Landmark Trees

ARBORICULTURAL METHOD STATEMENT

Proposed Lidl Store

Former Hayes Swimming Pool Site

Botwell Lane

Hayes

Middlesex

REPORT PREPARED FOR:

Lidl UK

London North Property Office

4-14 Blackbird Hill

Wembley

London NW9 8SD

REPORT PREPARED BY:

Adam Hollis

MSc ARB MICFor FArbor A MRICS C Env

Ref: LUK/BLH/AMS/01d

Date: 23rd July 2014

Contents

Appendices

1.0 Introduction

1.1 Purpose & Use of the Method Statement

1.1.1 This outline method statement has been prepared for Lidl UK for assistance with the discharge of future planning conditions at the former Hayes swimming pool site, Botwell Lane, Hayes, Middlesex. The document will address precautions to minimise damage to trees, specifically the avenue of London plane trees on Central Avenue.

1.1.2 This document lays down the methodology for any proposed works that may have an effect upon the trees on and adjacent to the site. It is essential within the scope of any contracts related to the development proposals that this method statement is observed and adhered to. It is recommended that this document form part of the work schedule and specification issued to the building contractors and can be used to form part of the contract.

1.1.3 Copies of this document will be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the arboricultural consultant is replaced.

1.2 Terms of Reference

1.2.1 We (LT) are instructed by the client, Lidl UK to prepare a method statement for proposed development based on the above planning application with reference to BS 5837:2012 Trees in Relation to Design, Demolition and Construction.

1.2.2 For this purpose, the client has supplied us with a site lay-out plan (03 Topographical Survey) and the current proposals plan (3176 108K Site layout 1407). We are also reliant upon our own impact assessment report LUK/BLH/AIA/01d and plan overlays of tree constraints contained therein.

1.3 Development Proposals & Potential Impacts

1.3.1 The principal primary impacts in the current proposals are the felling of 7 trees, comprising 2 category B trees, 5 category C trees; 2 further category U trees are also to be felled under the proposals, although are already recommended for felling under good arboricultural practice, therefore the removal of these dead/poor quality trees should not be rated an impact. All remaining primary impacts relate to the new access, new hardstanding/removal of old hardstanding, where mitigation is available to reduce the theoretical potential. The most significant impacts relate to the potentially high cumulative impacts to category B trees T9 and T11 from lowering the existing surfaces to create the access, combined with the removal/replacement of existing hard surfacing. With manual removal of the existing surfacing and careful supervision combined with pre-emptive root pruning during the lowering of the existing pavement, the impacts can be mitigated. Further high theoretical impacts from the

removal/replacement of existing surfaces alone occur within the RPAs of T5 & T7, in addition to medium impacts to T3, T13, T15 & T17. These will require the careful removal of existing hard surfaces, with the use of no-dig construction and porous replacement surfacing, either using the existing sub-base or with a construction technique such as 'Cellweb'. The remaining impacts are either low (T4, T6, T20 & T32) or very low impacts (T8, T12, T14, T16 & T33). These too can be mitigated further as above.

1.3.2 Further impacts to retained trees comprise the potential need to crown-lift T11, T15, T32 and T33 to facilitate development (T11, T32 and T33 are off-site street trees therefore third party permission will be required). Secondary impacts comprise minor organic deposition (including leaves/honey dew) on to cars and car parking spaces, with some shading. Given that car parking should be short term only, the impact should be minimal; some shading may be beneficial.

1.3.3 Services will also proceed through these protected areas under supervision, adopting the NJUG provisions for hand-digging and trenchless techniques. There will be a number of lamp posts which located within the RPA of T3, T4, T5, T9, T11 and T17. These will be positioned with trial pits excavated by hand, with pre-emptive root pruning under arboricultural supervision. Where a mass of significant roots are found within a pit, it will be relocated to minimise the potential impact.

1.4 Sequence of Works

1.4.1 The sequence of works will be as follows:

- initial tree works – felling, stump grinding and pruning for working clearances
- installation of Tree Protection Barrier (TPB) & ground protection
- demolition of hard landscaping
- installation of supplementary ground protection
- installation of underground services
- main construction
- removal of TPB
- soft landscaping

These works and their arboricultural implications are outlined in sequence below

1.5 Site Supervision

1) Site supervision – an individual e.g. the Site Agent, must be nominated to be responsible for all arboricultural matters on site. An agent must be nominated for each phase of work, if demolition and construction contracts are to be awarded separately. The agent(s) must:

- be present on site for the majority of the time

- be aware of the arboricultural responsibilities - to this end, a site briefing / meeting between the agent and arboricultural consultant must be held before the commencement of each phase of works.
- have the authority to stop any work that is causing, or has the potential to cause harm to any tree
- be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of the failure to observe these responsibilities.
- Make immediate contact with the local authority and/or a retained arboriculturalist in the event of any tree related problems occurring, whether actual or potential.
- Contact details for Landmark Trees are provided on the cover to this report.
- Contact details for the Local Authority Tree Officer are as follows:

  Trevor Heaps
  Tree and Landscape Officer
  London Borough of Hillingdon
  3N/02,Civic Centre,
  High Street
  Uxbridge UB8 1UW

  E-mail: theaps@hillingdon.gov.uk
  Telephone: 01895 250230

1.6 Site Monitoring

1.6.1 Landmark Trees are to be retained as Arboricultural Consultants responsible for site monitoring for the duration of the development. Key personnel are in the main Adam Hollis MSc (Arb) and occasionally James Bell Tech Cert, subject to any new staff intake. Site monitoring will be undertaken by a qualified and experienced arboriculturalist at pre-determined and agreed time intervals.

1.6.2 The arboriculturalist will arrive at the site, check in at the site office and be safely escorted around the site by the site agent, checking the maintenance of tree protection measures. Routine visits will generally be unannounced. However, the arboriculturalist will also visit subject to advance notification and agreement to supervise any agreed works within the RPA.

1.6.3 Monitoring will involve a schedule of routine visits (monthly for the first 6 months and quarterly thereafter, including both site-setup and sign-off inspections) and reports to ensure contractor compliance with tree protection measures and to provide ongoing liaison with all personnel involved in the site development (including the LPA). Any defects requiring rectifying must be notified to the Site Agent and the Client and copied to the LPA by email. Emergencies will be notified to the LPA by phone. Appropriate records will be kept and be made available to the LA if required to show evidence of site monitoring (Appendix 3).

1.6.4 Supervision will not require the arboriculturalist to be present throughout all operations to ensure tasks are carried out as per the approved methodology, but certainly, during the key elements of

proposed (and any other unplanned) incursions into the protection areas (subject to LPA agreement and for whatever reasons). Such supervision would require the arboriculturalist to attend site, if not the whole task, to ensure the arboricultural objectives were met. However, where tasks are ongoing, provided the arboriculturalist is satisfied, and after an appropriate briefing, the supervision may be reduced to telephone and email contact between the site foreman/ contractor and arboriculturalist.

1.6.5 The specified frequency of visits is fortnightly for the first three months and monthly thereafter. In addition, a site logbook will be kept by the Site Agent to record all stages of the development from the installation of the fence protection, to daily checks of the fencing through to the completion of the project. This should be made available to the LA if required to show evidence of site monitoring. Site monitoring should include:

- Pre-Development Site Inspection (S.2.3)
- Construction Site Agent Briefing (S.1.5)
- Installation of site facilities (S.3.3)
- Demolition of hard surfaces / structures within RPA's (3.6)
- Construction of new of hard surfaces / structures within RPA's (3.7)
- Site completion meeting (S.5)

1.6.6 The LPA's Arboricultural Officer will have free access to the site and report on any problem areas directly to the developer's Project Arboriculturalist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure implementation. A final sign-off visit will be carried out at the end of the development and a formal letter sent to both the client and LPA indicating an end to the monitoring period. It is the client's duty to notify LT that the project has been completed, in order to facilitate such an inspection.

1.6.7 N.B. Landmark Trees will only be responsible for providing monitoring in so far as they fully instructed to do so and regularly paid for such services by the client. In the absence of routine payment (as per our business terms), routine monitoring will cease (temporarily or permanently) and the LPA will be informed of the cessation of monitoring. The client will also reserve the right to dismiss Landmark Trees and replace with another arborist, but must inform the LPA.

1.7 Statement Adoption

1.7.1 It is recommended that, in due course, acceptance of the recommendations in this report is demonstrated by, for example, the architect specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of observation of such recommendations have been priced in. If conflicts between any part of a tree and the

building(s) arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflect poorly on the construction and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

2.0 Pre- Development Site Preparation

2.1 Arboricultural Works

2.1.1 All works must be carried out by a competent arborist in accord with BS 3998: 2010 and any other prevailing good professional practice.

2.1.2 Specific works recommended to facilitate development are the removal of trees T10, T21, T22, T23, T24, T28 and T29, with category U trees T26 & T27 (hazardous) to be removed on grounds of good husbandry. Pruning works include the potential need to crown-lift T11, T15, T32 and T33 to facilitate development. These specific works to facilitate development and any other husbandry works are listed in Appendix 1, including those that have been recommended for the off-site trees (mainly street trees that are not owned by Lidl UK).

2.2 Installation of Tree Protection Barrier

2.2.1 Tree Protection Barriers [TPB] comprising mainly steel mesh panels of 2.4m in height ('Heras') should be erected to protect trees near buildings to be demolished on site. These panels will be mounted on a scaffolding frame as shown in Figure 1 below (this is also Figure 2 of BS5837: Trees in Relation to Design, Demolition and Construction in paragraph 6.2.2.2). Individual boxed hording will also be required to protect T9 during the construction of the new access.

2.2.2 These TPBs are to be erected before any work commences on site, is to remain 'in situ' undamaged for the duration of all work or each phase, and only to be removed once all work is completed. If any work is deemed necessary prior to the erection of fencing a Landmark Trees representative should be informed to enable their presence to oversee the work being carried out.

2.2.3 The only other exception is the completion of soft landscaping but if any excavations, however minor, are to be carried out as part of soft landscaping within RPAs, an arboricultural assessment must be carried out beforehand and any arboricultural protection measures incorporated. The TPB should carry waterproof warning notices denying access within the RPA.

2.2.4 The Tree Protection Plan in Appendix 5 illustrates where the protective fencing will be located to form the boundary of the Tree Protection Zone (TPZ). The TPZ is an exclusion zone and suitable steps will be taken to prevent access by pedestrians and vehicles and the storage of any works materials and equipment will be located outside of the TPZ.

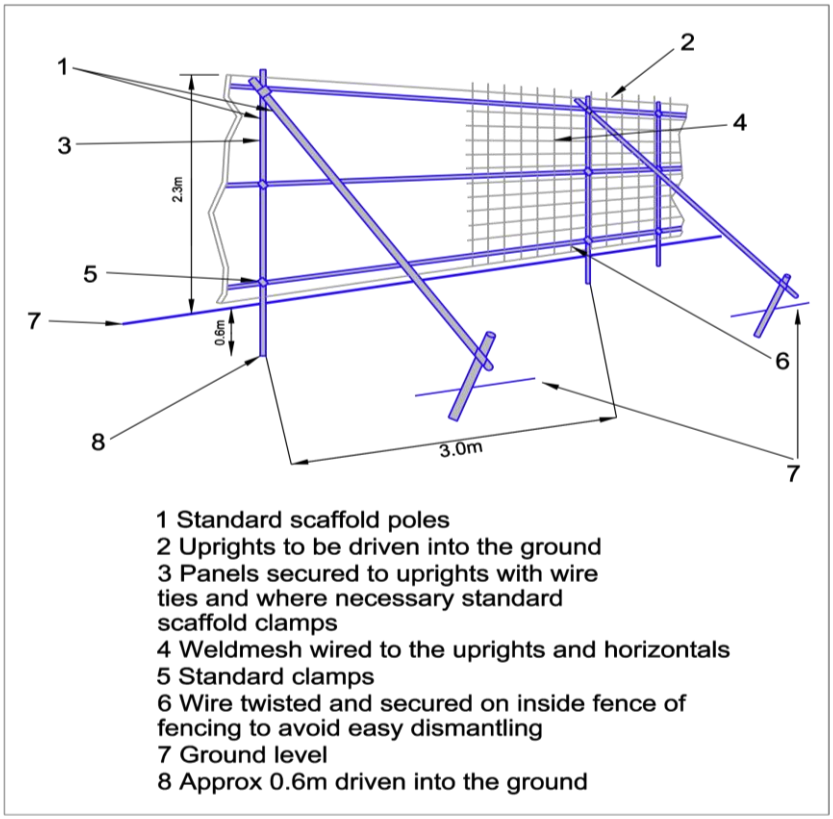


Fig. 1 Tree Protection Barrier Specification

(Source: Figure 2 from BS5837 - Default specification for protective barrier)

2.3 Pre-Development Site Inspection

2.3.1 Upon completion of the tree works and installation of the protection measures, the standard of work can be checked by the retained arboricultural consultant who can then liaise with the local authority. If there are any amendments to either the tree works or additional protection measures, they will be agreed at this meeting and confirmed in writing.

3.0 Development Phase

3.1 The following general precautions will apply:

- No fires shall be made on any part of the site, or within 20m of any tree to be retained.
- No spilling or pouring of fuels, oils, solvents, tar shall be made on any part of the site.
- No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.
- No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
- No storage of materials shall be made within the protective fences.
- No breaching or moving of the protective fences without the approval of an arboriculturist.
- Alterations in levels within the tree protection fence areas shall be avoided.

3.2 Root Protection Areas (RPA)

3.2.1 The Root Protection Area (RPA) is a desirable zone of protection around the trees' rooting system and these have been marked on the plan in Appendix 5. As much as possible, the RPA's will lie within the TPZ and therefore, be fully fenced off. However, this degree of protection is not entirely possible on the site: it is necessary to perform some works (in part) within the RPA i.e. removal of existing hard landscaping, installation of services and construction of new car parking spaces/hard landscaping areas.

3.2.2 All involved parties will need to be made aware of the deficiencies. In these instances, careful and supervised working, as described in sections S1.3, S.3.4 (routing of services) and S.3.6 (demolition of surfaces) and S.3.7 (construction) will be required.

3.2.3 Ground outside the TPZ must be protected from site traffic and not left exposed during construction. As far as practical, existing hard surfaces should be retained as initial ground protection (where fit for purpose for anticipated loading) until the landscaping phase and / or substituted / supplemented with appropriate materials (e.g. Cellweb, Ground Guards etc.), capable of withstanding anticipated loads. **NB the provision of ground protection on plan does not prohibit the consented laying of services and related works in those areas. It means that those operations should proceed under caution and protect adjacent ground to that immediately requisitioned for the work in hand.**

3.3 Site Access, Accommodation & Storage

3.3.1 Site access and accommodation will be as per the layout within our Tree Protection Plan (Appendix 5), making use of the existing access road off Central Avenue. Pedestrian access will run parallel, but separate to vehicular access.

3.3.2 Delivery lorries will be excluded from RPA's by tree protection fencing and ground protection. Adequate allowance must be made for vehicle heights and ground clearance, where tree canopies

overhang access routes. Any further pruning for working clearances must be discussed first with the arboriculturalist; once agreed in principle these works should be approved by the appropriate tree officer and approved in writing by the LPA. Materials can be unloaded onto protected ground within RPA's and stored throughout the interior of the site(s) away from protected trees

3.3.3 Many site activities are potentially damaging to trees e.g. material storage, parking, soil compaction and the use of plant machinery. In this latter example particular care is required to ensure that the operational arcs of excavation and lifting machinery, including their loads, do not physically damage trees in use.

3.4 Routing & Installation of Services

3.4.1 Every effort should be made to ensure that the routing and instillation of services avoid the RPA at the design stage; however if unavoidable then it may be possible, with written permission from the LPA, to implement the provisions of BS5837 and NJUG VOLUME 4 (e.g. radial trenching and /or mole trenching) under arboricultural supervision.

3.4.2 To avoid direct damage to drains, BS5837 recommends minimum distances to be maintained between newly planted trees and drains. These distances vary for different depths of drain (e.g. sewer laterals or mains) and different sizes of trees. See Table 3 below:

Table 3 — Minimum distance (m) between young trees or new planting and structure to avoid direct damage to a structure from future tree growth

Type of structure	Diameter of stem at 1.5 m above ground level at maturity		
	<30 cm	(30–60) cm	>60 cm
Buildings and heavily loaded structures	—	0.5	1.2
Lightly loaded structures such as garages, porches etc.	—	0.7	1.5
Drains and underground services			
<1 m deep	0.5	1.5	3.0
>1 m deep	—	1.0	2.0
Masonry boundary walls[a]	—	0.5	1.0
	—	(1.0)	(2.0)
In situ concrete paths and drives[a]	—	0.5	1.5
	(0.5)	(1.0)	(2.5)
Paths and drives with flexible surfaces or paving slabs[a]	—	0.5	1.0
	(0.7)	(1.5)	(3.0)

[a] These distances assume that some movement and minor damage might occur. Guidance on distances which will generally avoid all damage is given in brackets.

3.4.3 The foundation pits for the proposed lampposts should be positioned using trial pits to determine the root mass within the preferred location. Where these trial pits determine that there is significant rooting mass, the foundation pit will be relocated. Any roots found within a pit will require pre-emptive pruning, with roots over 25mm pruned under arboricultural supervision. Some remedial tree surgery may also be required, although this must be approved by the appropriate tree officer and approved in writing by the LPA.

3.5 Changes in Grade

3.5.1 The upper layer of top soil contains the majority of a tree's roots and if this is disturbed by a reduction in ground level, serious damage can be caused. If ground levels need to be marginally altered within the RPA of any tree, prior agreement must be sought from the Tree Preservation Officer and given in writing by the LPA.

3.5.2 If such soil is to be disturbed within the TPZ / RPA, it will be done only with hand tools and the supervising arborist will be informed if roots are exposed. If the ground level requires raising, this will be achieved using coarse, granular material such as pebbles.

3.6 Demolition Measures.

3.6.1 Demolition/removal of structures within what would otherwise be an RPA will proceed with due caution to avoid unnecessary damage to trees. All plant and vehicles engaged in demolition works/removals will either operate outside the RPA, or work from within the existing built structure and hard standing, near trees. Any existing hard standing within the tree's RPA's will be first broken up with manual power tools and then carefully removed with light plant by a skilled machine operator, either operating outside the RPA, or working from within the existing built structure and hard standing, near trees. Soil exposed beneath the structure will not be scraped away, but preserved in situ and protected immediately (not tracked over) with replacement ground protection (as per para 3.2.1) before the continuance of operations.

3.6.2 If the weather is "dry," the site will be watered down to reduce dust travelling to adjacent properties. Where levels of dust build-up on trees occur, it may be necessary to seek the advice of Landmark Trees on remedial measures, e.g. hose down the tree(s) immediately following any significant accumulation of dust.

3.7 Construction Measures

Detailed method statements and risk assessments will be obtained from all specialist subcontractors involved in the new build and these will be scrutinised by the site agent to ensure the AMS requirements have been considered therein.

3.7.1 Construction materials will generally be delivered on lorries with mechanical off load stored within designated areas away from the trees.

3.7.2 The lowering of the existing pavement to provide the new access will require manual excavation with pre-emptive root pruning under arboricultural supervision if required. The replacement access route and pavement should comprise porous surfaces where possible. The replacement paving/car parking spaces/hard landscaping within RPAs will also require a no-dig construction technique, either using a cellular confinement system with no fines aggregate for the sub-base or simply building upon the existing sub-base without disturbing the ground below. Choice of construction method will initially depend upon root penetration within the existing sub-grade. The key principle is

not to excavate in the presence of roots and to provide a porous surface to promote healthy soil water relations for future root growth. A further consideration in the use of a more expensive cellular confinement system or similar, may be the claimed reduction in risk of possible future slab / surface displacement by roots of trees growing in paved areas.

3.7.3 A sample specification for no-dig construction for the new hard surfaces by the London plane trees T3 – T20, in addition to the lime trees T32 & T33, is given below. NB: use of the 'cell-web' no-dig construction and its impacts (c.150mm rise) will need to be factored into the finished site levels.

i. The Construction should ideally be undertaken between May and October when the ground is sufficiently dry to prevent compaction occurring. The sub-base should be flat, that it to say any small hollows should be filled to bring up to surrounding levels.

ii. Install F4M Geotextile Separation Fabric over levelled ground surface.

iii. The geotextile should be laid out and not trafficked across at any time.

iv. The Cell Web cellular confinement system (e.g. 1 x 100 mm 'Cellweb' Tree Root Protection System for residential car use only and 75mm for pedestrian use only) is laid on the membrane and adjacent panels are stapled together. Place staking pins to maintain 'Cellweb' cells open. The panels should be laid out and worked on sequentially as the contractor progresses across the length of the area. The panels are sequentially filled with the no fines aggregate, each serving as a platform for the next section.

v. There is no need at any time for the ground to be crossed by heavy traffic. The particles/gravel pieces are transported from the parking bay over the freshly-laid confinement system BY WHEELBARROW and installed BY HAND. There will be no trespass on to the RPA beyond the installation of the confinement system itself.

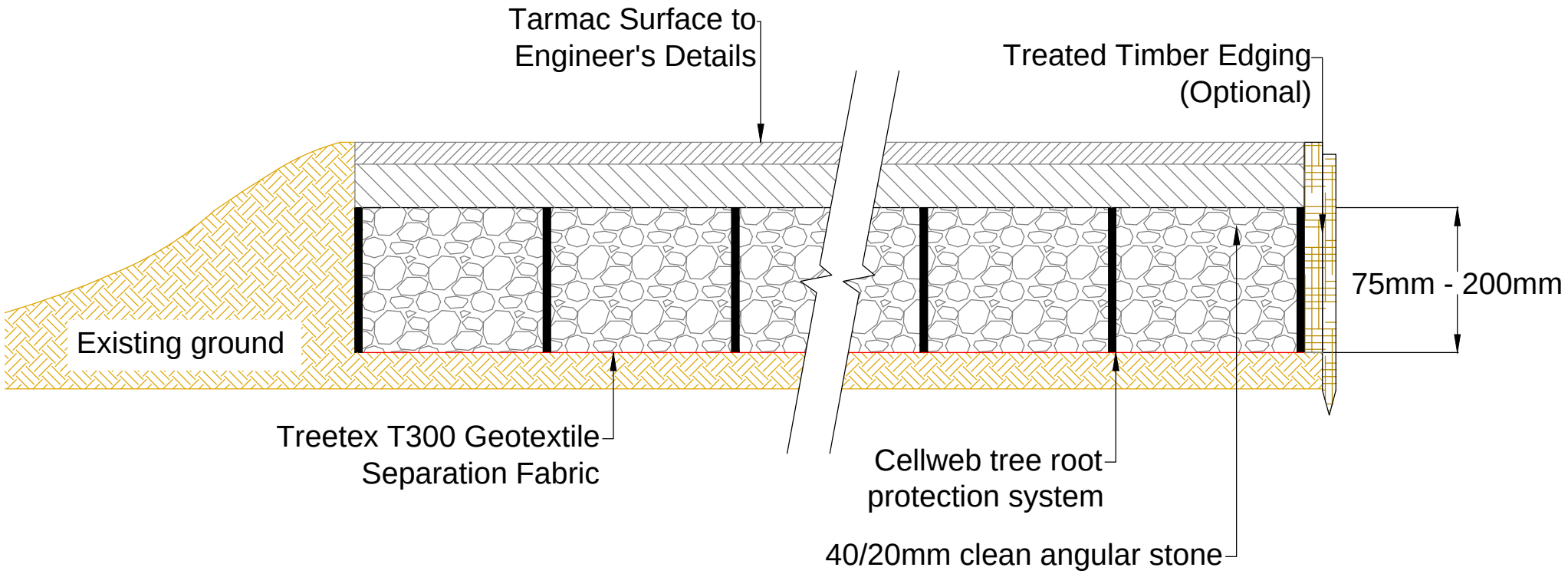
vi. Panels are backfilled with no-fines 20-40mm particle size stone (clean granular fill). The infill can then be rolled to compact the particles and create a tight interlock across the cells.

vii. The finished surface can then be laid on top. Again no fines material to be used, either gravel, dry-set block paving or porous tarmac is preferable; for a gravel finish install further F4M Geotextile separation fabric over 'Cellweb' and place minimum of 50 mm of decorative gravel surcharge (retained with plastic Duobloc grids as necessary).

viii. Install treated timber edging boards as required, fixed to timber pegs at 900 mm centres

3.7.4 See cross-sectional diagram below for further explanation. For technical data on the Geotextile membrane and the Cellweb cellular confinement system always refer to the manufactures guidelines for design and implementation. Further technical advice can be gained from the manufacturer:

'Cellweb' and 'Duobloc' is a trade name of Geosynthetics Ltd
Flemming Road
Harrowbrook Industrial Estate
Hinkley, Leics.
LE10 3DU
Tel. 01455 617139
www.geosyn.co.uk



Geosynthetics Ltd
Fleming Road, Harrowbrook Industrial Estate,
Hinckley, Leicestershire. LE10 3DU
Tel: 01455 617139 Fax: 01455 617140 www.geosyn.co.uk

Project: cellweb-tarmac-standard detail	Description: Cellweb Section - Tree Root Protection c/w Tarmac Surface	*Drawn By:* RDS	*Scale:* NTS	*Date:* 13 September 2012	*Checked By:*
		Ref: ----	*Version:* V1	*Sheet:* page 1 of 1	

3.8 Removal of Ground Protection & Post Construction Landscaping & Treatment

3.8.1 The tree protection may be removed upon completion of the construction phase and when all drainage and service runs have been installed and any site machinery has been removed from the RPA.

3.8.2 Following the developing phase, impacted trees within the site boundary, identified for such treatment, will receive remedial soil remediation treatment: deep root fertiliser / mycorrhizal injection and surface mulching

3.8.3 Any further landscaping works should avoid the changing of ground levels or deep digging. Mechanised cultivation such as tractor-mounted rotovation must not be used within the RPA's of existing trees.

3.8.4 Heavy machinery should not be used in the vicinity of any retained trees.

3.8.5 If herbicides are to be used they should be appropriate to their purpose and not in such a way as to damage any retained trees or vegetation; they must be applied by a suitably qualified person i.e. a holder of a recognised 'certificate of competence'.

3.8.6 Ideally, retained trees should be within a shrub area as this reduces the chances of compaction and disturbance of root systems.

3.8.7 Any new planting schemes adopted should consider aspects of the site such as current design, layout and future use. Consideration should also be given to the soil type, climate and overall character of the landscape.

4.0 Summary of Proposed Methods

4.1 Table of Impacts and Mitigation

4.1.1 The table below summarises the main areas where trees could become damaged by the proposed development and the methods that need to be adopted in order to prevent such damage:

Impact	Mitigation	Reference	Trees Affected
General site access, material storage etc.	Ground protection to acceptable standards.	Paras 2.2.1 & 3.3.3 Tree Protection Plan in Appendix 5	All retained trees
Removal & construction of hard surfaces beneath existing canopy	Tree surgery potentially required	Sections 1.3, 2.1	T11, T15, T32 and T33
Proposed Lampposts within RPAs	Trial pits to determine roots likely to be affected. Relocation of pit where required. Pre-emptive root pruning.	Sections 1.3, 3.5	T3, T4, T5, T9, T11 and T17
Creation of new access	Manual removal of existing surfaces, manual lowering of pavement; pre-emptive root pruning if required; new porous surfaces where possible.	Sections 1.3, 3.6 & 3.7	T9 & T11
Removal of existing hard standings within RPA	Manual power tools and then careful removal with light plant	Section 3.6	T3, T9 – T13
Construction of new hard surfaces in RPA	Use of existing sub-base/"cellweb" Use of cellweb where no existing hard-surface exists	Section 3.7	T3, T9 – T11, T13 T4 – 8, T15 – 17, T20, T32 & T33

5.0 Completion

5.1 Completion Meeting

5.1.1 Following completion of the works listed above, a Landmark Trees consultant will meet with a local authority representative and agree upon any remedial works deemed necessary. It is the client's duty to notify LT that the project has been completed, in order to facilitate such an inspection.

5.1.2 A separate LT post-development tree inspection (with specific reference to trees identified in the Appendix 1 schedules) is recommended to facilitate a constructive meeting and to monitor the health of some of the more senescent trees on site.

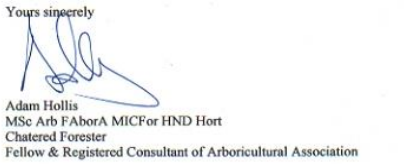
5.1.3 Any works agreed in the above meeting will be confirmed in writing and will be performed to BS 3998: 2010 Tree Works.

5.1.4 Landmark Trees recommend that any work proposed post development is checked to avoid penalty for performing illegal work on a protected tree.

5.1.5 It is recommended that, in due course, acceptance of the recommendations in this report is demonstrated by, for example, the architect specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of observation of such recommendations have been priced in.

5.1.6 If conflicts between any part of a tree and the building(s) arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflect poorly on the construction and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

Signed



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Adam Hollis MSc ARB MICFor FArbor A

23rd July 2014

For and on behalf of ***Landmark Trees***

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Landmark Trees is the trading name of Landmark trees Ltd. Registered in Wales. Reg No. 3882076

Appendix 1: Arboricultural Works

Notes for Guidance:

1, 2, 3 - Urgent (ASAP), Standard (within 6 months), Non-urgent (2-3 years)
RP - Pre-emptive root pruning of foundation encroachments under arboricultural supervision.
CB - Cut Back to boundary/clear from structure.
CL# - Crown Lift to given height in meters.
CT#% - Crown Thinning by identified %.
CCL - Crown Clean (remove deadwood/crossing and hazardous branches and stubs).
CR#% - Crown Reduce by given maximum % (of outermost branch & twig length)
DWD - Remove deadwood.
Fell - Fell to ground level.
FInv - Further Investigation (generally with decay detection equipment).
Pol - Pollard or re-pollard.
Mon - Check / monitor progress of defect(s) at next consultant inspection which should be <18 months in frequented areas and <3 years in areas of more occasional use. Where clients retain their own ground staff, we recommend an annual in- house inspection and where practical, in the aftermath of extreme weather events.
Svr Ivy / Clr Bs - Sever ivy / clear base and re-inspect base / stem for concealed defects.

Landmark Trees Ltd
Tel: 0207 851 4544

Recommended Tree Works

Hide irrelevant | Show All Trees

Site: Proposed Lidl Store, Botwell Lane, Hayes, Middlesex UB3 2BN

Surveyor(s): Adam Hollis

Date: 22 July 2014

Ref: LUK/BLH/AMS

Tree No.	English Name	Height	Stem Diameter	Crown Spread	Recommended Works	Comments/ Reasons
1	Oak, English	15	1040	8966	DWD FInv Climbing inspection	Small amount of bark loss in crown Major dead wood / stubs Advisable for good arboricultural practice
2	Plane, London	16	600	6666		Restricted rooting / FP heave T's 1-20 all high CL'd to 6m+ with slight etiolation of limbs
3	Plane, London	16	700	8378.	FInv	Tight in corner of hard surfaces. Cavity visible in pruning wound in crown break to N Some damage to path. Slight lean to road. All planes CL'd 6m+ Advisable for good arboricultural practice
4	Plane, London	15	520	4374	DWD	Deadwood (minor) thoughout crown Hung-up (detached) branches In macadam close to road. Heave to fp. Competes with tree behind Advisable for good arboricultural practice
5	Plane, London	16	580	4447	DWD	In grass. Slight lean towards path. 50mm x 6m dead branch W 7m abg Advisable for good arboricultural practice
6	Plane, London	15	500	4576		Leaf growth a bit thin in places. Heave to path
7	Plane, London	16	570	4477	FInv	A sparser than normal canopy Entry wounds on trunk Cavity visible in pruning wound in crown break to N Advisable for good arboricultural practice
8	Plane, London	14	450	5282	FInv	A sparser than normal canopy Significant break out wounds in crown with decay inside Advisable for good arboricultural practice
9	Plane, London	16	640	6566		A sparser than normal canopy Entry wounds on trunk
10	Plane, London	16	540	5556	Fell	Bit sparse on roadside. Slight lean to road. Entry wounds on trunk Heave to footpath Recommended to facilitate access

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Recommended Tree Works

Hide irrelevant | Show All Trees

Site: Proposed Lidl Store, Botwell Lane, Hayes, Middlesex UB3 2BN

Surveyor(s): Adam Hollis

Date: 22 July 2014

Ref: LUK/BLH/AMS

Tree No.	English Name	Height	Stem Diameter	Crown Spread	Recommended Works	Comments/ Reasons
11	Plane, London	16	690	6	CL4 Third party street tree therefore permission will be required.	Recommended to facilitate development
12	Plane, London	16	440	2424	FInv	Suppressed by nearby tree Entry wounds on trunk Cavity visible in pruning wound in crown break to E Advisable for good arboricultural practice
13	Plane, London	16	530	5336	DWD	Deadwood throughout crown Entry wounds on trunk Advisable for good arboricultural practice
14	Plane, London	12	410	4444	DWD	Slight lean to the road. Deadwood throughout crown Suppressed Advisable for good arboricultural practice
15	Plane, London	16	510	5556	CL	Recommended to facilitate development
16	Plane, London	12	430	5353	DWD	Deadwood through crown long dead branch above fp Advisable for good arboricultural practice
17	Plane, London	15	570	5555	FInv	Slight lean Significant break out wound W in crown with decay inside Advisable for good arboricultural practice
18	Plane, London	16	480	3383	Mon	Bit sparse, slight lean to the road Entry wounds on trunk Advisable for good arboricultural practice
19	Plane, London	16	570	6565		Main growth side towards road Deadwood (minor) Pavement heave
20	Plane, London	16	650	5666	FInv	Entry wounds on trunk Included bark in branch unions Canker in bases of limbs just above main fork & over FP Advisable for good arboricultural practice
21	Cherry, Wild (Gean)	10	290	4	Mon	Cankered base with resin bleed Advisable for good arboricultural practice

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Tree No.	English Name	Height	Stem Diameter	Crown Spread	Recommended Works	Comments/ Reasons
22	Whitebeam	11	330	6555		Included bark in branch unions Co-dominant limbs
23	Maple, Field	9	350	4	Fell	Dense growth Recommended to facilitate development
24	Birch, Silver	9	260	4456	Fell	Thinner on the side of the Maple Recommended to facilitate development
26	Ash, Common	9	410	6	Fell	Decay at trunk base Mechanical damage to base Minor dieback in top Advisable for good arboricultural practice
27	Plum	6	550	4242	Fell Remove	Decay at trunk base (Phellinus) Advisable for good arboricultural practice
28	Birch, Himalayan	10	330	4444	Fell	A tree with insignificant defects Recommended to facilitate development
29	Sycamore	14	490	4444	Fell	Recommended to facilitate development
30	Chestnut, Horse	10	670	5555	FInv	Decay in trunk Die-back in crown Fork at 3m, next to road Advisable for good arboricultural practice
32	Lime, Caucasian	10	430	5	DWD CL Crown lift recommended to facilitate development - 3rd party street tree therefore permission required	Hung-up (detached) branches Dense habit Included bark in branch unions Recommended to facilitate development
33	Lime, Common	12	470	5	CL Crown lift recommended to facilitate development - 3rd party street tree therefore permission required	Included bark in branch unions Recommended to facilitate development

Appendix 2: General Guidelines

3.1 All work must be to BS 3998:2010 - '*Recommendations for tree work*'.

3.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and will be covered by adequate public liability insurance.

3.3 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the consultant's attention immediately.

3.4 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this method statement are carried out under the supervision of a Landmark Trees consultant.

3.5 It is advisable to have trees inspected by a consultant regularly. On this site it is recommended that these inspections are made every year.

Appendix 3: Sample Site Monitoring Sheet

Landmark Trees

Site Monitoring Report Sheet

Client:		**Planning Ref:**	
Local Authority:		**Date:**	
Site Address:			
Proposal:			

Visit Checklist	**Y/N**		**Y/N**
Tree protection barrier (TPB) in place		TPB as per approved	
Ground protection (GP) in place		GP as per approved	
TPB / GP breached		Trees damaged	
Site Agent briefed by LT			
LT briefed by Site Agent			
LPA informed			
Remedial action required			

Comments

Recommendations

Outcome		
1		
2		
3		
4		

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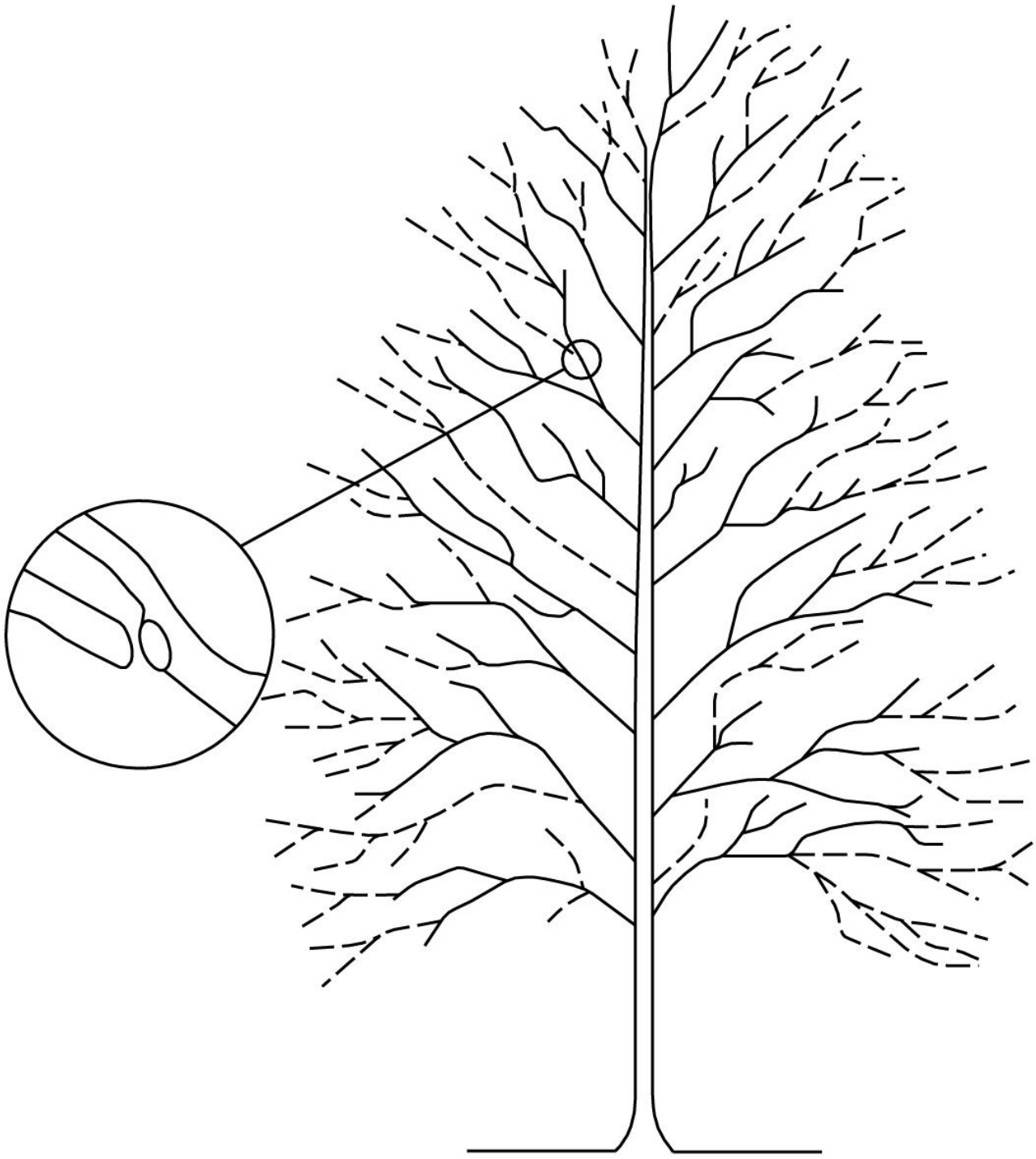
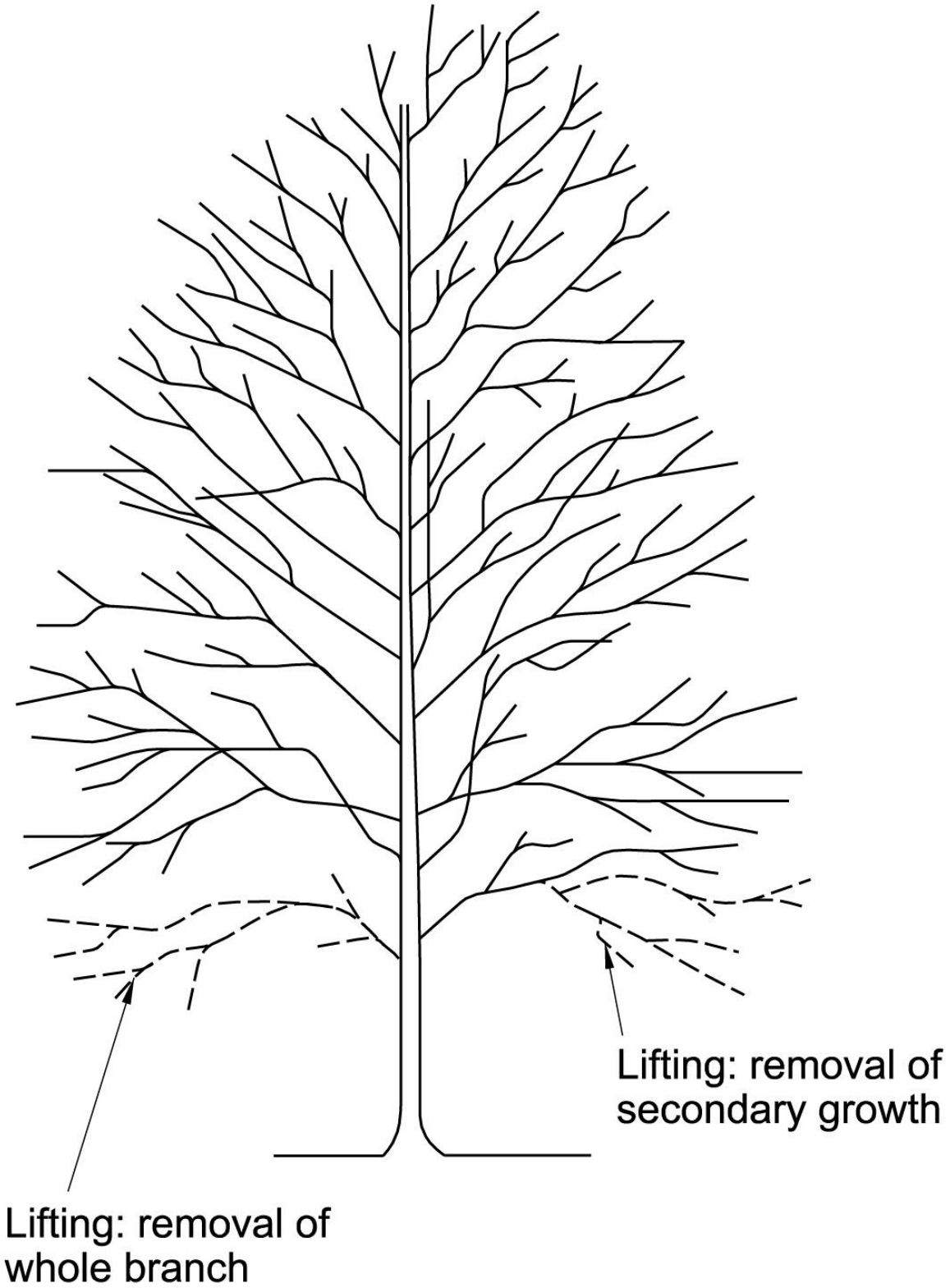
Registered Office: Grange Cottage, All Cannings, Devizes, Wiltshire, SN10 3NR

Appendix 4: Indicative Pruning Guidelines



NOTE: Branches pruned back to suitable outward pointing bud or small branch.

REDUCING THE CROWN



CROWN LIFTING

Appendix 5: Tree Protection Plan

CHURCH RO

BUS STOP

BOTWE

GOLDEN CRE

WIELD ROAD

BOTWELL LANE

CENTRAL AVENUE

Delivery store

6230

23850

58000

Warehouse

Video

Toilets

Wellbe

Office

Utility

Dis

wc

wc

wc

Plant

Sales

Bakery

Freezer

Warehouse

3 covered cycle stands
to accommodate 6 bicycles

28 Birch B

33 Lime B2

32 Lime B

26 Ash U

27 Plane

22 Whitebeam C

23 Maple C2

24 Birch C2

29 Sycamore C2

30 Chestnut C/u2

25 Cherry C2

20 Plane A

21 Plane B2

Oak

3 Plane B

4 Plane B2

5 Plane B2

6 Plane B2

7 Plane B2

8 Plane B2

9 Plane B2

10 Plane B2

11 Plane B2

12 Plane C2

13 Plane B2

14 Plane B2

15 Plane B2

16 Plane B2

17 Plane B2

18 Plane C2

19 Plane B2

NOTE:

This survey is of a preliminary nature. The trees were inspected from the ground only on the basis of the Visual Tree Assessment method. No samples were taken for analysis. No decay detection equipment was employed. The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.

Branch spread in metres is taken at the four cardinal points to derive an accurate representation of the crown.

Root Protection Areas (RPA) are derived from stem diameter measured at 1.5 m above adjacent ground level (taken on sloping ground on the upslope side of the tree base).

Landmark Trees

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Site: Lidl Hayes	1-200@A0
Drawing Title: Arboricultural Impact Assessment	July 2014

Key:

- Category A High Quality
- Category B Good Quality
- Category C Moderate Quality
- Category U Trees Unsuitable for Retention

Category — Crown Spread
Root Protection Area — Tree Number, Species, Category (3 Birch B2)

- Tree Proposed for Removal to Facilitate Development
- Tree Proposed for Removal for Health & Safety Reasons
- Precautionary area: assumed no-dig construction. All excavation subject to arboricultural supervision; limits of which to be hand-dug; hard-surfacing retained as ground protection where practicable
- Tree Protection Fencing

N