

**Arboricultural Method Statement
& Tree Protection Plan**

Plan in accordance with BS 5837

Client:	Mr N. Rosen
Location:	29 Berridge Mews, London NW6
Report Title:	Arboricultural Method Statement
Report prepared by:	Mark Enright The Landscape Garden Company Ltd

Contents

Introduction	Page 3
Summary	Page 3
1.0 Sequence of Events	Page 4
2.0 Root Protection Areas (RPA's)	Page 4
3.0 Restrictions within Tree Protection Areas	Page 5
4.0 Tree Protection Fencing	Page 5
5.0 Ground Protection	Page 7
6.0 Avoiding Crown and stem damage	Page 8
7.0 Tree Surgery	Page 8
8.0 Hard Surface Removal within Services	Page 8
9.0 Installation of Underground Services	Page 9

Introduction

Mark Enright The Landscape Garden Company Ltd was instructed in December 2015 to prepare the following report by Mr N. Rosen.

It is proposed to carry out the development of a domestic extension at 29 Berridge Mews, London NW6.

This Arboricultural Method Statement has been compiled to ensure the safe and healthy retention of the trees to be retained on this development. Integral to achieving this goal is the implementation of the special construction details and protection methods detailed within this report.

This Method Statement must be made available to all contractors and operatives on the site during the construction process so that they fully understand the importance of the measures set out for tree protection.

The information contained within this Arboricultural Method Statement conforms to BS 5837:2012 'Trees in relation to Construction'.

The controlling authority is Camden Borough Council.

For details of trees to be retained and the locations and types of special protection methods, reference should be made to the Tree Protection Plan.

It should be noted that this is a site-specific Arboricultural Method Statement produced solely for the physical protection of those trees identified on the above plan and is not relevant to any other site or situation.

This report has been compiled from data achieved by Visual Tree Assessment.

Summary

There are 2 No. Sycamore . They are to be protected by Construction Exclusion Zones (CEZ's) as recommended in BS 5837: 2010 and as shown on the Trees Protection Plan (TPP). The Sycamores are in good condition but would benefit from crown thinning in accordance with BS 3998: 1989 'Tree Work'. This work is to be carried out by a suitably qualified Tree Surgeon (ideally chosen from the Arboricultural Association's Approved Contractors list). Proof of experience and insurance provision will be required. The work should be in accordance with instructions from a consultant arboriculturalist. During these works the climbing Tree Surgeon will be instructed to inspect the tree cavities, damage, dead wood or disease which may not be apparent from ground level.

1.0 Sequence of Events

1.1 The following sequences are governed by operational constraints and subject to change. The developer's arboriculturalist must be noted of any changes to this schedule:

Pre-development Stage

- Pruning of tree directly/indirectly impacted by development: Removal of dead wood from all trees (and aerial investigation).
- Tree protection measures installed to both trees.
- Site to be inspected by developer's arboriculturalist.

1.2 Arboricultural supervision is to be carried out at all crucial stages throughout the development process to ensure detailed tasks are carried out as per the approved methodology and during:

- Any demolition of existing buildings near to trees or within RPA's.
- Any incursion into CEZ's for whatever reason.

1.3 This supervision will require the arboriculturalist to be present throughout the tasks, to ensure all the arboricultural objectives are met.

1.4 If the task is to take a long period of time, provided the arboriculturalist is satisfied, the supervision may be reduced to telephone contact between the site Project Manager and the arboriculturalist.

1.5 The local authority arboriculturalist will have free access to the site and pass any recommendations direct to the developers arboriculturalist.

1.6 Any alterations to the Protective Fencing should be approved by the developers arboriculturalist and Local Authority arboriculturalist.

2.0 Root Protection Areas

2.1 Approximate root protection areas (RPA's) have been determined for both retained trees. The RPA's are designed to protect at least a functional minimum of tree root mass in order to ensure that the trees survive the construction process.

2.2 It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.

3.0 Restrictions within Tree Protection Areas

3.1 Inside the exclusion area of the Protective Fencing, the following shall apply:

- No mechanical excavation
- No excavation by any other means without arboricultural site supervision.
- No hand digging without a written method statement having first been approved by the developers arboriculturalist.
- No ground level changes whatsoever.
- No storage of plant or materials.
- No storage or handling of any chemicals.
- No vehicular access.

4.0 Tree Protection Fencing

4.1 The Tree Protection Plan (TPP) shows the position of the Tree Protection Fencing (TPF). This fencing comprises of one type as detailed below. Vertical banners should be erected and ground protection installed before any materials or machinery are brought onto site and before any demolition, development or stripping of soil commences.

4.2 Once erected, barriers and ground protection will be regarded as sacrosanct, and will not be removed or altered without prior agreement of an arboriculturalist and approval of the local planning authority.

4.3 Barriers should be fit for the purpose of excluding constructive activity, and appropriate to the degree and proximity of work taking place around the retained tree. On all sites, special attention should be paid to ensuring that barriers remain rigid and complete.

4.4 In most cases, barriers should consist of a scaffold framework in accordance with Fig. 2 comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Onto this, weld mesh panels should be securely fixed with wire or scaffold clamps. Weld mesh panels on rubber or concrete feet are not resistant to impact and should not be used.

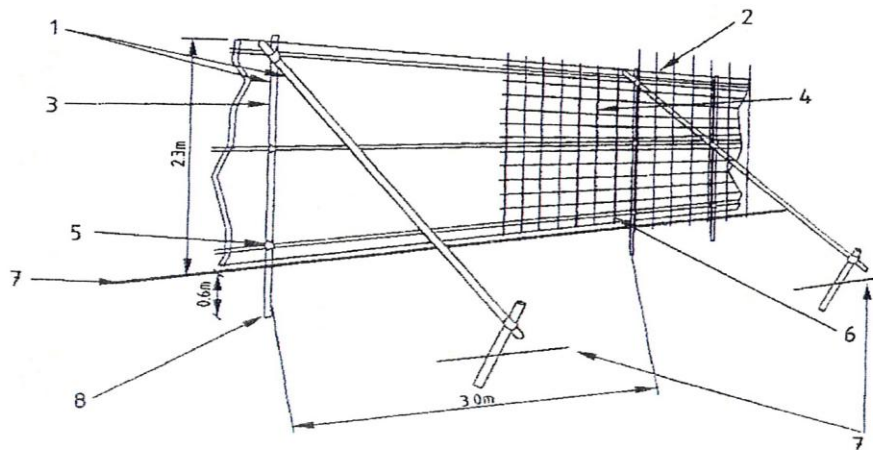
4.5 Should any alternative method of barrier construction be proposed, consultation with the developers arboriculturalist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent.

4.6 Once the exclusion zone has been protected by barriers and/or ground protection, construction can commence. All weather notices should be fixed to the barriers with the words: 'Construction exclusion zone – Keep out' or similar.

Fig 1.
Example of Tree Protection Warning Sign



Fig 2.
Protective Barrier

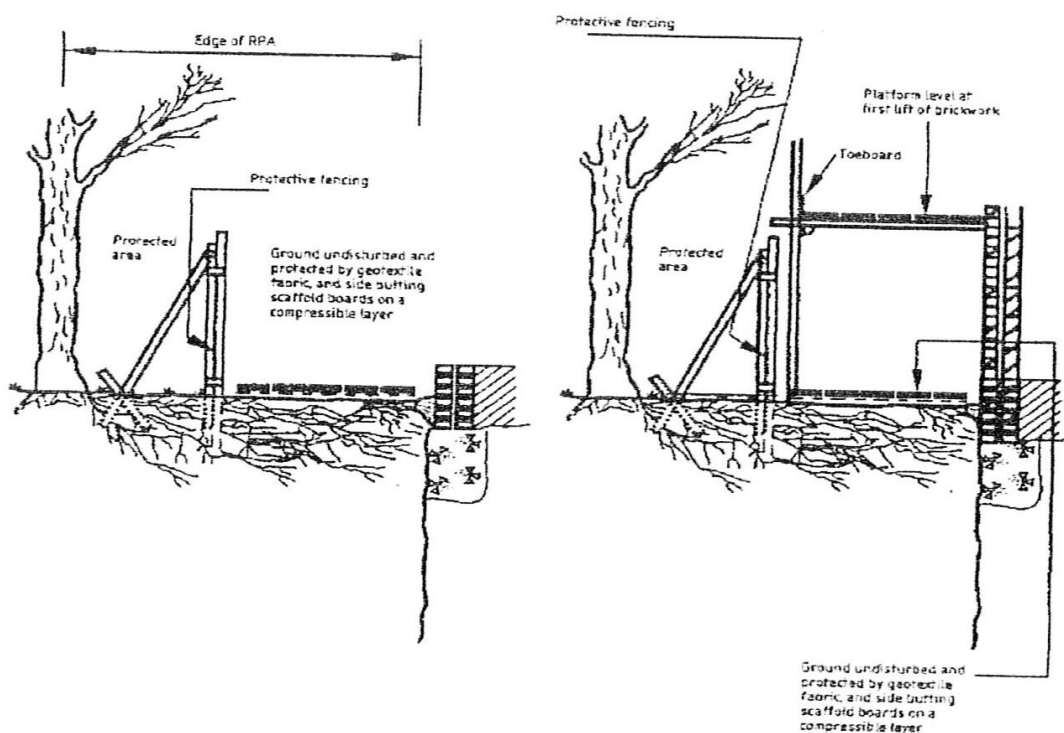


- | | | | |
|----|---|----|---|
| 1. | Standard scaffold poles | 5. | Standard clamps |
| 2. | Uprights to be driven into the ground | 6. | Wire twisted and secured on inside face of fencing to avoid easy dismantling. |
| 3. | Panels secured to uprights with wire ties and where necessary standard scaffold clamps. | 7. | Ground level |
| 4. | Weldmesh wired to the uprights and horizontals | 8. | Approx 0.6m driven into the ground |

5.0 Ground Protection

- 5.1 Any ground protection to be installed in locations shown on the TPP must be strong enough to support any predicted load and resist compaction and soil damage.
- 5.2 The primary method of protecting the ground when erecting scaffolding within RPA's is by installing geotextile fabric and side butting scaffolding boards on a compressible layer such as bark chippings on a geotextile membrane.
- 5.3 The scaffolding may be erected first with the uprights placed on spreader boards and the ground protection installed around the uprights.
- 5.4 The boarding will be left in place until the building works are finished.
- 5.5 A single thickness of boarding laid on the soil surface will provide sufficient protection for pedestrian loads. However, for wheeled or tracked construction traffic movements within the RPA, ground protection should be designed by the project engineer to accommodate the likely loading and may involve the use of proprietary systems such as three dimensional cellular confinement systems and approved for use by the developers arboriculturalist and local authority before any works start.
- 5.6 The ground beneath any protection boarding will be left undisturbed and will be protected with a porous geotextile fabric. If necessary, sand should be laid on the fabric to level the ground.

Fig 3. Scaffolding within the RPA



6.0 Avoiding Crown and Stem Damage

- 6.7 Great care must be exercised when working close to retained trees. Plant and machinery with booms, jibs and counterweights and the passage of tall or wide loads etc. Should be controlled by a bankmans to maintain adequate clearance.
- 6.8 Access facilitation pruning shall be kept to the barest minimum necessary to facilitate development and shall be carried out in strict accordance with the guidance below (Tree Surgery). **Under no circumstance shall construction personnel undertake any tree pruning operations.**

7.0 Tree Surgery

- 7.1 A 15% crown reduction will be required to facilitate the construction of the first floor. This will be done in accordance with BS 3998: 1989 'Tree work'. This work is to be carried out by a suitably qualified Tree Surgeon (ideally chosen from the Arboricultural Association's Approved Contractors list). Proof of experience and insurance provisions will be required. The work should be in accordance with our instructions and following approval by Camden Borough Council. During these works the climbing Tree Surgeon will be instructed to inspect the tree for any cavities, damage, dead wood or disease which may not be apparent from ground level.
- 7.2 All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

8.0 Hard Surface Removal within Root Protection Areas (RPA)

- 8.1 The initial 'breaking up' of any surface may be carried out by low impact pneumatic tools or by hand if possible.
- 8.2 Removal of the surface will occur in 2m strips working from undisturbed surface. This will enable any roots exposed to be covered with a good quality top soil to avoid desiccation and the ground to be 'made good' as the operation progresses, avoiding the need for excessive travel on exposed ground.
- 8.3 Where practical subsequent removal of debris will be carried out by hand. Should be mechanical means be required due to the size of the debris, then a small (1.5 ton) digger may be used providing that, when picking up the debris, no tines/teeth from the bucket cause any damage to the underlying soil surface. Once left with manageable size pieces, hand removal will be used, where the digger is employed, it will only travel on the undisturbed hard surface (within the RPA), clearing debris as it progresses out of the RPA.
- 8.4 No reduction in levels of the underlying soil surface will occur.

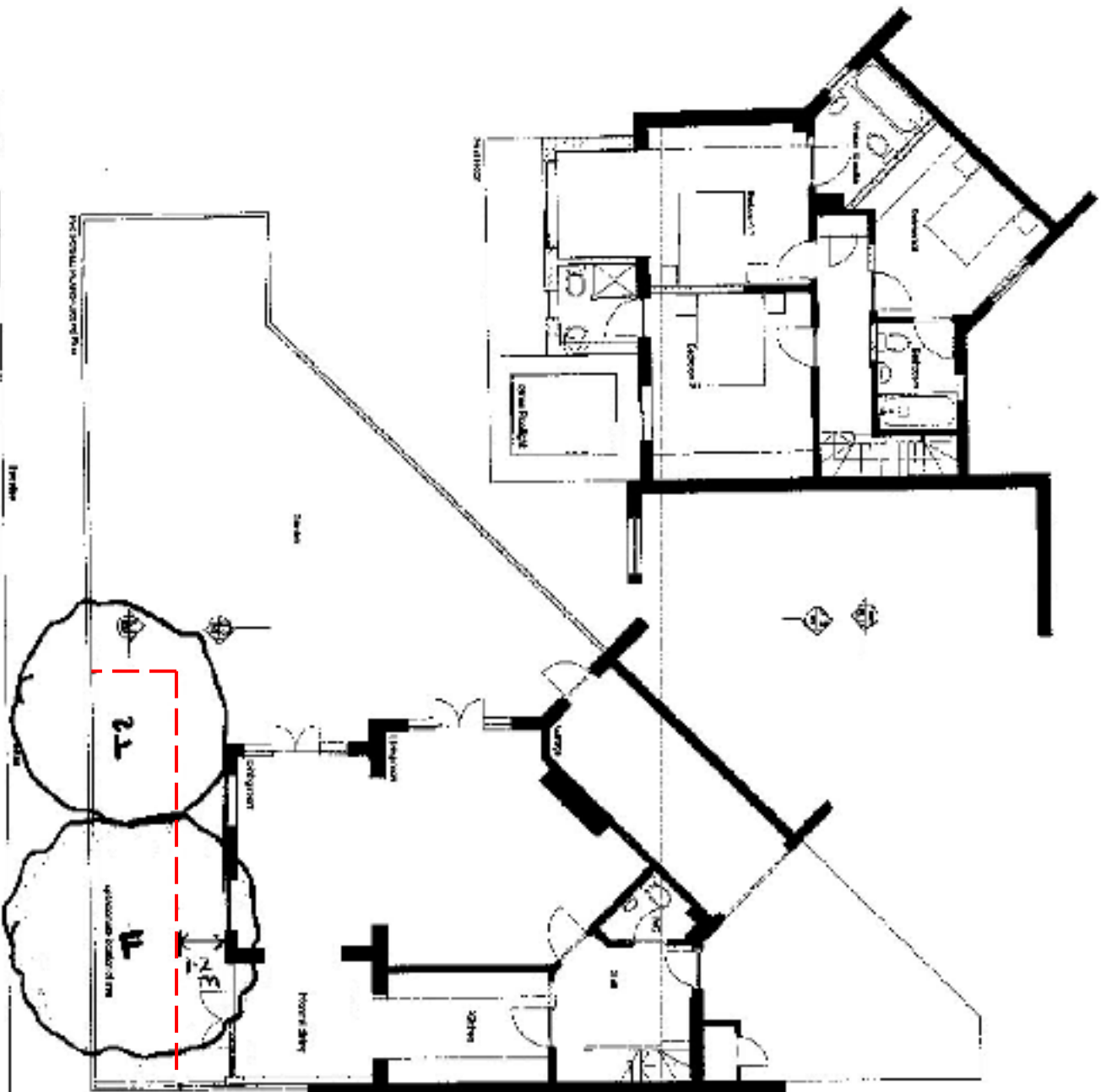
- 8.5 The underlying soil may be levelled by the addition of up to 100mm of good quality top soil to BS 3882: 1984. Hand tools only will be used for any levelling works; this work will not disturb the underlying soil.
- 8.6 Should any roots over 25mm diameter, have grown above the final soil level and be a hindrance to the final surface installation, their removal will only be carried out under arboricultural supervision and with the approval of the Local Planning Authority.
- 8.7 If the area around the retained trees is to be left following the removal of the existing hard surface, before a new hard surface is laid or soft landscaping implemented, then the line of protective fencing must be correctly re-established immediately after the hard surface removal work has been completed.
- 8.8 If, for whatever reason there is a delay before the area is left exposed prior to awaiting a new surface, then a temporary surface must be implemented or the area fenced off. 8.9 Some construction with regards to the car parking spaces will be required within the RPA of the trees. This will be carried out employing the no dig method and the construction will be cellweb based with resin bonded gravel top surface.

9.0 Installation of Underground Services

- 9.1 Effort will be made to ensure the routeing of services does not encroach into RPA's, if for whatever reason installation within RPA's is required, the developers arboriculturalist and local authority must be notified prior to any tree protection barrier removal and the following details adhered to.
- 9.2 Trenching for the installation of underground services severs any roots present and may change the local soil hydrology in a way that adversely affected the health of the tree. For this reason particular care will be taken in the routeing and methods of excavation used. At all times where services are to pass within the Root Protection Area, detailed plans showing the proposed routeing will be drawn up in conjunction with an arboriculturalist. Such plans will also show the levels and access space needed for installing the services.
- 9.3 The preferable method for trenching within RPA's to avoid damage is via excavation using 'airspade' or similar. This tool utilises compressed air to remove soil from around tree roots causing minimal damage. This approach should be utilised whenever possible.
- 9.4 Trenchless technology, such as thrust boring can be used in some instances and is particularly effective as it can pass directly under the tree, at a depth which is likely to avoid almost all impact on roots of the subject tree. As no access/thrust pits will

be located within the RPA's of the subject trees, the need for arboricultural supervision is limited.

- 9.5 Reference can be made to National Joint Utilities Group Volume 4, Issue 2 for guidance, but any approach must be approved by the developers arboriculturalist and brought to the attention of the local authority tree officer.



Line of CEZ

NOTE: The drawing is a preliminary drawing and is not to be used for construction purposes. It is intended for informational purposes only. The drawing is not to be used for any other purpose without the written consent of the architect. The drawing is not to be used for any other purpose without the written consent of the architect.

DMERK

SENTER PIRNITZ ENGINE ARCHITECTS

Architect: SENTER PIRNITZ ENGINE ARCHITECTS
 Address: ...
 Phone: ...
 Fax: ...
 E-mail: ...

DATE	DESCRIPTION	BY	CHK
15.12.2013	Architect
15.12.2013	Project Manager
15.12.2013	Architect
15.12.2013	Project Manager