ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

Site: 15 Oakwood Road

Client: Tarek Al-Daftary

Date of Report: 2nd March, 2016

Client's Reference: n/a

Author: Christopher Stringer
Bsc (Hons) Dip Arb L4 (ABC) TechArborA

Reference: 2917-009

Contents

Contents 3

1 Background and Tree Survey 4

Instruction 4

Purpose 4

Documentation 4

Development Proposal 4

Limitations 4

Site Visit and Description 5

Data Collection Methodology 5

Calculation of RPA 5

Schedule of Trees 5

2 Arboricultural Impact Assessment 6

Introduction 6

Summary of Impacts and Mitigation 6

Detail of Impacts and Mitigation 6

Conclusion 7

3 Method Statement 8

Introduction 8

Pruning 8

Specific Mitigation Measures 8

Activity Prohibited Within or Close to the CEZ 9

Appendix 1: Methodology and Explanatory Notes 10

Appendix 2: BS3857 Drawings 11

Appendix 3: References 13

1 Background and Tree Survey

Instruction

Shawyers have been instructed by Tarek Al-Daftary to inspect trees that could be affected by the development proposal at 15 Oakwood Road and to provide the following information:

1. A schedule of trees, including basic data and condition categorisation;
2. An arboricultural impact assessment of the development proposal on the trees listed in the schedule; and
3. A preliminary arboricultural method statement (and tree protection plan) detailing tree protection for the trees to be retained.

Purpose

This report is an assessment of the impact of the development proposal upon the trees, within the instruction, and how any impacts can be mitigated. It is based on the British Standards Institution's *BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations* (BS5837), and provides an overview for the Local Planning Authority (LPA) in determining the associated planning submission.

Documentation

A plan was provided for the purposes of conducting the arboricultural impact appraisal: "1809/08_50_B", received via email on 25/02/2016.

Development Proposal

It is understood that the development proposal comprises of a side (north) extension and a rear (east) extension (of which planning permission has already been granted).

Limitations

Trees, their structure and condition, are dynamic and subject to change throughout their lifetime and following alteration to their immediate environment. Due to the limitations in predicting such natural processes and events, all observations, comments and recommendations herein relate to the structure and condition of the tree at the time of the tree survey. The report is valid for a period of one year from the date of the report.

Development often involves multiple areas of expertise including design, engineering, planning, construction and ecology. Shawyers has no specialist expertise in these accompanying disciplines, therefore, this report solely relates to arboricultural aspects.

The survey has been undertaken principally for planning purposes. Although any obvious structural details have been noted, a full Tree Inspection and Risk Assessment has not been carried out.

No internal decay detection devices, or other invasive tools, were used to assess tree condition. No soil excavation or root inspection was carried out.

This survey has not considered the effect that trees and vegetation may have upon structural integrity of any buildings through heave or subsidence.

Site Visit and Description

The site was visited on the 29th February, 2016, in order to conduct a tree survey and collect the basic information required. The weather was fine and visibility was good.

The site is a residential dwelling and associated property in the Chandlers Ford area of Eastleigh Borough. The site is bounded by further residential property to the north, east and south, and by the highway to the west.

There is a single tree (T01) located in the front garden of the property, and several trees in neighbouring property, that could be effected by the proposed development.

Data Collection Methodology

All trees, within the instruction of this report, were inspected from ground level with all measurements estimated, unless otherwise stated. Information was collected on species, size, life stage and condition. As per BS5837, each tree was then categorised based on criteria in BS5837 section 4.5: Tree Quality Assessment.

Calculation of RPA

Using measured tree stem diameter information, rounded up to the nearest 25mm, the root protection area (RPA) for each tree was calculated using BS5837 Table D1.

Schedule of Trees

Common Name	Height	Diameter	N	E	S	W	Crown Clearance	Life Stage	Physiological Condition	Structural Condition	Remaining Contribution	Category	RPA Radius (m)	RPA Area	Comments
Common oak	15	720	5	7	7.5	7	3	Mature	Poor	Fair	20+	B1-3	8.70	238	Crown thinner than would be expected. Occluded pruning wounds and a cavity present. Overhead cables present within crown area.
Common oak	16	600	7	7	7	7	3	Mature	Fair	Fair	20+	B1	7.20	163	Measurements are estimates from site.
Silver birch	15	300	4	4	2	4	4	Mature	Poor	Poor	10+	C1	3.60	41	Measurements are estimates from site. Significant ivy on main stem.
Common beech	15	400	4	4	4	4	5	Semi-mature	Fair	Fair	20+	B1	4.80	72	Measurements are estimates from site. Lift historically.

shawyers

2 Arboricultural Impact Assessment

Introduction

Development can impact trees through necessity for removal, through direct damage or through harm caused by disturbance to their local environment. This arboricultural impact assessment details how the development proposal, as mentioned in Section 1, may affect trees through the design, during construction and post-development, and sets out precautionary measures in order to mitigate harm.

Summary of Impacts and Mitigation

Cause	Impact	Tree Number Affected	Mitigation
Development proposal	Tree loss or significant pruning	None	No trees are being lost to the development.
Foundations of development proposal	Potential harm through RPA disturbance	None	In large part the proposed development is using the existing footprint.
Hard landscaping	Potential harm through RPA disturbance	None	No plans submitted for any hard landscaping.
Construction access and activities	Potential harm through direct damage, through RPA disturbance or through pruning	T01, T02, T03 and T04	Implementation of Construction Exclusion Zone/ground protection and minor pruning.
Post-development pressure	Tree loss or significant pruning	None	It is not expected that any trees will be lost to post-development pressure.

Detail of Impacts and Mitigation

Construction access and activities

T01 is a medium to large specimen, located within the front lawn of the property. All other specimens are off site on neighbouring property. All trees are to be retained.

The east side of the crown may have to be pruned by up to 1m from the growing tips, to suitable growth points, to allow for scaffolding access. To mitigate the harm cause by this, pruning wounds should be no more than 30mm diameter and all work must be carried out to British Standard 3998:2010.

There is potential for the root system, stem and crown of T01 to be affected through construction activities, site access and storage of materials during construction of the proposed development. These can cause harm to the tree through soil compaction, direct physical damage and spillage of substances harmful to trees, such as concrete. In addition, there is potential for the root systems of T02, T03 and T04 to be affected through construction activities and storage of materials because there is potential for their root systems to extend into the property.

In order to mitigate risk from the above, at all times during construction, the root systems and stems must be protected with the use ground protection and protective fencing.

Site specific details can be found within the Arboricultural Method Statement and Tree Protection Plan.

Any further hard or soft landscaping of the site or changes in design, not mentioned in the development proposal, must seek specialist advice because of the level of tree protection afforded to the trees by Eastleigh Borough Council.

Conclusion

Consideration has been given to all trees within the context of the development proposal. It is recommended that the principles and detail contained within this Arboricultural Impact Assessment and the following Arboricultural Method Statement are followed to mitigate the potential for harm to retained trees during the construction of the development.

3 Method Statement

Introduction

Harm to trees, caused by construction activities, can be mitigated through good arboricultural management and engineered protection. Trees can be successfully retained and suffer no significant long term effects, resulting in benefit to the local amenity. This Arboricultural Method Statement details how the trees, identified in the Arboricultural Impact Assessment, will be managed and protected during the development of the site.

The following document should be read in conjunction with the tree protection plan (*2917-009 TPP*), which details how the following information will be applied to the site.

This method statement is preliminary and may have to be updated with regard to any planning conditions set by the local planning authority (LPA).

A copy of this document, along with tree protection plan, once finalised with the LPA, must be available on site, and to all contractors, at all times throughout the construction of the development.

Pruning

Pruning to T01, as proposed in the Arboricultural Impact Assessment, must be conducted before the commencement of construction work on site. All pruning work must be carried out in accordance to BS3998:2010, no pruning wound must be greater than 30mm diameter and the final crown spread east must be 6m from the stem (i.e. pruning will remove up to 1m from original spread on east side only).

Specific Mitigation Measures

All trees to be retained, including those on adjacent land, must be protected with the use of a construction exclusion zone (CEZ) and/or ground protection. The CEZ area and ground protection is shown in the tree protection plan that accompanies this method statement.

CEZ and protective fencing

The CEZ is an area, based on the root protection area (RPA), where construction activity is strictly prohibited for the duration of construction. Protective fencing is to be installed in accordance with BS 5837:2012 Section 6.2 and shown in figures A2.1 and A2.2 (Appendix 2) and marked on the tree protection plan. Once erected, all weather signage will be placed on the fences displaying: “Construction Exclusion Zone - No Access”. The CEZ should be regarded as sacrosanct and the position of the protective fencing should not be removed or altered in any way without the prior recommendation from the project arboriculturist and, where necessary, the LPA tree officer.

Ground protection

Where access is required, ground protection can be used to protect the RPAs outside of the CEZ. A range of approaches can be taken to ground protection, which includes utilising existing hard standing. In order to allow reasonable pedestrian access, material deliveries, access for scaffolding, limited storage and provision for a light commercial vehicle for the proposed development, ground protection can replace protective barriers in the area GP 1. This area has a pre-existing paved surface and this will act to protect the soil structure and RPA beneath. These surfaces must remain in place for the duration of the construction of the proposed development.

All site personnel shall be briefed by the developer on the importance of tree protection during construction and advised about the protection measures put forward in this document. It is the responsibility of the developer to commission any required arboricultural monitoring agreed upon or conditioned as part of planning consent.

Any damage to the protective fencing or ground protection must be reported to the developer and project arboriculturist immediately.

Any incursion into the CEZ, beyond that which is permitted, whether accidental or deliberate, must be reported immediately to the developer and the project arboriculturist.

Removal of protective fencing and ground protection will occur only after *all* construction is complete, as there is significant risk to the retained trees due to the proximity to the work.

Where is may be necessary to gain more access at certain times during construction, this will have to be agreed upon in writing with the LPA and supervised by the project arboriculturist.

Activity Prohibited Within or Close to the CEZ

Within the CEZ there must be no fires; no storage of spoil, construction materials or fuel; no mixing of cement or other materials; no installation of services; no excavation; and no level changes.

Close to the CEZ there must be fires; no mixing of cement or other materials; and no storage of fuel or any other harmful substance. Any deviation from these prohibited activities will require consent from the project arboriculturist and/or LPA.

shawyers

Appendix 1: Methodology and Explanatory Notes

Each tree was given an identifying number (tree no.). No tree tags were used because all trees are easily identifiable. The tree genus/species was recorded as the common name.

Tree heights were estimated to the nearest half metre; the stem diameter at 1.5 metres above ground level was carefully measured, rounded up to the nearest 25mm and recorded in the schedule in millimetres.

For the purposes of above ground development constraints, the branch spread was estimated to the nearest half metre at the four major cardinal points and the height of the crown above ground level (crown clearance) was also estimated to the nearest half metre.

The life stage was estimated using the following classifications:

1. Young - Less than 1/3 life expectancy;
2. Maturing/Semi Mature - 1/3 to 2/3 life expectancy;
3. Mature - final third life expectancy; and
4. Over Mature - declining.

The physiological condition was categorised using the following classifications:

1. Good - Good health typical for the species;
2. Fair - Reasonable health with few physiological issues; and
3. Poor - Has significant physiological issues or the tree is in decline.

The structural condition was categorised using the following classifications:

1. Good - Few minor structural defects;
2. Fair - A significant structural defect may be present, or several minor defects; and
3. Poor - A major structural defect is present.

The estimated remaining contribution to the landscape was categorised based on current age, condition and species characteristics.

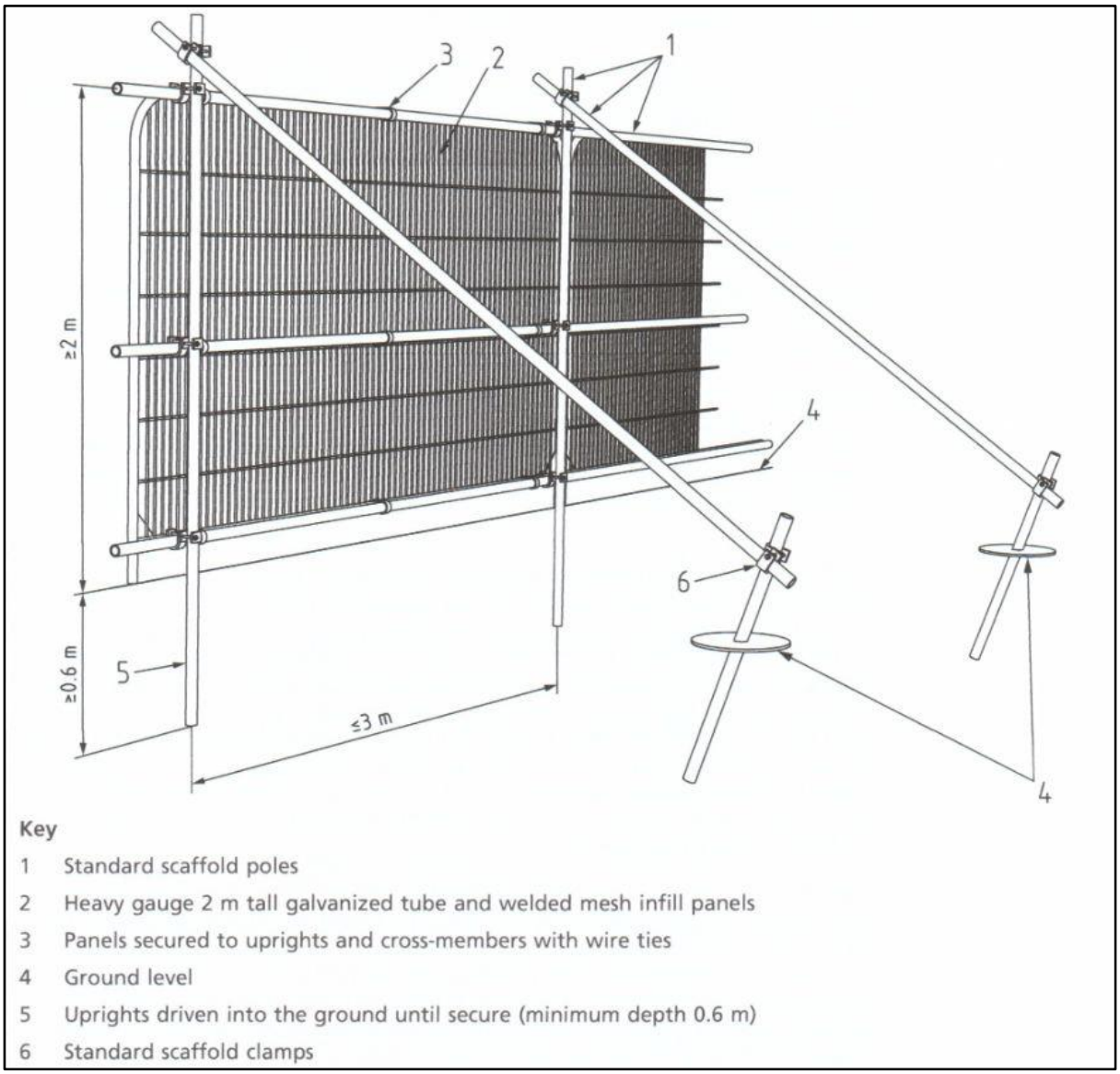
Finally, all trees were categorised as per the Tree Quality Assessment found in BS5837 into A, B, C or U categories. Details of categorisation can be found in BS 5837:2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*.

Trees and vegetation under 75mm stem diameter at 1.5m were not surveyed.

Following the tree survey, root protection areas (RPAs) were calculated using BS5837:2012 Table D1.

The trees and associated data were plotted on the site plan to produce the tree constraints plan.

Appendix 2: BS3857 Drawings



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

Figure A2.1 - Default specification for protective fence (BS3857:2012)

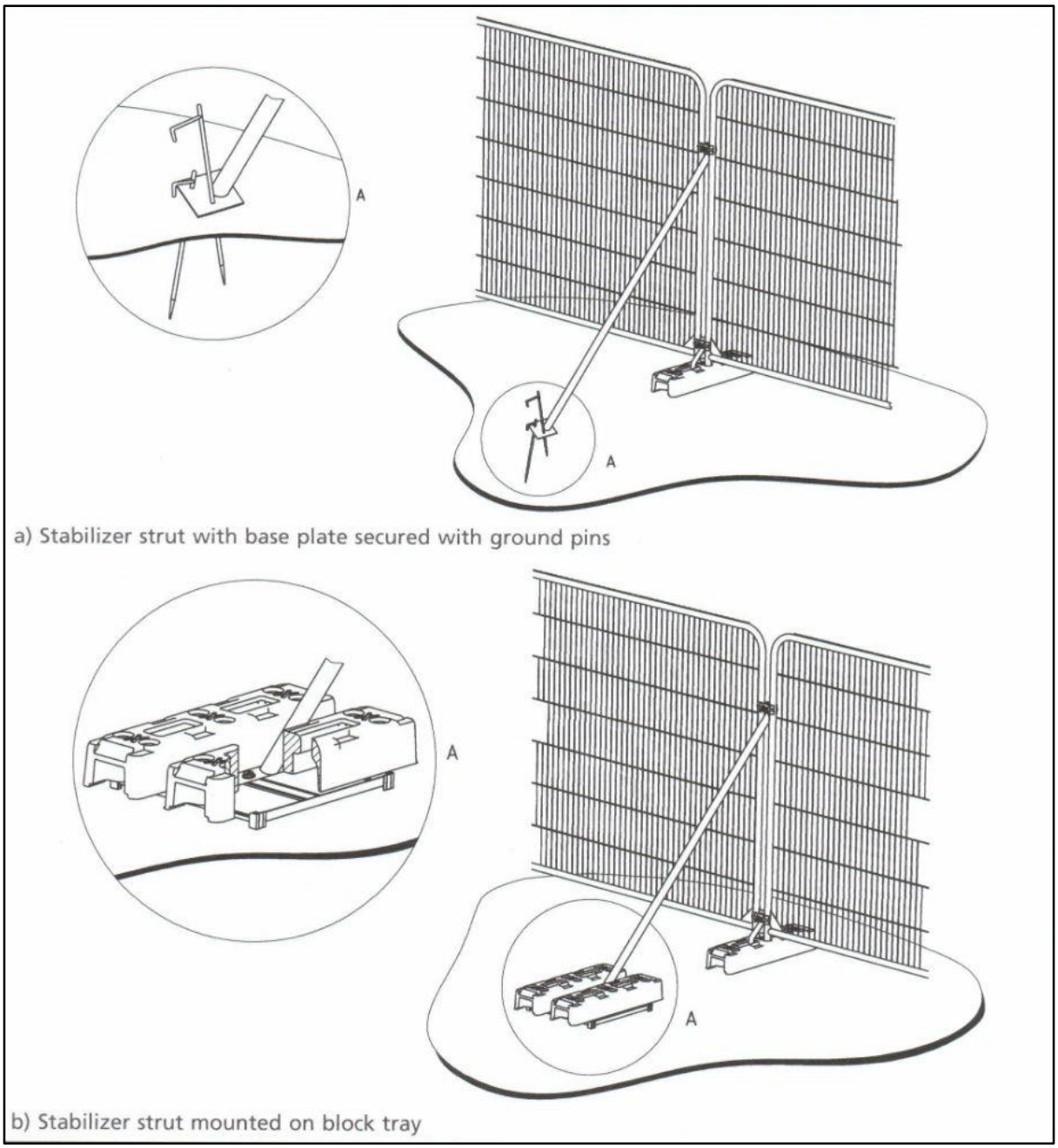


Figure A2.2 - Examples of above-ground stabilizing systems (BS3857:2012)

Appendix 3: References

BRITISH STANDARDS INSTITUTE (2010) ***BS 3998:2010 Tree Work Recommendations*** London: BSI

BRITISH STANDARDS INSTITUTE (2012) ***BS 5837:2012 Trees in Relation to Design, Demolition and Construction Recommendations*** London: BSI

LONSDALE, D (1999) ***Principles of Tree Hazard Assessment and Management*** London: HMSO

MYNORS, C. (2011) ***The Law of Trees, Forests and Hedges (2nd Edn.)*** London: Sweet & Maxwell