7.5m away from the stem of T88, runs radially from T88, and occupies no more than 5% of the total RPA of T88, the total potential root loss is likely to be far less than if the pit ran tangentially, because roots typically radiate out from the base of the tree. Incursions into the RPA of T136 and T145 are very minimal.</i> The concrete to be back-filled into the tank pit shall be pumped from off-site in to the pit, which shall be sleeved with an impermeable membrane (high-density polyethylene) to prevent cement leeching. As regards bringing the plastic tank and mini-digger into the site, this shall be achieved via existing vehicular access routes with hard-standing. A trailer shall be used to bring these items on to the site and these items shall be stored outside of RPAs when not in use. The tank shall be lowered in to the pit manually. Pictorial details of the measures proposed are included in the Tree Protection Plan at Appendix A.
Changes in soil levels	No significant changes in soil levels are proposed.
Installation of drainage	We do not currently have details of the condition of existing drainage runs or any information which suggests that there will be a requirement to install new drains. However, if new drainage runs are required, they should be located outside the RPAs of retained trees. If it is found to be necessary to locate new drainage runs within the RPAs of retained trees it is recommended that these works are carried out under arboricultural supervision. Methods of work should follow the recommendations in the NJUG guidance. BS5837 (2012) recommends the NJUG guidance as a normative reference to be used in these circumstances. See http://www.njug.org.uk/
Installation of services	New service runs (if required) will, where possible, be located outside the RPAs of retained trees. However, if it is necessary to locate services runs within the RPAs, BS5837 (2012) recommends the NJUG guidance as a normative reference to be used in these circumstances. See http://www.njug.org.uk/.
Pump house construction	The above-ground pump house shall be constructed manually. All materials for the pump house shall be stored outside of RPAs. Work operations within RPAs shall take place upon suitable ground protection that will be relevant to the sustained load (i.e. foot / vehicular traffic).

Arboricultural mitigation

- 5.2 Landscape proposals have not yet been formulated but there is sufficient space on site to plant new trees, which can contribute significantly to the amenities of the local area.

6 DISCUSSION AND CONCLUSIONS

General Change

- 6.1 The proposed development has minimal impacts upon trees within Bedford Square Gardens. Appropriate re-landscaping can easily off-set the loss of the single tree being removed.

How do the changes relate to planning policy?

<i>Policy Ref</i>	<i>Compliance</i>
NPPF	The proposals do not impact upon ancient woodland or veteran trees. The proposals are sustainable in landscape terms and therefore meet the criteria for sustainability in this respect. The proposals have been designed to retain a good standard of amenity within the Bedford Square Garden area. Landscaping, whilst not yet considered formally, can readily be designed to respond to local character and to contribute towards a strong sense of place, while integrating the proposed development into the natural environment.
Spatial policy (The London Plan)	The London Plan emphasises the importance of trees, green infrastructure and climate change resilience. By retaining existing trees of good quality and proposing tree replacement to off-set losses, the proposals have responded to the London Plan.
Local policy	The proposals accord with 'A3 Biodiversity', by retaining good-quality trees and minimising the overall arboricultural impact from the proposal. The site resides within a Conservation Area (Bloomsbury). 'D2 Heritage' has been followed, by retaining the character of the CA as provided by trees.

Conclusions

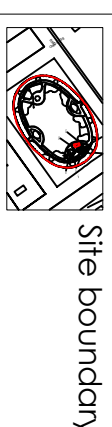
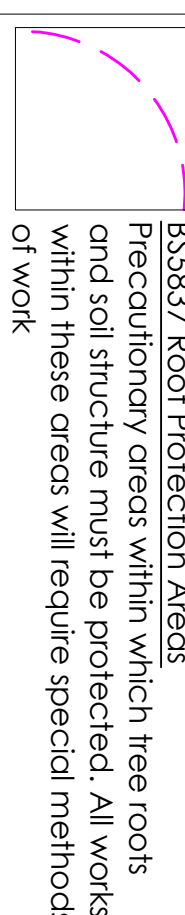
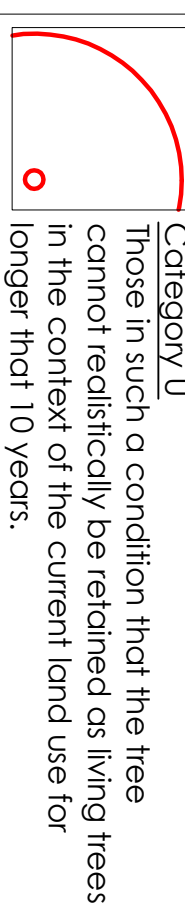
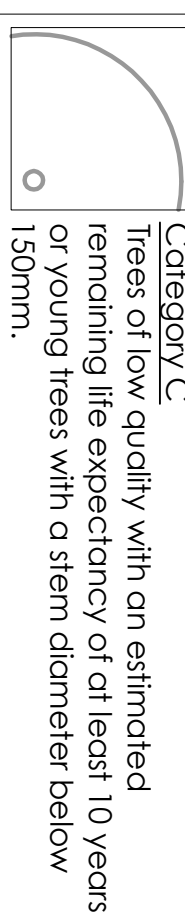
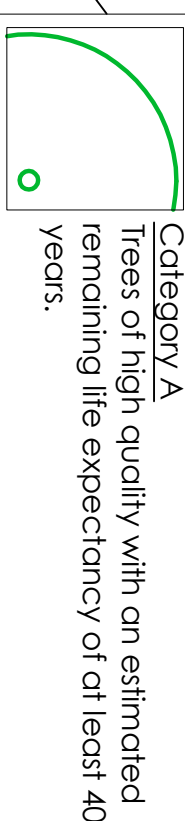
- 6.2 The design of the proposal has properly considered the tree constraints.
- 6.3 The proposal complies with planning policies referenced within the report
- 6.4 All retained trees can be adequately protected by following the recommendations in the method statement at Appendix A (and within section 5) and controlled by suitably-worded planning conditions.

APPENDIX A - PLANS

Tree Survey 180309-P-10

Proposed Works Location and Tree Removals 180309-P-11

Tree Protection Plan 180309-P-12



REV	DATE	DESCRIPTION	DRAWN
-	XX.XX.XX	-	XX

180309 - 5392-01-U Base Drawing

0' 11" 10" 9" 8" 7" 6" 5" 4" 3" 2" 1" 0"

0' 11" 10" 9" 8" 7" 6" 5" 4" 3" 2" 1" 0"

Title
Tree Survey

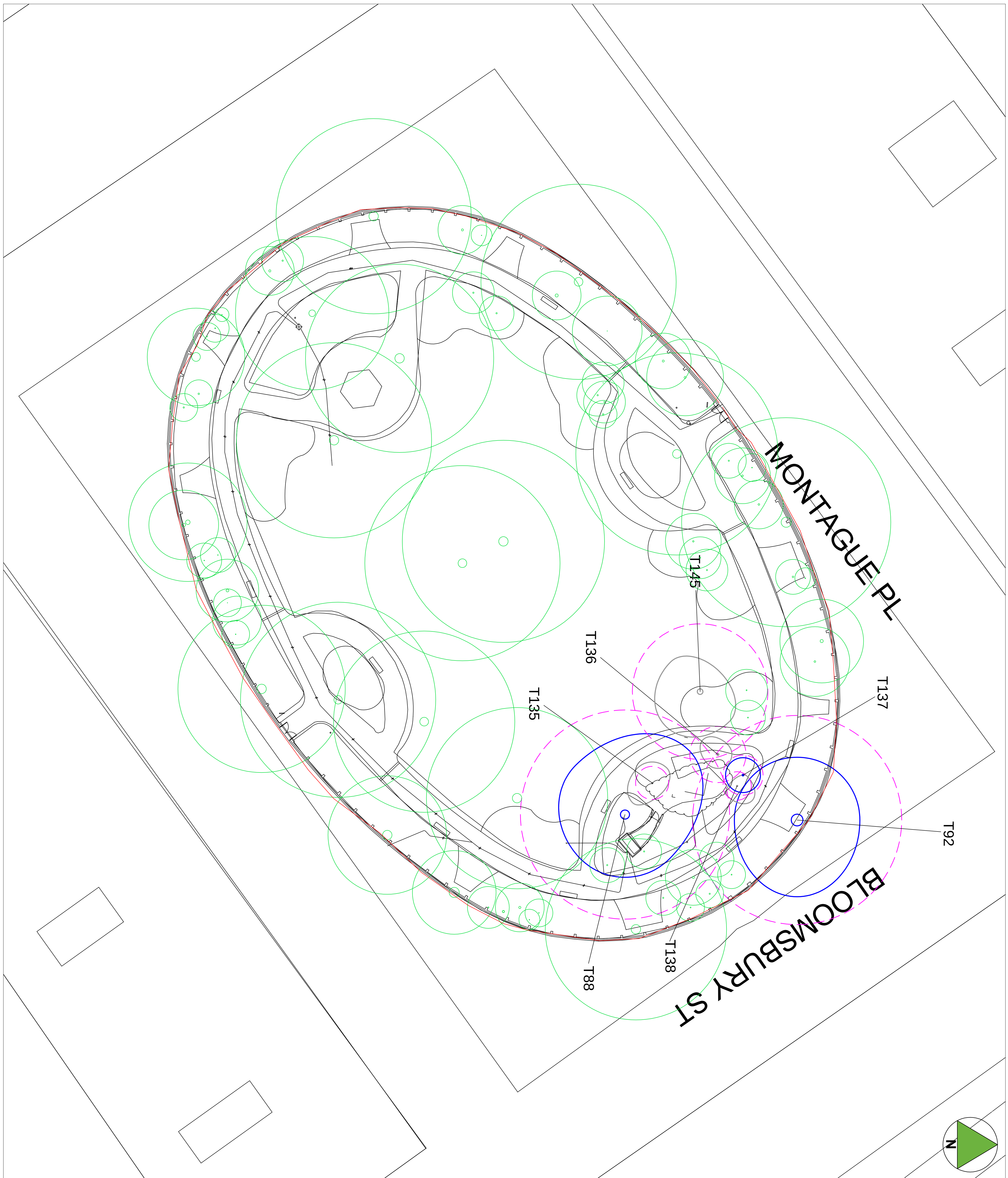
Client
Bedford Estates Bloomsbury Ltd

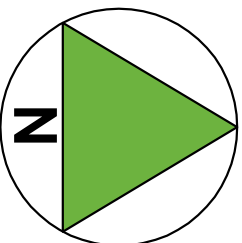
Project
Bedford Square Development
Project, London, WC1B

Date	Drawn by	Checked by
March 2018	BP	-

Drawing No	Rev	Scale
180309-P-10	-	1:250-@A

DO NOT SCALE Use only figured dimensions





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

BS 5837:2012 TREE RETENTION CATEGORIES

Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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 150mm.

Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work

Trees to be removed shown shaded

Site boundary

XXXXXX	-	XX
REV	DATE	DESCRIPTION
180309	-	Base Drawing
U	1:111	2:111
3:111	4:111	5:111

Proposed layout and tree removals

Client
Bedford Estates Bloomsbury Ltd

Project
Bedford Square Development
Project, London, WC1B

Date
March 2018

Drawing No
180309-P-11

DO NOT SCALE Use only figured dimensions

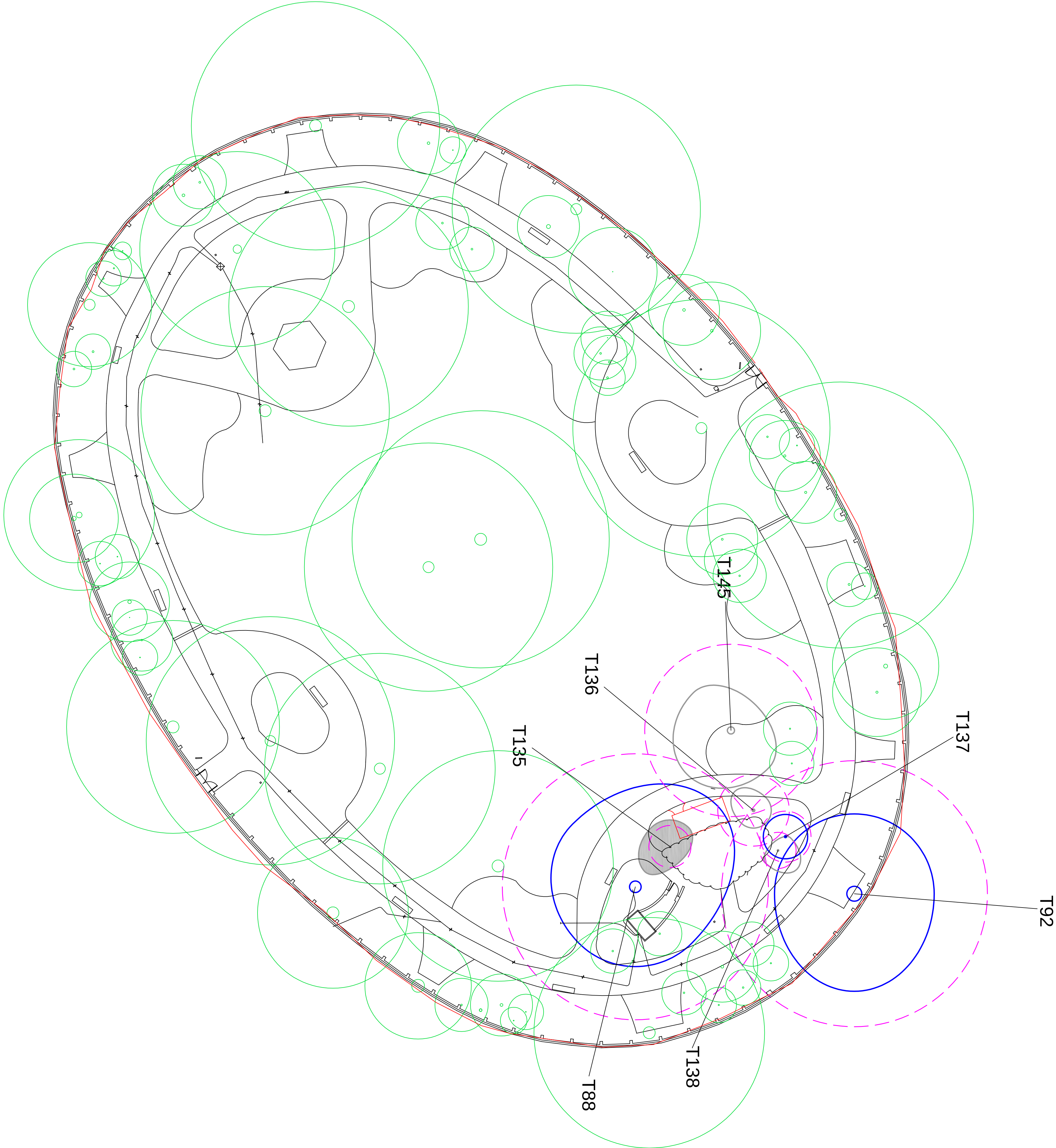
TIM MOYA ASSOCIATES
ARBORICULTURE • LANDSCAPE • ECOLOGY

The Barn, Feltham Park

Essex CM17 0PF

Tel: 0845 094 3268

www.timmoassoc.co.uk



ARBORICULTURAL METHOD STATEMENT

BRITISH STANDARD BS37(2012)

This method statement is in accordance with British Standard BS37. Trees in relation to design, demolition and construction - Recommendations (2012) which provides a methodology for the assessment and protection of trees and other significant vegetation on development sites.

TREE SURGERY WORKS

Only tree works specified within this document may be carried out. Any uncertainty regarding trees to be pruned will be immediately confirmed with the arboricultural consultant and local authority tree officer.

All tree works will be carried out in accordance with the recommendations given in the current BS 3998 (2010).

All tree works should be carried out in accordance with the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010.

SITE SUPERVISION

All key / critical activities that will affect trees during construction will be inspected and monitored by the approved arboricultural consultant and reports issued to the client and local authority.

Supervision visits will occur as follows:

- Inspection of tree works, tree protection prior to demolition and construction works
- Monthly visits to inspect tree protection measures
- During works that may affect retained trees

PROTECTIVE FENCING

No materials or equipment other than those required to erect protective fencing, will be delivered to the site before the fencing is installed. The position of protective fencing for demolition is shown on this drawing.

Protective fencing will be constructed of robust barriers fit for the purpose of excluding demolition and construction traffic. Signs will be fixed to every third panel stating 'Tree Protection Area Keep Out - Any incursion into the protected area must be with the agreement of the local authority or arboricultural consultant'.

The main contractor will inform the local authority officer and the arboricultural consultant that tree protection is in place before demolition or site clearance works commence.

No alteration, removal or repositioning of the tree protection for demolition will take place during the demolition phase without the prior consent of the arboricultural consultant.

SERVICES AND DRAINAGE

Methods of working for installation of the drainage runs or services will follow the guidance within Table 3 of BS 5837 (2012), or National Joint Utilities Group (NJUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. Volume 4, Issue 2, London NJUG 2007.

No works will occur within the tree protection zone without prior agreement from the arboricultural consultant. No machinery will be permitted within the TPZ at any time.

GENERAL PROTECTION METHODS

No trees will be permitted within 20m of the crown of any tree.

No changes in soil levels will take place within the tree protection zones without prior written consent of the local authority.

No materials, vehicles, plant or personnel will be permitted into the tree protection zones at any time without the prior consent of the arboricultural consultant.

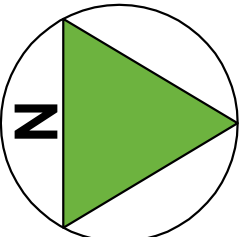
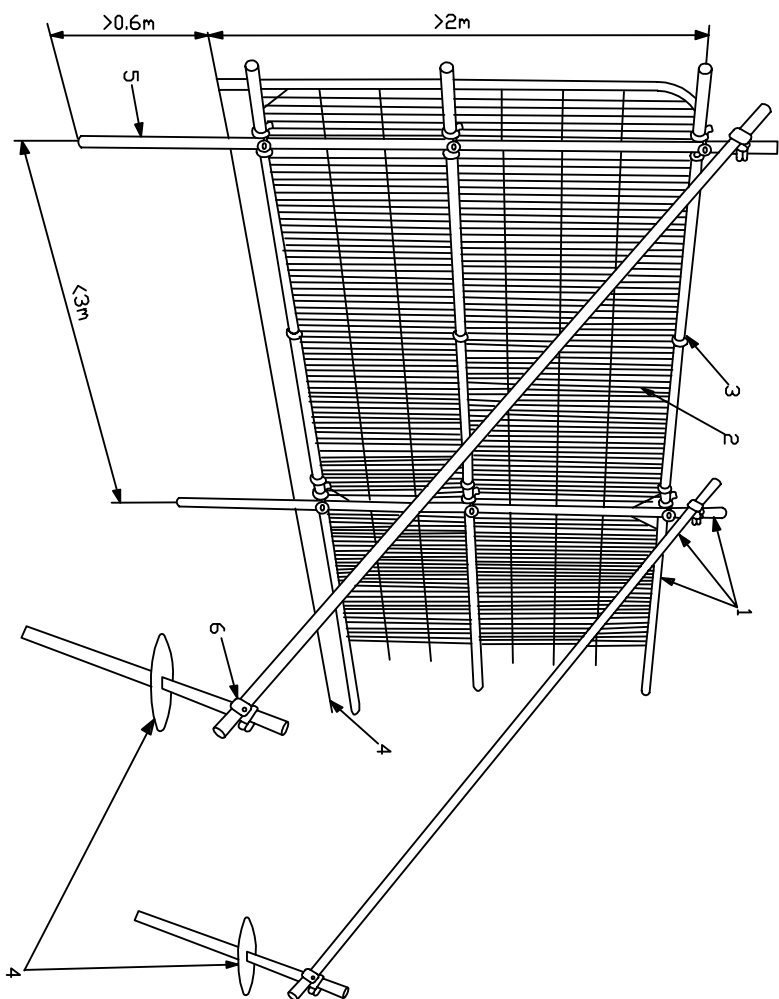
Any liquid materials spilled on site will be immediately cleared up and removed from the site. If liquid fuel or cement products are spilled within 2m of the tree protection zone, the contractor will report the incident to the arboricultural consultant immediately.

The contractor will report any damage to trees or shrubs, whether caused by construction activities or from any other cause, to the arboricultural consultant immediately.

NO-DIG CONSTRUCTION AREAS

Areas requiring no-dig methods of construction are indicated on this drawing. No-dig will involve either excavating existing hard surfacing down to sub base and building up, or laying materials to create new hard surfacing onto existing ground levels. No scraping or reworking of existing soft ground levels in the areas indicated on this plan will be undertaken, and all construction in these areas will avoid the use of machinery. The specification for no-dig construction is shown below.

Protective Fencing Specification



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

BS 5837:2012 TREE RETENTION CATEGORIES

Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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 150mm.

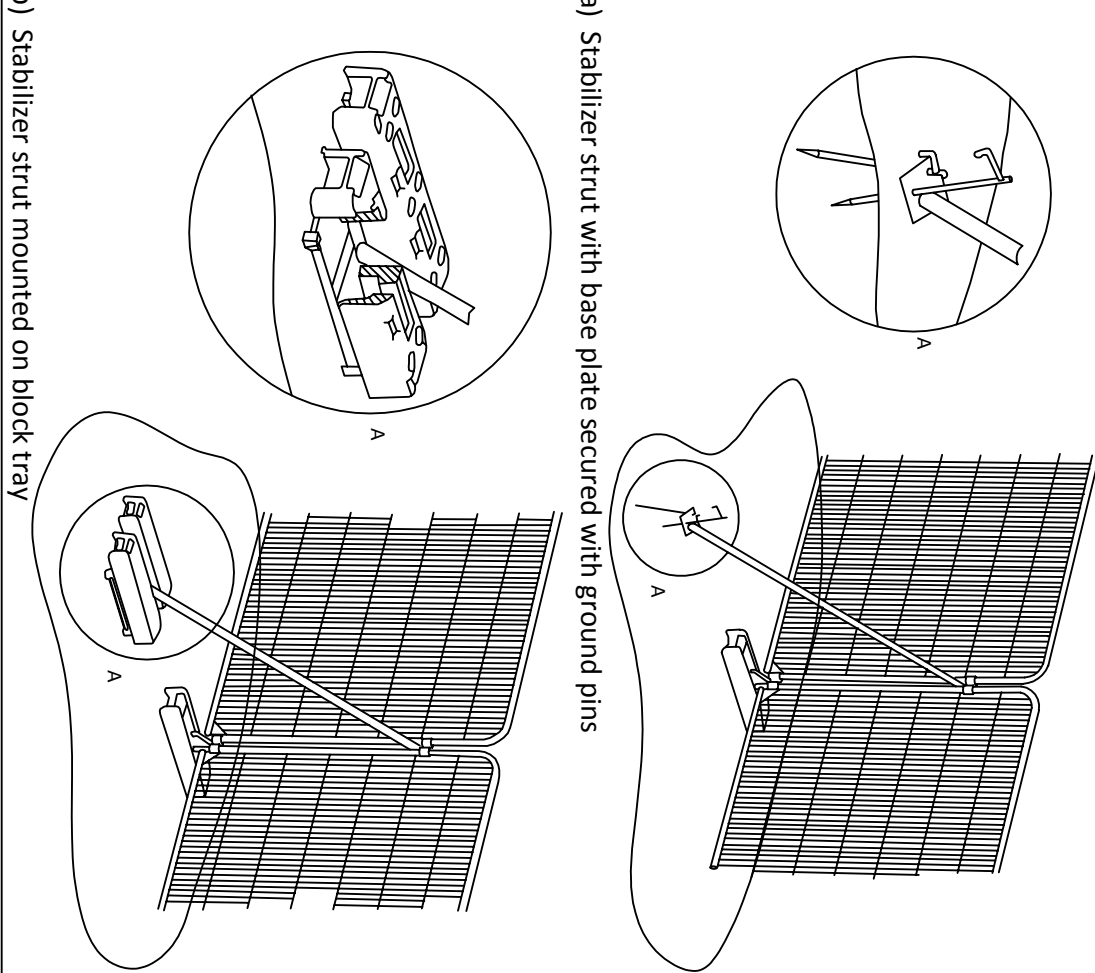
Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Position of protective fencing and tree protection zones.

Ground protection to be installed on soft surfacing

Site boundary



Figure 5 Examples of above-grounds stabilizing systems



REV	DATE	DESCRIPTION	XX
180309	-	Base Drawing	DRAWN
180309	-	5392c-01-U	

0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m 13m 14m 15m 16m 17m 18m 19m 20m 21m 22m 23m 24m 25m 26m 27m 28m 29m 30m 31m 32m 33m 34m 35m 36m 37m 38m 39m 40m 41m 42m 43m 44m 45m 46m 47m 48m 49m 50m 51m 52m 53m 54m 55m 56m 57m 58m 59m 60m 61m 62m 63m 64m 65m 66m 67m 68m 69m 70m 71m 72m 73m 74m 75m 76m 77m 78m 79m 80m 81m 82m 83m 84m 85m 86m 87m 88m 89m 90m 91m 92m 93m 94m 95m 96m 97m 98m 99m 100m	0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m 13m 14m 15m 16m 17m 18m 19m 20m 21m 22m 23m 24m 25m 26m 27m 28m 29m 30m 31m 32m 33m 34m 35m 36m 37m 38m 39m 40m 41m 42m 43m 44m 45m 46m 47m 48m 49m 50m 51m 52m 53m 54m 55m 56m 57m 58m 59m 60m 61m 62m 63m 64m 65m 66m 67m 68m 69m 70m 71m 72m 73m 74m 75m 76m 77m 78m 79m 80m 81m 82m 83m 84m 85m 86m 87m 88m 89m 90m 91m 92m 93m 94m 95m 96m 97m 98m 99m 100m
---	---

Tree Protection Plan

Client
Bedford Estates Bloomsbury Ltd

Project
Bedford Square Development
Project, London, WC1B

Date
March 2018

Drawn by
BP

Checked by
-

Drawing No
180309-P-12

Rev
-

Scale
1:250 @ A1

DO NOT SCALE Use only figured dimensions

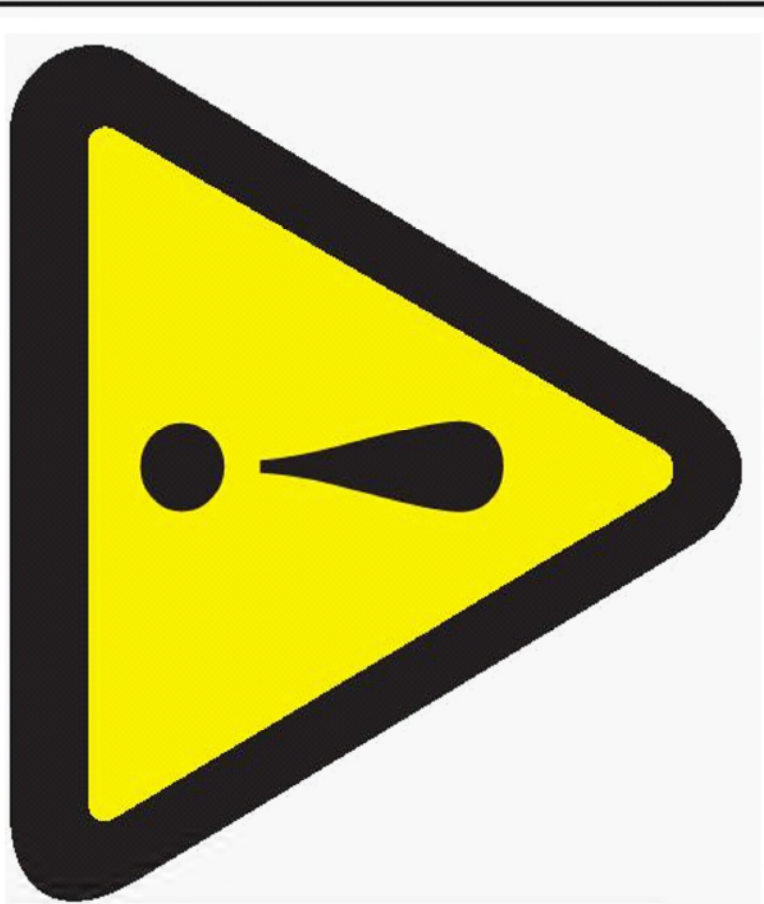
TIM MOYA ASSOCIATES
ARBORICULTURE • LANDSCAPE • ECOLOGY

The Barn, Feltham, Middlesex

Essex CM17 0PF

Tel: 0845 094 3268

www.timmoassoc.co.uk



TREE PROTECTION

AREA

KEEP OUT!

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL CONSULTANT

TIM MOYA ASSOCIATES

0845 094 3268

ARBORICULTURAL & LANDSCAPE CONSULTANTS

APPENDIX B - SCHEDULES

Tree Schedule 180309-PD-10

Tree Work Schedule 180309-PD-12

180309-PD-10 - Tree schedule (BS5837:2012)

Bedford Square Gardens

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	J.P. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T88	1 Platanus x hispanica (London Plane)	30.0	131	1	9.0				9.0				11.0	2.5	Mature	Structural condition Fair. Physiological condition Fair. Base / stems obscured - Vegetation. Branch weight - Heavy. Decay / structural defect - Localised. Decay / structural defect - Open cavity / cavities. Epicormic growth - Crown. Fork - Suspected structurally sound. Foreign object. Leaning trunk - Minor.	05/03/2018	706.9	15.0	40+	B2
Tree T92	1 Platanus x hispanica (London Plane)	32.0	169	1	9.0				11.0				9.0	4	Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Branch weight - Heavy. Decay / structural defect in crown limb / limbs - Localised. Epicormic growth - Crown. End-loaded limb / limbs. Form - Spreading crown. Foreign object - Ingrown metal. Pruning wounds - Historic. tree growing over railings	05/03/2018	706.9	15.0	20-40	B1/B2
Tree T135	1 Ulmus glabra (Mych Elm)	6.0	19	2					2.0				1.0	1.5	Semi Mature	Structural condition Fair. Physiological condition Good. Fork - Suspected structurally sound.	05/03/2018	17.7	2.4	10-20	C1
Tree T136	1 Ilex aquifolium (Holly)	12.0	33	2					2.0				1.0	0.5	Mature	Structural condition Fair. Physiological condition Fair. Deadwood - Minor. Decay / structural defect - Open cavity / cavities. Epicormic growth - Base. Fork - Suspected structurally sound. Fused limb / limbs. Fused stems. Natural bracing - branches fused across stems must be retained	05/03/2018	51.1	4.0	10-20	C2
Tree T137	1 Ilex aquifolium (Holly)	12.0	24	1					2.5				1.5	1	Mature	Structural condition Fair. Physiological condition Fair. No significant faults observed.	05/03/2018	26.1	2.9	20-40	B1
Tree T138	1 Ilex aquifolium (Holly)	11.0	17	1					3.0				2.0	1	Early Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Leaning trunk - Minor. Suppressed crown - Minor.	05/03/2018	13.1	2.0	10-20	C1/C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning

purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Generated By

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T145	1 'Ulmus glabra 'Camperdownii' (Camperdown Elm)	8.0	81	1	N	NE	E	SE	S	SW	W	NW	4.0	1.1	Late Mature	Structural condition Poor. Physiological condition Fair. Coalesced decay seam - Suspected. Decline - Suspected. Decay / structural defect in crown limb / limbs - Localised. Deadwood - Minor. Decay / structural defect - Extensive. Decay / structural defect - Open cavity / cavities. Decay / structural defect - Bole. Epicormic growth - Base / bole / principal stems. Fungal fruiting body - structural decay suspected. Habitat - High value. Pruning wounds - Historic. Rigidoporus ulmarius bracket at base on north side of stem.	05/03/2018	296.8	9.7	0-10	C1/C2

Stem green Estimated value

Stem AVE Average stem diameter for tree groups

Stem COM Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning

purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Table 1 of BS5837 (2012) 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	* 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 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			RED
Trees to be considered for retention				
Category A	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	GREEN
Trees of high quality	Tree 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).	
Category B				BLUE
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.	
Category C				GREY
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.	

180309-PD-12 - Tree Works Schedule

Bedford Square

ID	No. / Species	BS5837 Category	Recommended works	Status
T135	1 <i>Ulmus glabra</i> Wych Elm	C1	Fell to ground level.	Proposed
T136	1 <i>Ilex aquifolium</i> Holly	C2	Reduce crown back by a sufficient lateral spread (no more than 1m), to facilitate the effective construction of the tank pit with pump house atop, where necessary.	Proposed
			Lift low canopy up to 3m from ground level.	Proposed