

Tree Survey

BS5837:2012

Trees in relation to design, demolition and construction- Recommendations

Client: Lidl UK GmbH
Site: Proposed Lidl Store
Frazer Road
Erith
Date of inspection: 7th March 2017
Weather: Dry and bright
Site condition at time of inspection: Good

Revised 15th March 2017 to reflect client's comments



HRH Design Associates
15 Ravenswood Avenue
Crowthorne
Berks
RG45 6AX

Tel 01344 772551
Fax 01344 7502551

Email hrh@easynet.co.uk

Table of Contents

Page	
3	Introduction
4	Schedule of trees
9	Arboricultural Impact Assessment
10	Arboricultural Method Statement
12	Phasing of Tree Protection Measures
13	Protective Barrier Fencing
14	Ground Protection
15	Monitoring

The Site

The site currently comprises five retail units at Atlas Trade Park and is situated at the corner of Frazer Road and Birch Walk. Industrial premises (Batt Cables plc) are located immediately across Frazer Road to the north and a Wickes store is situated to the east, sharing an access road with the site. A steep bank lies to the rear of the site and is covered by mixed deciduous woodland and scrub. This woodland enjoys the protection of Tree Preservation Order TP/X/93/36 of 1993 and is identified as W3. The site extends to approximately 1.69 acres

Site drawing 5508 BR V01 00 DR A 012010 Rev 11 was produced for this survey together with Topographic Survey 15020/T/02-02 dated June 2015 by EDI Surveys Ltd.

Site: Atlas Trade Estate, Frazer Road, Erith

Date 7/3/17

Reference Number	Species	Height (m)	Stem diameter (mm)	Branch Spread	Existing height above ground level 1. First significant branch 2. Canopy	Life Stage	General Observations	Estimated Remaining Contribution (years)	Category
1	<i>Castanea sativa</i>		#300			Semi mature		20+	B
2	<i>Quercus robur</i>		#150			Young		40+	C
3	<i>Quercus robur</i>		#395			Semi mature		40+	B
4	<i>Quercus robur</i>		#150			Young		40+	C
5	<i>Quercus robur</i>		#300			Semi mature		40+	B
6	<i>Quercus robur</i>		#330			Semi mature		40+	B

Reference Number	Species	Height (m)	Stem diameter	Branch Spread	Existing height above ground level 1. First significant branch 2. Canopy	Life Stage	General Observations	Estimated Remaining Contribution (years)	Category
7	<i>Acer pseudoplatanus</i>		#400			Early Mature		40+	B
8	<i>Acer pseudoplatanus</i>		#400			Early Mature		40+	B
9	<i>Acer pseudoplatanus</i>		#550			Early Mature		40+	B
10	<i>Acer pseudoplatanus</i>		#425			Early Mature		40+	B
11	<i>Acer pseudoplatanus</i>		#425			Early Mature		40+	B
12	<i>Fraxinus</i>		#180			Young		10+	C

Reference Number	Species	Height (m)	Stem diameter	Branch Spread	Existing height above ground level 1. First significant branch 2. Canopy	Life Stage	General Observations	Estimated Remaining Contribution (years)	Category
13	<i>Fraxinus</i>		#200			Young		10+	C
14	<i>Quercus robur</i>		#300			Semi mature		40+	B
15	<i>Quercus robur</i>		#330			Semi mature		40+	B
16	<i>Quercus robur</i>		#310			Semi mature		40+	B
17	<i>Fagus sylvatica</i>		#270			Semi mature		40+	B
18	<i>Quercus robur</i>		#300			Semi mature		40+	B

Reference Number	Species	Height (m)	Stem diameter	Branch Spread	Existing height above ground level 1. First significant branch 2. Canopy	Life Stage	General Observations	Estimated Remaining Contribution (years)	Category
19	<i>Quercus robur</i>		#300			Semi mature		40+	B
20	<i>Quercus robur</i>		#490			Semi mature		40+	B
21	<i>Quercus robur</i>		#500			Semi mature		40+	B
22	<i>Quercus robur</i>		#400			Semi mature		40+	B
23	<i>Quercus robur</i>		#400			Semi mature		40+	B
24	<i>Quercus robur</i>		#300			Semi mature		40+	B

Reference Number	Species	Height (m)	Stem diameter	Branch Spread	Existing height above ground level 1. First significant branch 2. Canopy	Life Stage	General Observations	Estimated Remaining Contribution (years)	Category
25	<i>Quercus robur</i>		#500			Semi mature		40+	B

Arboricultural Impact Assessment

The proposed site plan, tree locations, tree categories and Root Protection Areas (RPAs) are detailed on accompanying Drawing No 1221 Lidl Lawrence Erith Tree Constraints Plan.

- The woodland within which the trees are located enjoys the protection of Tree Preservation Order TP/X/93/36 of 1993 and is identified as W3, one of seven woodland groups covered by the TPO and forming a wooded buffer zone between A206 Frazer Road and A220 Bexley Road.
- The trees were inaccessible behind a chain link fence. The author has therefore used the indicated trunk diameters of each tree in the Topographic Survey together with visual estimates to calculate the RPAs.
- The western end of the TPO area consists of *Betula* saplings and the lower part of the slope is occupied by gorse, buddleia and brambles.
- The proposed site layout seeks to incorporate an additional seven car parking spaces (nos 12-18) by means of cutting back the bank. This will necessitate the removal of tree numbers 3, 4, 5, 6, 9, 10, 11 and 12.
- The new store will be set back from the position of the current building and it is proposed that the bank behind the store be cut back to achieve this. This will conflict with the RPA of tree number 22 and it is therefore recommended that this tree be felled.
- In order to avoid the possibility of future conflict with the building or damage to branches during construction, it is recommended that the canopies of tree nos 16,18, 19 and 24 be reduced by to achieve a distance from the building of 3 metres.
- The proposed position of the retaining wall will be situated outside the RPA perimeters of tree numbers 1, 2, 7, 8, 13, 16, 18, 19, 20, 21 and 24. It is recommended that a ribbed root barrier be installed behind the wall to direct future root growth downward.
- It is proposed that nine feathered *Quercus robur* 175-200cm high be planted in mitigation. Two trees would be planted within the site boundary behind car park spaces 12-18 in order to reinforce the tree line when viewed from Frazer Road. The remainder would be planted between the *Betula* saplings, which would form a nurse crop for the longer lived *Quercus* species.

Tree Protection

Tree locations, Root Protection Areas, Construction Exclusion Zones and positions of Protective Barrier Fencing are detailed on accompanying Drawing No 1022 Lidl Erith Tree Protection Plan.

Arboricultural Method Statement

General

During the entire development process, the following sequence of events must be adhered to in order to ensure the phased security and protection of retained trees:

- a) A pre-commencement site meeting shall take place before any work takes place on site between the owner/manager, contractor and the arboricultural consultant outlining the principal measures for tree protection and ensuring that every person who acts within a root protection area (RPA) is fully aware of the importance and legality concerning a breach of planning conditions and/ or statutory protection of trees.
- b) All trees to be retained shall be marked by either the Consultant or the Landscape Architect before any tree work or felling commences.
- c) All tree work or felling shall be undertaken by a professional and specialist arboricultural contractor who has the appropriate experience and insurance cover.
- d) For the purpose of the development phase, the RPAs shall be actively recognized as construction exclusion zones (CEZ).
- e)
 1. The Consultant shall monitor any excavation within a CEZ;
 2. All materials and construction equipment are to be stored outside the CEZ in a location agreed between the site owner/manager, contractor and the Council;
 3. No fires shall be lit within 10m of any tree or within any CEZ;
 4. Demolition of hard surfacing within the RPAs shall be carried out by means of a hand operated machinery and in strict accordance with the guidance set out in NJUG publication No 10- Regulations (1995);
 5. There is to be no digging, by hand or machine, not authorized by this AMS, no mechanical scraping, no storage of plant and/or materials, no handling, discharge or spillage of any chemical substances toxic to trees (inc cement washings), no action likely to cause localized water logging, no change in ground levels not authorized by this AMS, no construction of a hard surface not authorized by this AMS, no earthworks;
 6. No materials, machinery, signage or site office/toilet shall be attached to trees;

7. The trees shall NOT to be used to “prop” materials or machinery up against.
- f) once the Consultant is satisfied that works within the RPAs are completed, the ground protection can be removed and the protective barrier fence (PBF) can be erected
 - g) remaining construction can take place as per the constraints outlined in (f) maintaining limitations of extra heavy machinery (>40tonnes) breaching the RPAs
 - h) once the consultant is satisfied that all works on site are completed, the PBF can be removed
 - i) All soft landscaping works can then be undertaken, but with due regard for the statutory protection still applying to retained trees.

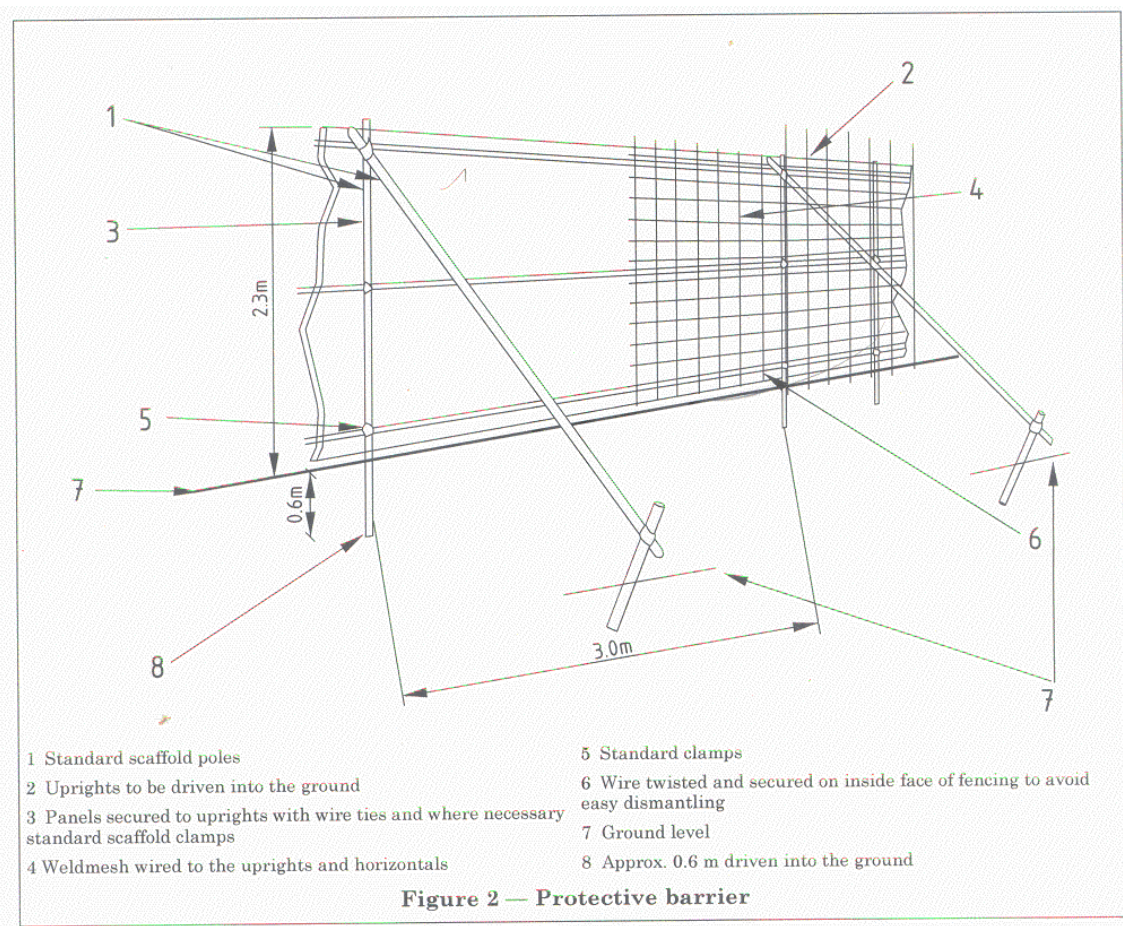
Phasing of Tree Protection Measures

1. Carry out tree felling and tree works to include reduction of canopies to behind the line of proposed retaining wall.
2. Erect Protective Barrier Fence (PBF) as indicated in 1022 Lidl Erith Tree Protection Plan (TPP).
3. Removal of the lower bank shall be carried out from outside the TPO area with no intrusion into the RPAs of retained trees There shall be no changes to soil level between the retaining wall and the retained trees.
4. Ribbed root barriers (ReRoot 1000 or similar approved) shall be installed behind the retaining wall as indicated in the TPP in order to direct future root growth downward.
5. Protective Barrier Fence shall be dismantled on completion of all construction works.
6. Mitigation planting shall then take place.

Protective Barrier Fencing

The PBF will be in place to ensure that no materials/ machinery/etc is “propped” against the tree stems and that no excavation can be undertaken adjacent to and within their main anchorage/ fibrous rooting volume.

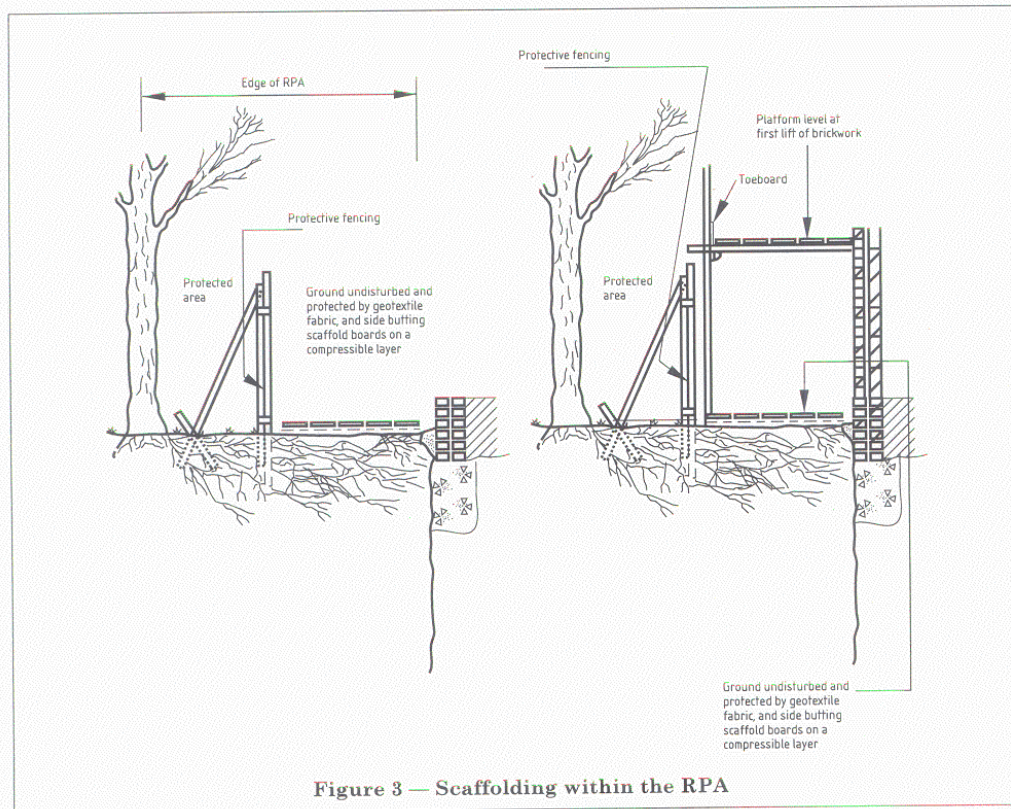
The PBF will be constructed in accordance with the Standard. It shall be constructed from a vertical and horizontal framework of scaffold poles, well braced to resist impact, with vertical tubes spaced at a maximum interval of 3.0 metres. Weldmesh panels are to be securely fixed to this framework with wire or scaffold clamps. Weldmesh panels on rubber or concrete feet should not be used, as they are not resistant to impact. PBF positions are shown in Drawing No 1222 Lidl Erith Tree Protection Plan. Should the PBF become damaged or its function become impaired, all works in the vicinity shall cease until it has been reinstated or repaired.



No distance is given for a protective fence barrier where the report recommends removal of individual specimens.

Ground Protection

This will be implemented in accordance with the Standard “for pedestrian movements within selected areas of the RPA the installation of ground protection in the form of single thickness of scaffold boards on top of a compressible layer laid onto geotextile.



Monitoring

The Consultant shall be required to catalogue visits to the site (and any additional visits that might arise) and shall report any breach of planning conditions relating to the AMS to the Council immediately

It is recommended that, subject to written Local Authority approval of this report; all agreed works to the trees should be carried out before the commencement of construction works on the site.

Henrietta Simpson CHort, MI Hort AMLI

Landscape Architect

Date: 14th March 2017

Rev: 15th March 2017 as client's comments