# Site Specific Arboricultural Method Statement

## Sir John Soanes Museum Lighting Installation – Lincoln Inn Fields

A report to Sophie Persson, Sir John Soane Museum

Date: 22nd June 2023

Report No: WAS211 -AMS/2023

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## Report Verification

This method statement has been undertaken in accordance with British Standard 5837:2012 "Trees in relation to design, demolition and construction - Recommendations".

## Disclaimer

The contents of this report are the responsibility of Wassells Arboricultural Services Ltd. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Wassells Arboricultural Services Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

## Validity of Data

The findings of this AMS are valid for a period of 18 months from the date of the statement. If works have not commenced by this date, an updated site visit and AMS may be required and should be carried out by a suitably qualified and experienced Arboriculturist to assess any changes to the site and trees.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such, following any significant meteorological event or changes in the growing environment of the trees they should be reassessed by a suitably qualified and experienced arboriculturist.

# Introduction and Scope of Method Statement

This document has been produced to provide a method statement to ensure the protection of all retained trees that could potentially be affected by construction activity on the site and to discharge the requirements of the Camden Council PP

**Reference: Planning Permission – NMA to 2022/2772P**

The scope of this report follows the recommendations and guidance described within ***BS 5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations*** which set out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures.

This AMS will also recommend any required tree works to enable access and also to mitigate potential damage from construction activity and for the future well-being of the trees concerned.

### Abbreviations:

RPA = root protection area

CEZ = construction exclusion zone

CWA = construction working area (including materials storage)

AMS = arboricultural method statement

AS = Arboricultural Supervision

TPF = tree protection fencing/hoarding/barrier

# Proposed Scheme for the Lighting Installation

The proposal is to install 2 temporary lighting towers for an Exhibition in the Sir John Soanes Museum.

The towers are to be installed opposite the museum in Lincoln Inn Fields and within the RPA of a large London Plane tree – T1

The towers are 4 metres high and have a small footprint of 3 Spirafix ground anchors.

# Arboricultural Method Statement

**Ref: Addendum 1 and Webb Yates Installation Method Statement I Addendum 2**

## Excavation within RPA of Retained Trees

- There is no requirement for excavation within the RPA of London Plane tree T1, which is located within Lincoln Inn Fields – ***see plan in addendum 2***
- The temporary lighting towers ground support are to be 3 x 50mm Spirafix ground anchors per tower.
- This type of ground anchor will not impact the RPA of this tree as they are driven in, and counter rotated to remove.

## Tree Protection Barriers & Construction Exclusion Zone

- No requirement for this
- No vehicle access needed, and only light pedestrian access required for installation.

## Ground Protection of Existing Surfaces within Root Protection Area (RPA) of Nearby Trees

- No requirement.

## Access Facilitation Pruning & Tree Surgery/Removal Works

### Schedule of Tree Works

| Tree Number | Tree Species | Diameter Class mm | RPA radius metres | Height metres | Grading Category | Tree work recommendations |
|---|---|---|---|---|---|---|
| T1 | London Plane | 1350 | 15 | 20 | A | None |

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Light Access facilitation pruning may be required by trimming of droppers from the tree around the lighting tower nearest to the stem on the LHS as you look at the museum.

### Tree work to be carried out to the following standards and guidelines:

- BS 3998:2010 Recommendations for Tree Work

- Tree pruning cuts will be carried out using the 'Natural Target Pruning' technique as defined by: *BS 3998:2010 section 7.2.5 and Fig. 2 The Pruning of Trees, Shrubs and Conifers: George E. Brown & Tony Kirkham – 2nd edition revised & enlarged 2004 and Section 3.1.27 of The Arboricultural Association Specification for Tree Works June 2008.*

## Site Access and Construction Working Area (CWA)

- Site access shall be from Lincoln Inn Fields

## Site Storage and Accommodation

- Not required.

## Installation of Services

- Nothing proposed

## Arboricultural Supervision (AS)

1. Not required for this minor project

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## References


1. BS 5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations
2. BS3998:2010 Tree Work – Recommendations
3. NJUG Volume 4 Issue2 2007 – Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees.
4. NHBC Standards – Section 4.2 Building Near Trees
5. British Geological Survey – London & the Thames Valley
6. Principles of Tree Hazard Assessment – Lonsdale 2001
7. Diagnosis of Ill Health in Trees – Stouts & Winter 2004
8. Spirafix Ground Anchors - sales@spirafix.com


## Declaration

This AMS is written and checked by Richard Wassell of Wassells Arboricultural Services Ltd. and provided without prejudice as an objective and professional assessment of the trees and site conditions described.

Signed: R.J. Wassell Date: 22.06.MMXXIII

**Richard Wassell. Director**

**CHort MCIHort MArborA NDArb (RFS) Kew Diploma NEBOSHlevel3**

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Which? Trusted Trader


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# Addendum 1 – Tree Protection Informative

**Ref: BS 5837:2012 in Tables C.1 & D.1of annex C & D**

## Protecting Root Zone of Trees (BS 5837:2012 section 6.2 Figs. 2 & 3):

### The Root Protection Area (RPA)

This is the area surrounding a tree that is deemed to contain sufficient roots and rooting volume to maintain the tree's viability in the future. The root system is typically concentrated in the uppermost 600 – 1200mm of the soil and is not necessarily symmetrical around the tree, being dependent on a number of factors such as water, nutrients, oxygen, soil penetrability and physical obstructions such as existing foundations, roads or changes in level (terracing).

The RPA is a design layout tool that is deemed to be a minimum area around a tree where the protection of roots and soil structure are treated as a priority. This area is envisaged as and portrayed with a circle around each tree as would be the case if it were an open grown with no physical restrictions. Where there appears to be restrictions to root growth then rooting may occur in areas outside of this typical RPA area. Where this is deemed to be likely then a "no-dig" root investigation trench can be carried out to determine actual depth and density of rooting.

### Key Points

1. AVOID building works within the RPA if at all possible but if not then carefully consider the following: where the RPA is likely to be severely affected because of site design constraints then felling and planting replacement(s) trees in a more suitable location on the site will need to be considered.
2. Where possible do not use strip foundations within the RPA, if absolutely necessary consider using a trenching saw or excavate by hand to avoid 'shatter damage' to the root system.
3. Consider using piling techniques for foundations @ maximum 350 mm diameter with ground beams on or above the surface of the root zone.
4. Unless unavoidable, do not exceed entering the root zone by more than one fifth of RPA radius.
5. Do not trench tangentially across the root zone for footings and services unless it cannot be avoided.
6. Consider 'no dig' techniques for services installation, with radial service lines being preferable to tangential across the root zone. Where this is undertaken then boring must be carried out below 600mm deep.
7. Any hard surfacing, paths and roads need to have the same considerations for the RPA and as in the above points. Where possible paths and hard surfacing (patios etc.) need to be surface constructed (cellular) and semi-porous to allow water penetration and gaseous exchange into the root system of trees.

### Excavation within Root Protection Area of trees

Where trees are to be retained then any proposed foundation, underground services work and hard surfacing such as roads/paths falling within the RPA of trees that are to be retained shall be kept as far away from tree stems as possible (SEE NOTE 1 ABOVE). Where any such works are necessary within the RPA there will be a requirement to dig carefully by hand and ensure any roots encountered of maximum 25mm in diameter shall be exposed and correctly pruned back by a competent Arborist. Where larger roots are encountered of above 25mm in diameter then advice from the Arboricultural Supervisor (AS) for the site must be sought prior to any work being undertaken.

**Any roots exposed/ pruned back as part of the above operation shall NOT be left exposed to drying out. All roots exposed/pruned shall be either covered with damp Hessian sacking prior to backfill or backfilled/covered immediately with a suitable open and free draining compost/loam.**

## Site Hoarding

Site hoarding, where possible, shall be no closer than 1.5 metres away from the stem of retained trees and consist of 2400mm high x 1200mm wide x 20mm thick plywood sheets supported by minimum 100mm square posts and 100 x 50mm rails with posts at 2.5 metre centres.

Post holes for site hoarding that are required within the RPA of nearby trees shall be dug by hand and are to be a maximum of 300 x 300mm and 450mm deep

Posts to be supported in the ground with 1 bag of “PostCrete” per post or use of “Meta Posts” if applicable

### Ground Protection System Specification for pedestrian access areas only:

- Level area of RPA concerned by blinding with sharp sand at maximum depth of 50mm
- Lay geo-textile membrane such as ‘Terram’ to cover area concerned and peg down on banked areas as required
- Cover geo-textile with maximum of 100mm MOT Type 1 sub-base – not compacted
- Retain MOT type 1 with edge restraint/terrace restraint using 30 x 100mm edging board pegged every 2 metres to prevent migration of the sub-base
- OR
- Use 20mm minimum thickness plywood sheets instead of MOT type 1 and ensure they are secured from moving

Other manufactured ground protection systems are available such as Eve Tracking, EcoGrid or similar and should be used as an alternative where machinery access is required.

## Addendum 2 – Tree Protection Plan

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FOR PLANNING AND CONSULTATION

FACADE

SIR JOHN SOANE'S MUSEUM

FENCE LINE

PAVEMENT

STREET LIGHT

ROAD

STREET LIGHT 18

PAVEMENT

FENCE LINE

2000

LIGHTING POLE A

LIGHTING POLE B

4940

nearest anchor:7099 approximate distance to trunk

8900 approx.

11787 approximate distance to trunk

SHRUB

SHRUB

SHRUB

SHRUB

HOLLY

SHRUB

SHRUB

London Plane T1

TREE
trunk diameter 1370 approx.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 M

| | | | |
|---|---|---|---|
| SIR JOHN SOANE'S MUSEUM | PROJECTED ARTWORK INSTALLATION | NAYAN KULKARNI | NKProjects (UK) LIMITED<br>53C Dartmouth Road<br>London<br>SE23 3HN | PLAN |
| | | DATE<br>2nd June 2023 | DRG-NO<br>SJS-02-B-R1 | SCALE @ A3<br>1:100 |

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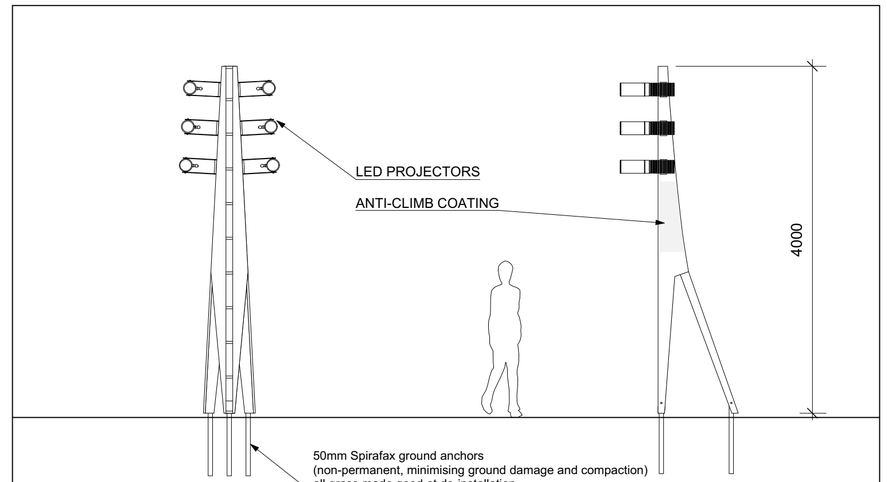


Lighting Equipment Details @ 1:50
LED RGBW Glass Gobo Projectors
25mm CNC Varnished External Pywood
Control Equipment Secured wiithin column


0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 M

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SIR JOHN SOANE'S MUSEUM | PROJECTED ARTWORK INSTALLATION | NAYAN KULKARNI | NKProjects (UK) LIMITED<br>53C Dartmouth Road<br>London<br>SE23 3HN | ELEVATIONS | DATE<br>2nd June 2023 | DRG-NO<br>SJS-01-B-REV2 | SCALE @ A2<br>1:100 |

# Ground Anchor Installation Method Statement

| | | | | | |
|---|---|---|---|---|---|
| **Project** | Soane's Museum Lighting Support | | | | |
| **Reference** | J5261-S-TN-0001 | | | | |
| **Scope** | Temporary ground anchors for lighting tower support | | | | |
| **Date** | 08.06.2023 | **Job number** | J5261 | **Author** | D.Cole |

Webb Yates Engineers have been appointed by The Sir John Soane's Museum to design temporary lighting towers as part of an installation for an exhibition. Proposals for the temporary plywood lighting towers include the installation of small ground anchors to support the base of the structure.

In order to support a non-material amendment (NMA) to the original planning application (Ref: 2022/2772/P) for the lighting towers, a method statement for the installation of the temporary ground anchors has been produced. This document outlines the proposed method statement, taking into consideration the proximity of nearby trees.

## 1. Method Statement

### 1.1. Proximity of trees

As shown on drawings submitted as part of the NMA (SJS-02-B-R1), both lighting towers are approximately 6.8m and 10.7m away from the nearest tree respectively.

### 1.2. Securing of root protection areas

No vehicular access, and only light pedestrian access, is required for installation of the lighting towers. In addition, the scale of the proposed works is small and relatively far from the nearest trees. Based on this, no fencing or additional securing of root protection areas is considered to be necessary.

### 1.3. Site storage

The materials required for construction are minimal, lightweight and construction will be completed using hand tools only. There will be no construction materials stored within the root protection areas of the trees to minimise the compaction of roots of the trees. No oils, fuels or chemicals will be used or stored in the vicinity of the site.

### 1.4. Levels

There will be no alteration to soil levels on the site.

### 1.5. Services

No proposed services are planned to be installed within root protection areas as part of the works.

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020 3696 1550
london@webbyates.com
www.webbyates.com

Registered in England & Wales No.: 5393930

## 1.6. Installation sequence

The proposed installation sequence of the lighting towers and ground anchors is as follows:

1. Materials for lighting towers to be delivered to site, weight aprox. 40kg per tower.
2. Position of ground anchors to be marked on site prior to installation. Anchors to be positioned to avoid clashes with any visible surface roots (if present).
3. Areas around position of ground anchors to be sub-surface scanned for below ground services.
4. Ground anchors to be installed into the ground to a depth of 540mm in accordance with manufacturers recommendations.
5. Plywood lighting towers to be assembled on the ground.
6. Lighting towers to be lifted on to ground anchors.
7. Lighting towers to remain in place for during of exhibition, approximately 3 months.
8. At the end of the installation, plywood towers to be removed from anchors.
9. Ground anchors to be unscrewed from ground.
10. Grass around anchors to be made good following removal.


T1


Approx. Location of lighting pole B


T1


T1
Approx. Location of lighting pole A