Thomson environmental consultants

UCL IoN/DRI - UKPN Substation

Arboricultural Impact Assessment

and

Arboricultural Method Statement

For

UCL

Project No.: AALP156/002/001/001

January 2021

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London & South East
Compass House
Surrey Research Park
Guildford
GU2 7AG . UK
t: +44 (0)1483 466 000

North & Borders
The Tannery
91 Kirstall Road
Leeds
LS3 1HS . UK
t: +44 (0)113 247 3780

Wales & South West
Sophia House
28 Cathedral Road
Cardiff
CF11 9LJ UK
t: +44 (0) 2920 660180

Midlands
Edmund House
12-22 Newhall Street
Birmingham
B3 3AS
t: +44 (0) 121 726 3494

Scotland
20-23 Woodside Place
Glasgow
G3 7QF . UK
t: +44 (0)141 582 1333

Enquiries

e: enquiries@thomsonec.com

w: www.thomsonec.com

Project Number	Report No.
AALP156/002	001

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001	28/01/2021	Neil Francis	Alex Cooke	Simon Mackrell

Contents

1. Summary

1.1.1 This Arboriculture Report has been prepared by Thomson Environmental Consultants (TEC) in connection with the proposed refurbishment and redevelopment of 256 Grays Inn Road. Two new substations are proposed as part of the works.

1.1.2 TEC were commissioned to produce an Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS) detailing the protection of trees at the site. An arboricultural survey was previously carried out by Thomson Ecology Ltd (Thomson) in March 2019 in accordance with BS5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations'* (BS5837:2012), the results of which can be seen in Thomson report reference AALP120/008/001/002 (Thomson, 2019).

1.1.3 A total of two trees will be removed as part of this aspect of the development. Eleven new trees in mobile planters are proposed to help contribute to the tree losses and will be part of the wider landscaping scheme.

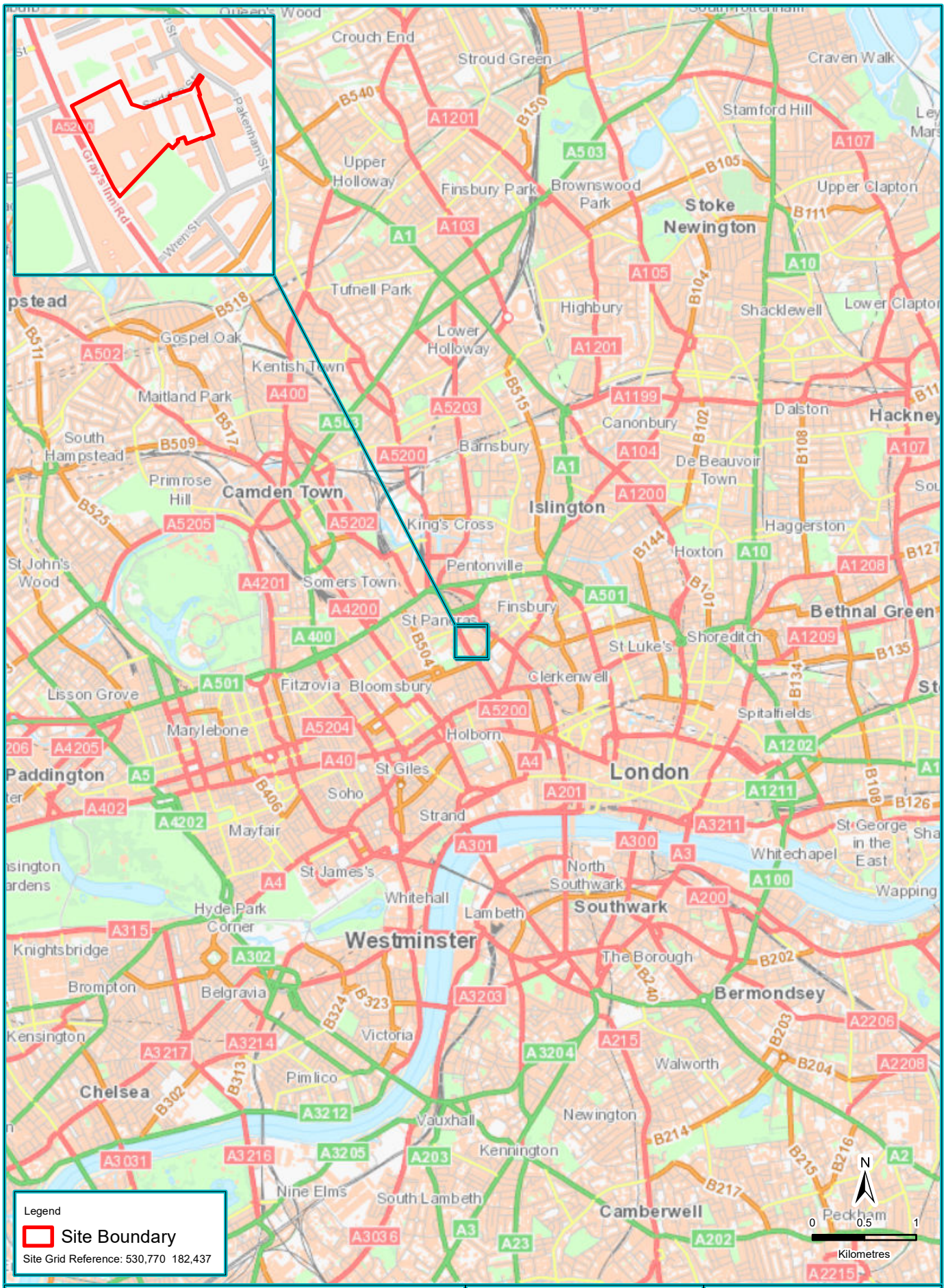

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Figure Title: Site Location		Drawn: GIS Specialist	Checked: Senior GIS Specialist
		Date: 21/02/2019	Date: 21/02/2019

thomson ecology

www.thomsonecology.com
enquiries@thomsonecology.com

thomson ecology

www.thomsonecology.com
enquiries@thomsonecology.com

Legend

- Root Protection Area of Category 'A' Tree
- Root Protection Area of Category 'B' Tree
- Root Protection Area of Category 'C' Tree
- Tree to be Removed to Facilitate Development
- Tree Canopy Extents
- Tree Stem Location
- Site Boundary

Site Grid Reference: 530,752 182,492

Drawing Ref	AALP120/27127/1
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Date: 21/02/2019	Date: 21/02/2019
Client	UCL
Figure Number	2
Figure Title	Tree Constraints Plan (TCP01)

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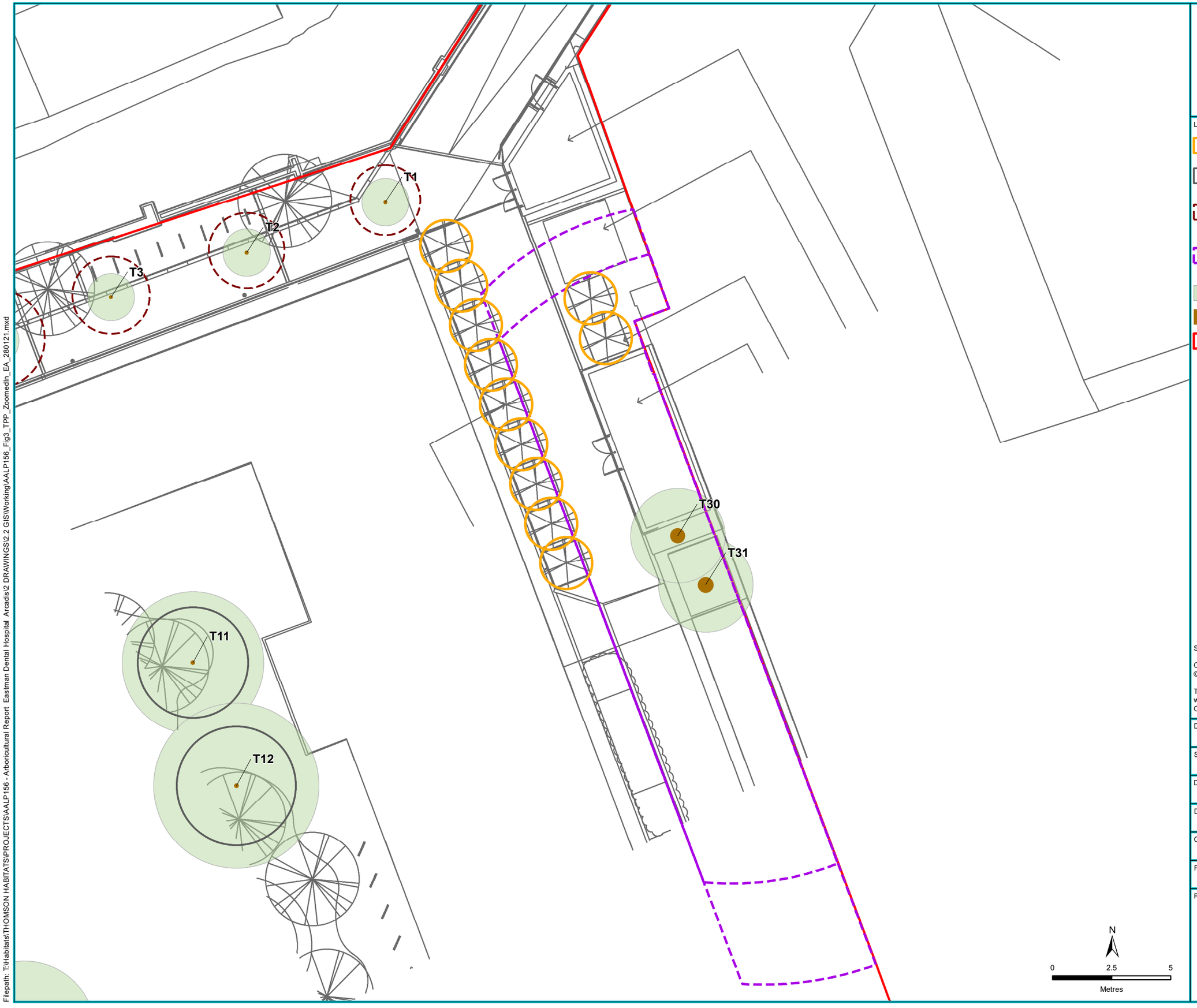

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Thomson environmental consultants

www.thomsonec.com
enquiries@thomsonec.com

Legend

- Proposed Mobile Planter
- Root Protection Area of Category 'C' Tree
- Tree to be Removed to Facilitate Development
- Tree to be Removed and Replaced with New Moveable Trees
- Tree Canopy Extents
- Tree Stem Location
- Site Boundary

N

0 2.5 5
Metres

DRAFT

Site Grid Reference: 530,818 182,532

Drawing Ref	AALP156/31572/1
Scale at A3	1:150
Drawn: EA	Checked: AS
Date: 25/01/2021	Date: 25/01/2021
Client	Arcadis LLP
Figure Number	3
Figure Title	Tree Protection Plan (TPP01)

2. Introduction

2.1 Development Background

2.1.1 This Arboricultural Report has been prepared by TEC in connection with the installation of two electricity substations, the removal of two trees and the introduction of 11 mobile planters to the rear of Frances Gardner House. This sits within the wider site at 256 Grays Inn Road, on which planning permission 2019/2879/P was granted in March 2020 for partial redevelopment of the site, including to the former Royal Free Hospital; Eastman Dental Clinic; Levy Wing; Frances Gardner House and the Riddell Memorial Fountain within the courtyard of the former Royal Free Hospital, to create medical research, outpatient facility and academic floorspace, along with associated access and landscaping arrangements.

2.1.2 These proposals are hereafter referred to as 'the development'.

2.1.3 The wider development is located on approximately 1.207ha area of land, shown on Figure 1. The area affected by the wider development is hereafter referred to as 'the site'.

2.1.4 There are two trees within the site boundary that will be affected by the proposed substations.

2.2 Arboricultural Background

2.2.1 An arboricultural survey of the site was undertaken by Thomson in March 2019 in accordance with BS5837:2012.

2.2.2 A total of 31 individual trees were recorded during the survey and listed in the Tree Schedule. The surveyor recorded nine Category A trees, two Category B trees, 16 Category C trees and four Category U trees located within or adjacent to the site (see Figure 2).

2.2.3 An AIA and AMS was also produced by Thomson in May 2019. The AIA concluded that the development will result in the loss of seven trees from the site and a further four as part of good arboricultural management.

2.3 Brief and Objectives

2.3.1 UCL commissioned TEC to produce an AIA and AMS.

2.3.2 The objective of the report was to assess the impact of the proposed development on the existing trees on site and any off-site trees that might be affected by the development. The brief was to complete:

- An Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS), based on the proposed site layout, which evaluates the direct and indirect effects of the final proposed design on the trees on or adjacent to the site, identifies which trees can realistically be retained, and recommends any necessary mitigation to protect those trees.
- A Tree Protection Plan.

2.4 Limitations

The information provided within this report and in the accompanying Tree Schedule covers only those trees that were inspected and their condition at the time of survey.

3. Arboricultural Impact Assessment (AIA)

3.1 Introduction

3.1.1 The purpose of the AIA is to assess the likely impact of the proposed development on the existing trees on site and to determine which trees are to be removed or retained during the construction phase.

3.1.2 The protection of retained trees is paramount to their survival during the development process and their consequent long term contribution to the site. The Root Protection Areas (RPAs) identified in the arboricultural survey and Tree Constraints Plan (TCP) should remain protected throughout the development to avoid potential damage, such as:

- Soil compaction;
- Root severance due to excavation;
- Soil coverage with impermeable material;
- Alterations in ground level;
- Leaks and spillages from stored materials; and
- Vehicle and heavy plant collision.

3.2 Documents

3.2.1 This assessment has been based on documents produced by Hawkins/Brown Architects. The details of these documents can be seen in Table 1.

Table 1: Documents upon which this assessment has been based

Originator	Reference No.	Title
Hawkins/Brown Architects	BEMP-HBA-SW-00-DR-A-20-0131	Substation Enclosures - Level 00 (proposed)

3.3 Tree Removals

3.3.1 Two Category B London plane trees (*Platanus* x *hispanica*), T30 and T31, require removal as part of this aspect of the development. To help offset the loss of these trees, 11 mobile planters are proposed in the same vicinity.

3.4 Trees to be Retained

3.4.1 Where necessary, the RPAs of the retained trees across the site should be protected by fencing to the specification laid out in BS5837:2012. The specification of this fencing is detailed in Section 4.6 of the AMS and an illustrated example can be seen in Appendix 3. The area protected by the fencing shall be known as the Construction Exclusion Zone (CEZ).

3.5 Trees Works

3.5.1 No trees require maintenance works prior to the erection of protective fencing. If future works are identified as part of the development, they should be undertaken in accordance with British Standard BS3998:2010 Recommendations for Tree Work (BS3998:2010).

3.6 Construction Work within RPAs

3.6.1 No construction work is required within the RPAs of the retained trees for this development.

3.7 Services and Utilities

3.7.1 Where existing services situated within RPAs require upgrading, care must be taken to minimise any disturbance, and where feasible trenchless techniques are to be employed, and only where necessary should manual excavation be considered.

3.7.2 If new services are to be introduced into the site they should be located outside of the RPAs where they will not interfere with tree roots. Final positions of any proposed services should be verified and approved by an arboricultural consultant and the Local Authority Tree Officer before implementation.

3.7.3 If service installation is required within RPAs then the guidelines within National Joint Utilities Group publication '*Guidelines for the planning, installation and maintenance of utility services in proximity to trees*' (NJUG 4, 2007) should be adhered to.

3.8 Post Development Management

3.8.1 The retained trees across the site and any new trees planted as part of the final landscaping scheme should be subject to some form of tree management system. Guidance on the level of tree management required can be found in the National Tree Safety Group publication, '*Common sense risk management of trees*' (NTSG, 2011).

3.9 New Planting

3.9.1 The proposed layout shows the introduction of 11 mobile planters to the rear of Frances Gardner House as part of the new landscaping scheme. All planters will contain small trees and allow easy repositioning to ensure sufficient access routes are available during maintenance works.

3.10 Conclusion

3.10.1 The development will result in the removal of two trees from the site. To help redress the losses, 11 mobile planters are proposed in the same vicinity, with further planting proposed as part of the overall development.

4. Arboricultural Method Statement (AMS)

4.1 Introduction

4.1.1 The purpose of this AMS is to demonstrate how work will be undertaken on the site to avoid an unacceptable impact on, and provide an adequate level of protection for, the retained trees.

4.1.2 This AMS sets out the tree protection required to facilitate the proposed development, and should not be read as a definitive engineering or construction statement for this site. Matters relating to construction or engineering detail should be referred to a qualified structural engineer for further information and specification.

4.1.3 This AMS is to be used in conjunction with the Tree Protection Plan (TPP01) in Figure 1.

4.2 Documents

4.2.1 This AMS has been based on documents produced by Hawkins/Brown Architects. The details of these documents can be seen in Table 2.

Table 2: Documents upon which this assessment has been based

Originator	Reference No.	Title
Hawkins/Brown Architects	BEMP-HBA-SW-00-DR-A-20-0131	Substation Enclosures - Level 00 (proposed)

4.3 Supervision

4.3.1 As the there is no requirement to work within the RPAs of the retained trees, there should be no need for any part of the construction phase to require arboricultural supervision.

4.3.2 However, any changes to the nature and sequence of works specified in this AMS regarding the retained trees should be agreed with an arboricultural consultant at least 48 hours before their realisation.

4.4 List of Contacts

4.4.1 The list of contacts within Table 3 should be used as reference if any deviations from, or issues with, any part of this AMS arise.

Table 3: List of contact details for relevant parties

Senior Arboriculturist	Thomson Environmental Consultants	01483 466000
Planning Arboricultural Officer	London Borough of Camden	020 79744444
Architectural Designer	Hawkins/Brown Architects	020 7336 8030
Project Manager	Arcadis LLP	020 7812 2000

4.5 Tree Removals and Pruning

4.5.1 The two individual trees, T30 and T31, shall be felled to ground level. The stumps of the felled trees shall be left in place or ground out to below ground level. Trees requiring pruning shall have the works carried out in accordance with BS3998:2010 *'Recommendations for Tree Work'*.

4.5.2 Care is to be taken of the ground around retained trees to make sure that it does not become compacted as a result of tree surgery operations. No equipment or vehicles such as timber lorries, tractors, excavators or cranes should be parked or driven beneath the crowns of any retained trees, to prevent subsequent soil compaction and root death. All arisings are to be removed and the site is to be left in as tidy and orderly manner as possible.

4.6 Protective Fencing

4.6.1 Temporary fencing is not anticipated or specifically required for this part of the development. If it is found that fencing is required at a later date, the specification for this fencing will be in accordance with the recommendations given in BS5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations*' (BSI). It will comprise 2.0m high mesh fencing (Heras type panels are a simple, readily available solution) attached to a scaffold framework. Support scaffolds will be attached to the scaffold framework as necessary at an angle of 45 degrees on the side of the trees and anchored by further scaffold poles carefully firmed into the ground. The vertical scaffold tubes will be spaced at a maximum interval of 3m.

4.6.2 A diagram illustrating an example of the protective fencing can be seen in Appendix 3.

4.6.3 Clear signs will be attached at 4m intervals along the fencing stating 'Tree Protection Area – Keep Out'. These should be outward facing and weather protected and maintained for the duration of the works. A suitable sign can be seen in Appendix 4.

4.6.4 The area protected by the fence shall be known as the Construction Exclusion Zone (CEZ).

4.6.5 The following principles must be maintained within the CEZ:

- Existing ground levels shall not be altered;
- No excavation shall occur to avoid root severance;
- No plant or vehicles shall enter the CEZ;
- Impermeable surfacing shall not be laid down over soil ('capping');
- No materials, fuels or chemicals shall be stored within any of these areas;
- No fires to be lit where flames may reach within 5m of the CEZ;
- No structures or fixtures of any kind shall be fastened in any way to the trunks of the retained trees;
- No drainage or irrigation pipes shall be installed within the RPAs of the retained trees; and
- Any unwanted vegetation shall be removed by hand.

4.6.6 The fencing shall remain in place until soft landscape operations require its full or partial removal. No other construction activity will take place within those areas formerly protected by the fence.

4.7 Ground Protection

4.7.1 There is no requirement for ground protection to be installed for this development.

4.8 Removal of Hard Surfaces within the RPA

4.8.1 There is no requirement for the removal of hard surfaces within the RPAs of the retained trees.

4.9 Construction within RPAs

4.9.1 There is no requirement to undertake any construction work within the RPAs of any of the retained trees for this development.

4.10 Services and Utilities

4.10.1 All underground services and drainage routes shall be located so that no excavations are required within the RPAs of the retained trees. In this instance, the best route onto the site is along the southern boundary or the north-west corner of the site.

4.10.2 In the event that an incursion into an RPA is unavoidable, the installation shall comply with the methods and guidelines detailed in *Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees* NJUG 4 (2007). If this does occur, then an arboricultural consultant shall be consulted before any works commence within the RPA to agree the methodology for the excavation.

4.11 Landscaping

4.11.1 The plans provided show 11 new mobile planters as part of the landscaping scheme. There is no landscaping within the RPAs of the retained trees shown. However, if any is to be undertaken post-construction the principles of the CEZ (as detailed in Section 4.6.5) should still be adhered to with particular reference to level changes, root severance and 'capping' with impermeable materials. If impermeable surfaces are to be laid within the RPA of any of the retained trees then they should not cover greater than 20% of the area.

4.12 Sequence of Works

4.12.1 A logical sequence of events is to be observed as shown in Table 4.

Table 4: Sequence of works.

Stage	Event	Arboricultural Supervision required
Stage 1	Prestart meeting with site manager and relevant construction staff. This will include site induction for all personnel.	Yes

Stage	Event	Arboricultural Supervision required
Stage 2	Carry out tree removals specified in Section 3.3 and any other necessary tree pruning operations.	No
Stage 6	Complete main construction phase of development.	No
Stage 7	Complete all the landscaping.	No

5. Bibliography

5.1.1 British Standards Institution (2014) BS8545:2014 *Trees: from nursery to independence in the landscape - Recommendations*. BSI, London.

5.1.2 British Standards Institution (2012) BS5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*. BSI, London.

5.1.3 British Standards Institution (2010) BS3998:2010 *Recommendations for tree work.* BSI, London.

5.1.4 British Standards Institution (2005) *Publicly Available Specification 100 (PAS 100:2005).* BSI, London.

5.1.5 HM Government. The Town and Country Planning (Tree Preservation) (England) Regulations 2012. London: Office of Public Sector Information (OPSI).

5.1.6 Lonsdale, D. (1990) *Principles of Tree Hazard Assessment and Management*. The Stationery Office, London.

5.1.7 Matheny, N. & Clark, J.R. (1998) *Trees and Development.* ISA, Champaign, IL.

5.1.8 Mattheck, C. & Breloer, H. (1994) *The Body Language of Trees.* The Stationery Office, London.

5.1.9 Johnson, O. & More, D. (2004) *Collins Tree Guide*. London: HarperCollins

5.1.10 National Joint Utilities Group (NJUG) (2007) *Guidelines for the planning, installation and maintenance of utility services in proximity to trees*. NJUG, London.

5.1.11 National Tree Safety Group (2011) *Common Sense Risk Management of Trees* Forestry Commission, Edinburgh

5.1.12 Robertson, J, Jackson, N & Smith, M (2006) *Tree Roots in the Built Environment.* The Stationery Office, London.

Appendix 1 - Tree Schedule

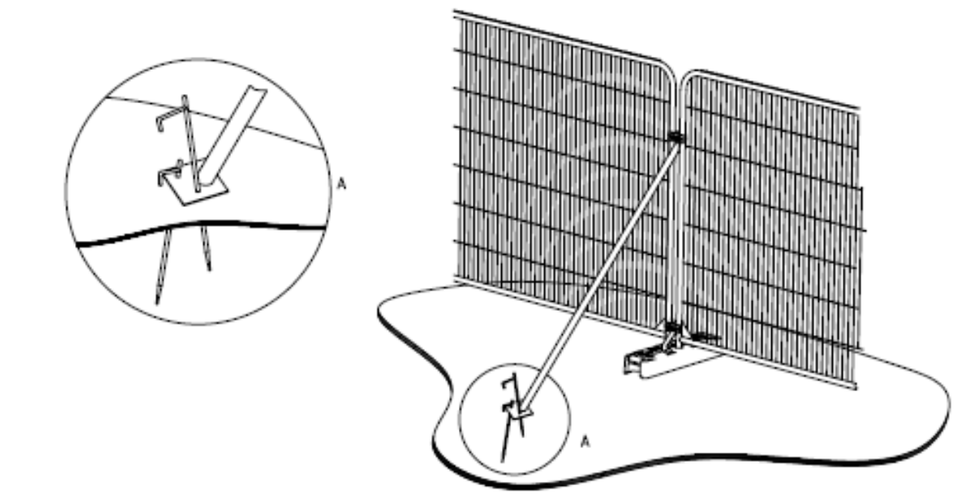
Tree/ Group No.	Species	Height (m)	Stem Diameter (mm)	Canopy Spread (m) N	E	S	W	Height of Lowest Limb and Direction (m)	Crown Clearance (m)	Age Class	Estimated Remaining Contribution (years)	Condition Physiology	Structure	Comments	Preliminary Management Recommendations	BS Category	RPA (m^2)	RPA Radius (m)
T1	common pear; ***Pyrus communis***	6	175	1	1	1	1	2 East	2	Middle-aged	10-20	Good	Good	Ivy on the stem	-	C1	14	2.1
T2	common pear; ***Pyrus communis***	6	175	1	1	1	1	2 East	0	Middle-aged	10-20	Good	Good	-	-	C1	14	2.1
T3	common pear; ***Pyrus communis***	7	170	1	1	1	1	2 East	0	Middle-aged	10-20	Good	Good	-	-	C1	13	2
T4	common pear; ***Pyrus communis***	6	150	1	1	1	1	2 East	2	Middle-aged	10-20	Good	Good	-	-	C1	10	1.8
T5	common pear; ***Pyrus communis***	7	185	1.2	1.2	1.2	1.2	2 North	2	Middle-aged	10-20	Good	Good	-	-	C1	15	2.2
T6	red oak; ***Quercus rubra***	5	170	1.3	1.3	1.3	1.3	2.1 East	18	Young	10-20	Good	Good	-	-	C1	13	2
T7	red oak; ***Quercus rubra***	5.5	150	1	1	1	1	2.2 West	2	Young	10-20	Good	Good	-	-	C1	10	1.8
T8	red oak; ***Quercus rubra***	9.5	230	3	3	3	3	2.2 North	2.3	Young	10-20	Good	Good	-	-	C1	24	2.8
T9	red oak; ***Quercus rubra***	5	100	1	1	1	1	2 West	2	Young	< 10	Dead	Hazardous	This tree is dead.	Fell to ground level	U	5	1.2
T10	red oak; ***Quercus rubra***	4.5	100	1	1	1	1	2 West	2	Young	< 10	Dead	Hazardous	Fungus at the base of the tree. This tree is dead.	Has now been removed	U	5	1.2
T11	red oak; ***Quercus rubra***	10	195	3	3	3	3	2.5 East	2.5	Young	10-20	Good	Good	-	-	C1	17	2.3
T12	red oak; ***Quercus rubra***	11	210	3.5	3.5	3.5	3.5	2.5 West	2.5	Young	10-20	Good	Good	-	-	C1	20	2.5
T13	red oak; ***Quercus rubra***	5.5	160	1.2	1.2	1.2	1.2	2 West	2	Young	10-20	Good	Good	-	-	C1	12	1.9
T14	red oak; ***Quercus rubra***	4	90	1	1	1	1	2 East	2	Young	< 10	Dead	Hazardous	This tree is dead	Fell to ground level	U	4	1
T15	London plane; ***Platanus*** x ***hispanica***	15	720	6.3	3.5	2	3	6 North	8	Mature	> 40	Good	Good	Pollard	-	A1,2,3	235	10
T16	London plane; ***Platanus*** x ***hispanica***	16	940	3.8	5	4.2	3.5	6 west	6	Mature	> 40	Good	Good	Pollard	-	A1,2,3	400	15

Tree/ Group No.	Species	Height (m)	Stem Diameter (mm)	Canopy Spread (m) N	E	S	W	Height of Lowest Limb and Direction (m)	Crown Clearance (m)	Age Class	Estimated Remaining Contribution (years)	Condition Physiology	Structure	Comments	Preliminary Management Recommendations	BS Category	RPA (m^2)	RPA Radius (m)
T17	holly; ***Ilex aquifolium***	6	100 160	2.5	2.5	2.5	2.5	1.8 East	2	Middle-aged	10-20	Good	Fair	-	-	C1	16	2.7
T18	London plane; ***Platanus*** x ***hispanica***	16	985	4.1	3.6	3.8	5.7	3 east	6	Mature	> 40	Good	Good	Pollard	-	A1,2,3	439	15
T19	holly; ***Ilex aquifolium***	6	160 150	2	2	2	2	3 East	2	Middle-aged	10-20	Good	Fair	-	-	C1	22	3.4
T20	purple leaved plum; ***Prunus cerasifera*** 'Pissardii'	6	190	2	2	2	2	2 West	2	Middle-aged	10-20	Fair	Fair	-	-	C1	16	2.9
T21	London plane; ***Platanus*** x ***hispanica***	16	830	3.8	5.1	5	4.6	6 east	7	Mature	> 40	Good	Good	Pollard	-	A1,2,3	312	14.3
T22	London plane; ***Platanus*** x ***hispanica***	16	780	2	4.1	6.1	2.9	3 east	6	Mature	> 40	Good	Good	-	-	A1,2,3	275	13.3
T23	London plane; ***Platanus*** x ***hispanica***	16	780	1	3.3	5	3.1	7 east	8	Mature	> 40	Good	Good	Pollard	-	A1,2,3	275	11.1
T24	London plane; ***Platanus*** x ***hispanica***	16	890	2	3.5	3.7	2.5	3 west	6	Mature	> 40	Good	Good	Pollard	-	A1,2,3	358	15
T25	London plane; ***Platanus*** x ***hispanica***	16	750	3	3.1	3.6	3.7	6 east	7	Mature	> 40	Good	Good	Pollard	-	A1,2,3	254	12.5
T26	wild cherry***; Prunus avium***	3	180	2	2	2	2	1 East	2	Middle-aged	10	Poor	Fair	Remove	-	U	15	2.2
T27	silver birch***; Betula pendula***	12	190	2	2	2	2	3 East	4	Mature	10-20	Good	Fair	-	-	C1	16	2.3
T28	false acacia; ***Robinia pseudoacacia***	15	350	2	7	5	2.5	4.5 East	5	Mature	20-40	Good	Good	Deadwood in the crown, Large split limb at 5m height on the stem	Remove the hazard limb and deadwood	C1	55	4.4
T29	London plane; ***Platanus*** x ***hispanica***	20	835	5	5	5	5	4 West	8	Mature	> 40	Good	Good	Has been maintained by regular reduction to the crown	-	A1,2,3	315	10
T30	London plane; ***Platanus x hispanica***	10	640	2	2	2	2	4 West	4	Mature	20-40	Good	Good	Maintained as a pollard	-	B1	185.3	
T31	London plane; ***Platanus x hispanica***	10	670	2	2	2	2	4 West	4	Mature	20-40	Good	Good	Maintained as a pollard	-	B1	203	

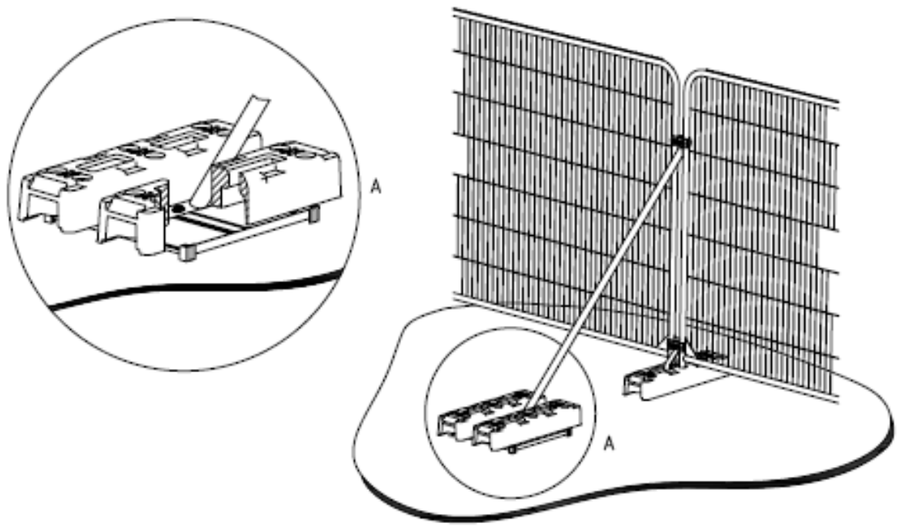
Appendix 2 – Table of Quality Assessment

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 be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have serious, irremediable, structural defects, 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 might be desirable to preserve			DARK RED
	1 Mainly arboricultural values	**2 Mainly landscape values**	**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 of formal or semi-formal arboricultural features (e.g. the dominant and/or principle 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 150mm	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 landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

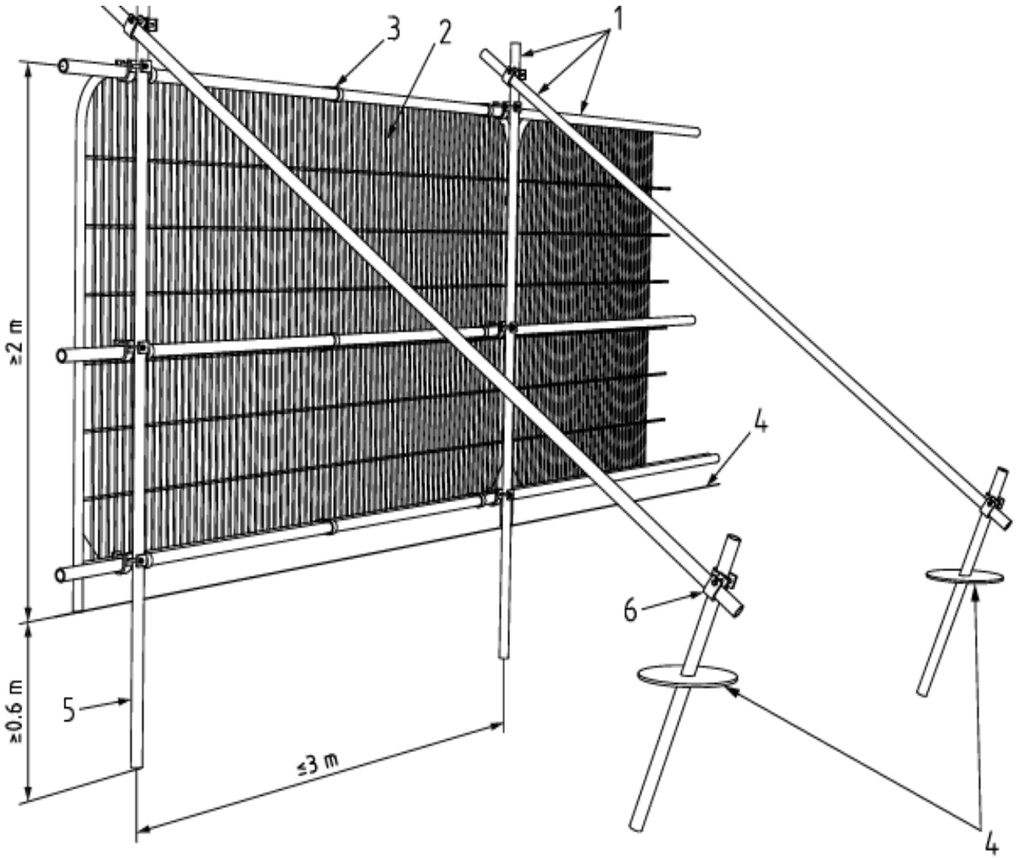
Appendix 3 – Example of Protective Fencing



a) Stabilizer strut with base plate secured with ground pins



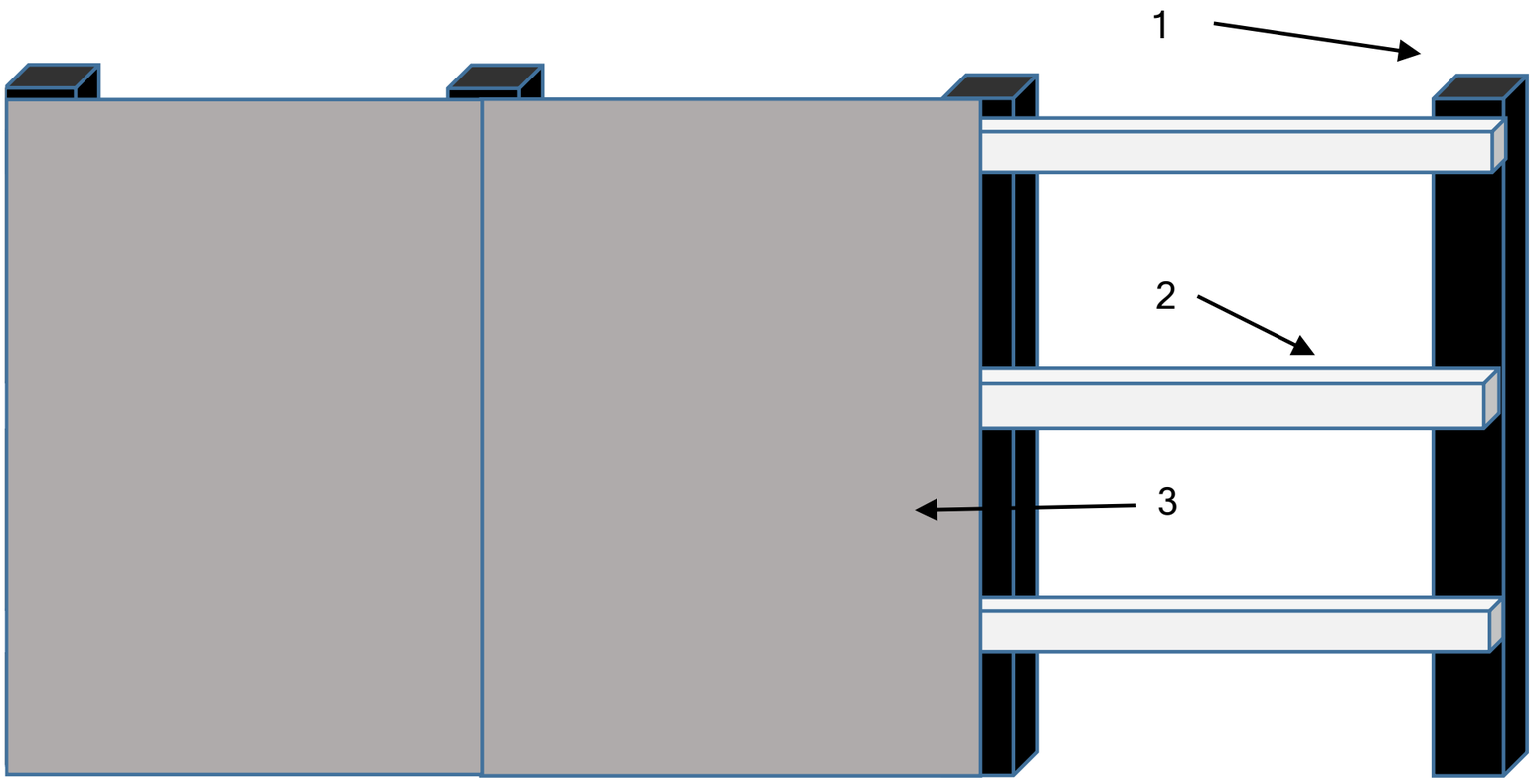
b) Stabilizer strut mounted on block tray



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Appendix 4 - Example of Protective Fencing



1. 100mm x 100mm timber posts at 1.2m centres

2. Three 100mm x 50mm timber rails

3. 12mm WBP Virola hardwood through plywood framed panels

Appendix 5 - Tree Protection Fencing Notice