LIDL: HILLINGDON, FREEZELAND WAY, UXBRIDGE

Tree Survey Report and Arboricultural Impact Assessment

JSL5163_770
Tree Survey Report and Arboricultural Impact Assessment
B
24 March 2025

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Quality Management

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Contents

1 INTRODUCTION....1
2 SITE LOCATION....2
3 SURVEY METHOLDOLOGY....3
4 APPRAISAL AND RECOMMENDATIONS....6
5 ARBORICULTURAL IMPACT ASSESSMENT....8
6 TREE PROTECTION MEASURES....10
7 CONCLUSION....11

Appendices

Appendix A Tree Constraints Plan JSL5163_700
Appendix B Tree Protection JSL5163_710
Appendix C Tree Survey Schedule JSL5163_750
Appendix D Site Photographs
Appendix E Arboricultural Glossary

1 INTRODUCTION

1.1 This Tree Survey and Arboricultural Impact Assessment (AIA) has been prepared by RPS on behalf of Lidl Great Britain Limited to support the application for a proposed new Lidl Superstore located northwest of the crossroads of Freezeland Way and Long Lane, Hillingdon, Uxbridge.

1.2 A tree survey of the application area was carried out by RPS on the 15th May 2024 in accordance with the requirements of BS5837:2012. Refer to the Tree Constraints Plan JSL5163_700 (Appendix A).

1.3 This report has been prepared in broad accordance with the requirements set out in BS5837:2010 'Trees in relation to design, demolition and construction – Recommendations.'[1]

1.4 The purpose of this report is to:

- Provide an assessment of the quality of the surveyed trees with reference to the categories and sub-categories listed within Table 1 - BS5837:2012.
- Assess and quantify the arboricultural impact of the proposed development within the survey area, based on the proposed development layout.
- Provide additional arboricultural information and advice in relation to the protection of trees throughout the development of the site.
- Provide a Tree Protection and Removal Plan to detail the proposed protective measures to be taken in respect of the trees during development of the site.

1.5 The Tree Protection Plan JSL5163_710 included in Appendix B identifies the following:

- Trees to be retained
- Trees to be removed (if any)
- Alignment and design of protective fence (if required)
- Root Protection Area (RPA) of trees

1.6 The Tree Protection and Removal Plan shall be made available to all relevant site operatives prior to and throughout the construction process, so they understand the scope and importance of the tree protection measures.

1.7 To minimise the potential for harm to occur to retained trees all works shall be carried out in accordance with the Tree Protection Measures and construction techniques detailed within this report.

1.8 In particular, the establishment of a Construction Exclusion Zone (CEZ) by erection of Tree Protection Fencing (where necessary), will minimise the potential for harm to occur to retained trees.

[1] British Standards Institute. British Standard (BS5837) Trees in Relation to Design, Demolition and Construction - Recommendations. 2012.

2 SITE LOCATION

2.1 The survey covered an area, defined by the client, that is currently a disused area of land located south of Hillingdon Train Station and northwest of the crossing of Freezeland Way and Long Lane. The site is served by an existing bell mouth access from a roundabout on Feezeland Way in the western corner of The Site.

2.2 The area to the south of the site is a mix of commercial and residential. To the north site the Hillingdon Train Station and to the east further parcels of disused land. The eastern boundary shares its direct boundary with a fencing supply storage area and fencing contractor.

2.3 The land is roughly centred on OS grid reference TQ 07573 84926.

2.4 The soilscape of the area typically consists of 'Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils.'[2]

[2] Magic.gov.uk – 25.04.2022

3 SURVEY METHOLDOLOGY

3.1 This report was completed by Stefan Kowalczyk of RPS group and authorised by David Cox, a professional member of the Arboricultural Association and Chartered Landscape Architect of RPS Group.

3.2 The report and survey were carried out in general accordance with the requirements set out in BS 5837:2012 “Trees in Relation to Design, Demolition and Construction – Recommendations”.

3.3 The tree survey involved a visual inspection from the ground of individual specimens and groups of trees in order to record their amenity value, management recommendations and dimensions. Where observed, the general condition of all the trees has been noted. The survey does not constitute a full arboricultural condition assessment involving the detailed inspection of trees in relation to their structural condition, decay, and any other physical and pathogenic defects.

3.4 The locations of the trees were based upon a topographic survey produced by John Robinson Associates in April 2024, drawing ref. 240204.

3.5 The tree survey assesses individual trees and groups of trees for quality and benefits within the context of proposed development. The quality of each tree or group of trees has been recorded by allocating it to one of four categories as described in table 3.1. These categories have been differentiated on the Tree Constraints plan (Appendix A) by colours.

3.6 The survey information was recorded on the attached schedule (Appendix C) in general accordance with the guidance contained within Section 4 of BS 5837:2012 “Trees in Relation to Design, Demolition and Construction - Recommendations".

3.7 The information recorded includes the following-

Table 3.1 Tree characteristics recorded during survey

Tree Ref No:	Sequential reference number of trees or groups of trees. Avenues, woodlands and hedgerows were also recorded on the tree constraints plan. # - denotes inaccessible trees (best estimates are made about the location, physical dimensions and characteristics.)				
Species	Species listed by common name, with scientific names (italic lettering).				
Height (m)	Estimated height of canopy to nearest metre.				
Branch Spread	branch spread, taken as a minimum at the four cardinal points, to derive an accurate representation of the crown				
Stem diameter @ 1.5 m (m)	Estimated diameter of trunk at 1.5 m above ground level in metres unless otherwise indicated, multi-stemmed trees being measured in accordance with Annex C: BS5837				
Existing height above ground level	To inform on ground clearance, crown/stem ratio and shading the estimated height of the first significant branch and direction of growth and canopy above ground level.				
Stem No.	Number of stems (if necessary) of individual tree.				
Life Stage	Expressed as:-	Y SM EM M	(Young) (Semi-mature) (Early-mature) (Mature)	OM V D	(Over-mature) (Veteran) (Dead)
Physical Condition	Apparent condition expressed as the following categories, based upon a brief visual inspection from the ground only:-				Good Fair Poor Dead
Comments / Management Recommendations	General observations, particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect), and/or preliminary management recommendations and potential for wildlife habitats (not exhaustive).				
Estimated remaining contribution (years)	Estimated remaining contribution, in years (<10, 10+,20+,40+)				
Tree Quality Assessment Value: Category	Criteria grading with regards to Table 1: BS 5837:2012, expressed as:-	**A** (Trees/Vegetation of high quality and value) **B** (Vegetation of moderate quality and value) **C** (Trees/Vegetation of low quality and value) **U*** (Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years)			
	* Category U trees can have existing or potential conservation value which might be desirable to preserve.				
Tree Quality Assessment Value: Sub - Category	Criteria grading with regards to Table 1: BS 5837:2012, expressed as:-	**1** (Trees with mainly *arboricultural* value) **2** (Trees with mainly *landscape* value) **3** (Trees with mainly *cultural / conservation* value)			

Limitations

3.8 The findings of this survey are not valid following adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events.

3.9 Trees were not climbed or inspected below ground level and inaccessible trees will have best estimates made about the location, physical dimensions and characteristics. Where direct access to trees was difficult a '#' denotes this within the Tree Survey Schedule (Appendix C).

3.10 Trees and woody vegetation were not assessed for their potential impact upon future construction issues such as foundation designs (re: NHBC chapter 4.2)'[3]. Whilst this report may assist in assessing likely future impacts, it should not be classed as a comprehensive vegetation survey in relation to impact upon future designs.

3.11 It is recommended that further arboricultural assessments be undertaken in order to assess the full health and safety of all trees which may possess structural or pathogenic conditions.

[3] NHBC. 'Chapter 4.2- Building Near Trees'. NHBC Standards 2016. 2016.

4 APPRAISAL AND RECOMMENDATIONS

Generally

4.1 In general, all trees were located out side of the assumed planning boundary. The majority of trees that related to the site where young self-set saplings and in a condition that is largely consistent with what is expected for their age, management and species.

4.2 The survey was dominated by Common Oak (*Quercus robor*) located off-site within the fencing supplies compound. This tree was considered to be of reasonable quality – Category B – with a moderate retention value given that its overall condition was fair – poor.

Planning Considerations & Statutory Protection

4.3 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account when dealing with planning applications.

4.4 Trees covered by a **Tree Preservation Order** are protected under the Town and Country Planning Act 1990 (Trees Regulation 2012). The local authority must be consulted, and permission sought for any works that may affect them.

4.5 A desktop investigation using the Hillingdon Councils' TPO register[4] confirmed that are **no TPOs within the survey boundary.**

A desktop investigation into the planning constraints on this site using the Forestry Commissions interactive map[5] confirmed that the survey site is **not located within a Conservation Area or part of an Ancient Woodland.**

Design and Site Layout Considerations

4.6 Trees can offer many benefits, including the provision of visual amenity, softening or complementing the effect of the built environment, adding maturity to new developments and by making places more comfortable in tangible ways e.g. contributing screening and shade, reducing wind speed and turbulence, intercepting snow and rainfall, and reducing glare.

4.7 New tree planting opportunities should be considered as part of any potential redevelopment; this will help to broaden the age diversity of the tree cover within the area. Sufficient space should be provided for species with significant stature to grow out into maturity.

4.8 A tree constraints plan defines the Root Protection Area (RPA) for each tree shown as a circle. This area may be adjusted should physical constraints or topographical features limit root activity in a particular area, however, the total area should remain the same. Prior to any adjustment of the trees RPA zones the changes should be assessed by an Arboriculturist.

[4] https://lbhillingdon.maps.arcgis.com/apps/View/index.html?appid=7b18f60872a94d38a0c9bf1aea032760

[5] https://www.forestergis.com/Apps/MapBrowser/

During any site planning exercises the current and future growth potential of the trees should be considered.

4.9 The RPA for single stem trees broadly equates to a radius 12 times the stem diameter of the tree at 1.5m above ground level or the extent of canopy spread, whichever is the greater. For multi-stemmed, low branching trees or those with trunks with an irregular girth the point of stem diameter measurement is adjusted in consideration of these factors and in accordance with the illustrations in BS5837:2012 (Annex C).

4.10 The RPA should become an exclusion zone during construction works and for any development. It should be fenced-off and protected in accordance with BS5837:2012. The canopy is likewise susceptible to damage during construction work and requires similar protection.

4.11 No activities that result in excavations, changes in level or soil compaction should take place within the RPA of any retained trees, especially older mature trees. This would include the storage of materials, any construction work, trafficking by vehicles or even excessive trafficking by pedestrians.

4.12 If some form of construction must take place within the RPA, then certain measures need to be adopted to avoid disturbance or damage to the roots and to maintain moisture infiltration and gaseous diffusion into the soil.

Services

4.13 Services likewise should be routed outside the existing or potential root zone of trees. Where it is unavoidable, then certain measures should be employed to avoid damage to the tree's larger roots.

4.14 The location and siting of new facilities near trees should consider the potential impact on and conflict with both tree roots and canopy. This should consider the ultimate size of existing young and middle-aged trees at maturity. Conversely the impact of the tree on the activities should also be considered regarding obstruction, shading, leaf fall and root action. These are problems that can be managed provided sufficient space is allowed for.

4.15 Any new services should avoid the RPAs of any retained tree. Where it is unavoidable, then the route of the services must be designed by an Engineer in consultation with an Arboriculturalist. Further advice can be found in NJUG Volume 4- "Guidance for the planning, installation and maintenance of utility services in proximity of trees".[6]

Trees and Management of Health and Safety

4.16 It is recommended that a programme of periodic arboricultural assessments be undertaken in order to regularly assess the full health and safety of all trees both in full leaf and bare stemmed. The assessments should prioritize areas based on levels of access and presence of target (i.e. exposure of people to hazard) and accord with arboricultural advice, taking account of relevant factors (where known) that affect safety such as the age class, condition, size and species of the trees.

[6] N.J.U.G. 4: Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. 2007

5 ARBORICULTURAL IMPACT ASSESSMENT

Introduction

5.1 Trees have finite energy reserves, developed each year throughout the growing season, which are utilised for biological processes such as growth and defence against pests or diseases throughout the following year.

5.2 Any development in proximity to trees has the potential to cause harm to those trees unless control measures are identified and acted upon; as such it is essential to consider the relationship between the proposed development and the retained trees to identify what precautions are necessary, proportionate and appropriate.

5.3 Development has the potential to impact upon the above ground and below ground parts of trees. Whilst some damage that can occur, such as physical damage to the trees stems and branches from machinery movements, is clearly visible, the impact from other aspects of work common on development sites, which can have a significant effect upon the continued health of trees, are not always immediately evident.

5.4 Damage that is not immediately evident, but which can cause long term harm to retained trees, includes things such as damage to the soil structure by compaction causing root damage and levels changes altering the water table and affecting moisture availability.

5.5 To minimise the potential for harm to occur to retained trees all works must be carried out with regard to the Tree Protection measures detailed within this report.

5.6 In general by adopting appropriate methods of working, precautionary and protective measures, significant harm to retained trees can be avoided.

5.7 In particular the establishment of a Construction Exclusion Zone (CEZ) by erection of Tree Protection Fencing will minimise the potential for harm to occur to retained trees.

5.8 The retention and protection of significant trees and vegetation will assist in assimilating the proposed development into the wider landscape and offer long term tree cover.

5.9 Furthermore, redevelopment of the site may offer an excellent opportunity to actively manage any retained vegetation and accordingly we recommend restorative tree works be undertaken as appropriate. This will further improve the amenity value and landscape setting of the site and increase the useful life of any retained trees.

Brief Description of Proposed Development

5.10 The proposed development is for a new Lidl Superstore, comprising of:

- The erection of a new retail store
- Construction of a new car park
- Building associated access
- Installation of new utilities as required

Proposed Tree Removal and Works

5.11 In order for this development to be realised the removal of 0 trees will be required. These trees are categorised as follows:

Category	Total number	% of Total Removals
A	0	0%
B	0	0%
C	0	0%
U	0	0%

Root Protection Areas (RPA)

5.12 All of the proposed development will take place outside of the RPA of trees to be retained. Therefore, no impact to retained RPAs is proposed.

5.13 All trees are located offsite behind boundary fencing or walls. So long as these boundary divides are to remain there will be no requirement for Tree Protection Fencing.

6 TREE PROTECTION MEASURES

Construction Exclusion Zone

6.1 The site boundary line defines the Construction Exclusion Zone (CEZ) and the fencing and or boundary wall shall not be moved or taken down unless it is to be replaced. Within the Construction Exclusion Zone there must be no mechanical digging or scraping; no alteration to existing ground levels including soil stripping; no earthworks; and no handling or discharge of any chemical substance, concrete washings or of any fuels.

6.2 Furthermore, vehicular or pedestrian access and the storage of any materials is prohibited within the Construction Exclusion Zone.

6.3 Additionally, no materials that may contaminate the soil such as concrete mixings, diesel oil and vehicle washings shall be discharged within 10m of the stem of any tree and no fires shall be lit within 10m of the maximum extent of a trees crown.

Tree Protection Fencing

6.4 All trees are located offsite behind boundary fencing or walls. So long as these boundary divides are to remain there will be no requirement for Tree Protection Fencing.

Site Compounds and Materials Stores

6.5 Activities related to the establishment of a temporary site compound have the potential to impact upon retained trees by various means. In particular the storage and mixing of chemicals and materials such as concrete can have a damaging effect on tree health if precautions are not taken.

6.6 To prevent harm occurring to trees, provision for materials storage, deliveries and other related activities shall be made available in areas away from retained trees.

6.7 Under no circumstances shall materials or plant be stored beneath the canopy or within or abutting the Root Protection Zone of any retained trees/hedges, whether fenced or not.

Reporting

6.8 Should any arboricultural issues become apparent during the works the site manager should immediately contact the Arboricultural Consultant or the Council's Tree Officer for advice upon how to proceed.

7 CONCLUSION

7.1 A comprehensive tree survey has been completed on the site and its immediate surroundings. The survey was completed in accordance with BS5837:2012.

7.2 The proposed development of the area relates to the construction of a new Lidl store and its associated works.

7.3 The trees recorded are all assumed to located off-site and are **not** subject to any TPO or located within a Conservation Area.

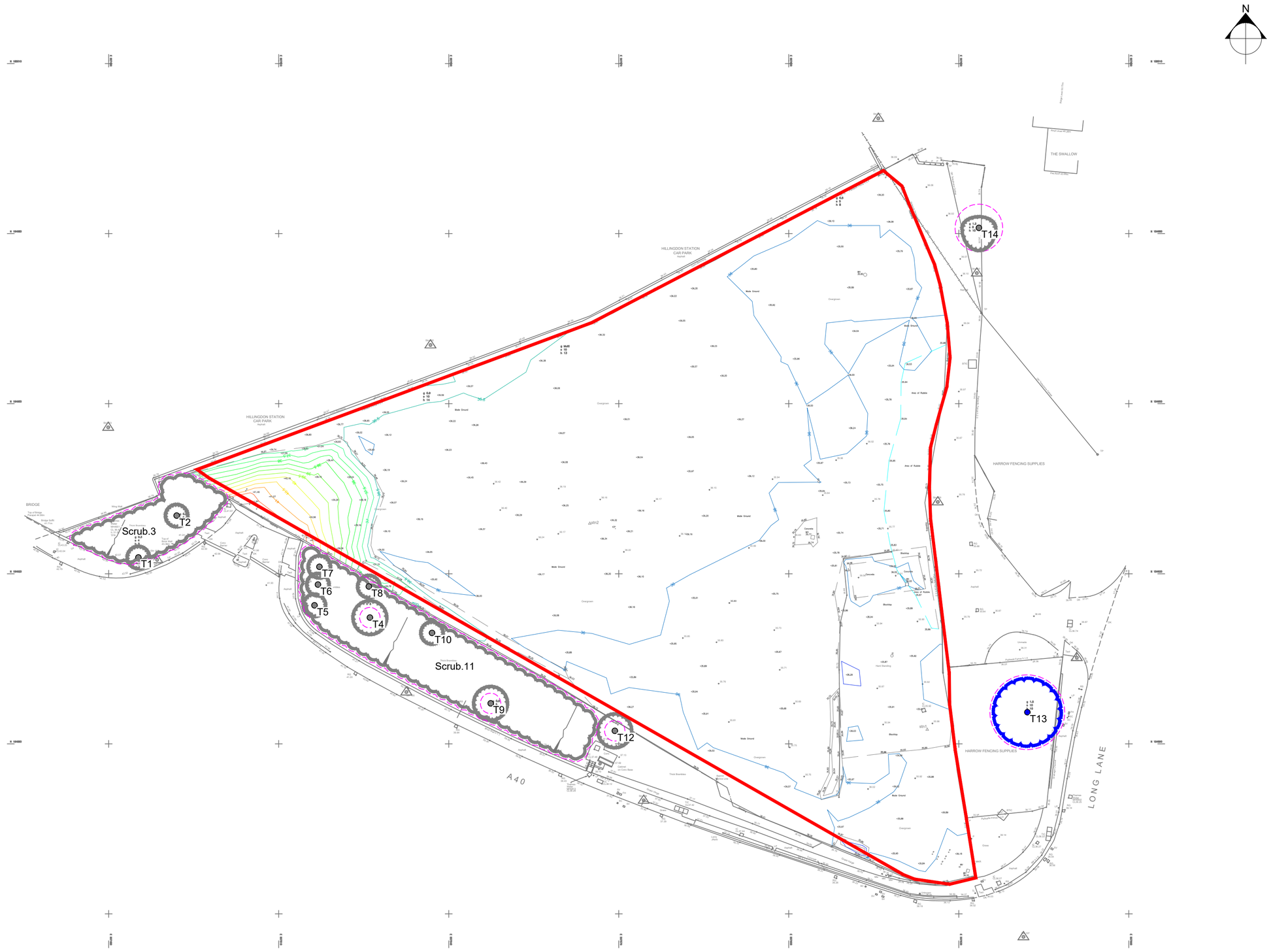
7.4 The proposed development will require the removal of 0 trees.

7.5 If any arboricultural issues relating to works being carried out occur, then they should be reported to the Arboricultural Consultant or Tree Officer immediately.

APPENDICES

Appendix A

Tree Constraints Plan JSL5163_700



Notes

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Key

Survey and Assumed Site Boundary.

T1 — Tree with numbered reference. Canopy spread and coloured BS5837:2012 tree quality category as shown below. # = Tree details/location estimated (inaccessible tree)

S1 — Veg/Scrub group with numbered reference. Canopy extents and coloured BS5837:2012 tree quality category as shown below.

BS 5837:2012 Tree Quality Categories - Table 1

- Category A - High quality
- Category B - Moderate quality
- Category C - Low quality
- Category U - Unsuitable for retention

Root protection area (RPA) Calculated in accordance with Section 4.6 - BS5837:2012

NOTES:

- Refer to RPS Tree Survey Report & Schedule for further details.
- Survey based on a visual inspection from the ground and is not intended as a full arboricultural inspection.
- Plan produced in accordance with recommendations set out in BS 5837:2012 - 'Trees in Relation to design, demolition and construction'.
- Due to the legal protection afforded to breeding birds vegetation removal should not take place during the bird nesting period; generally, although not restricted to, March - August inclusive.
- Survey based upon topographic survey produced by John Robinson Associates, Drw Ref 240204, 04/2024.

Rev	Description	By	CB	Date

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Title: Tree Constraints Plan

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For Planning	SK	DC

Job Ref	Scale @ A2	Date Created
JSL5163	1:500	May 2024

RPS Drawing / Figure Number	Rev
700	-

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Appendix B

Tree Protection JSL5163_710

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Key

Survey and Assumed Site Boundary.

T1 — Tree with numbered reference. Canopy spread and coloured BS5837:2012 tree quality category as shown below.
= Tree details/location estimated (inaccessible tree)

S1 — Veg/Scrub group with numbered reference. Canopy extents and coloured BS5837:2012 tree quality category as shown below.

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Rev	Description	By	CB	Date
A	Layout updated	DC	DC	03.25

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Project: Lidl: Hillingdon

Title: Tree Protection Plan

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JSL5163	1:500	May 2024

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Rev: A

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Appendix C

Tree Survey Schedule JSL5163_750

TREE SURVEY SCHEDULE

Site: Lidl: Hillingdon, Freezeland Way, Uxbridge
Project Schedule Ref: JSL5163_750
Drawing Reference: JSL5163_700
Survey date: 15/05/2024

Surveyor: S.Kowalczyk
Status: For Planning
Revision: -
Notes: -

Ref. no	Species	Height (m)	Canopy Spread (m) N	E	S	W	Crown Area	Stem dia. (mm)	Stem no. at 1.5m	Height of crown clearance (m)	FSB Height (Direction)	Age class	Condition	General Observations Management Recommendations	Estimated remaining contribution (yrs)	Tree Quality Category (BS5837)
T1*	Acer pseudoplatanus (Sycamore)	6	2	2	2	2	13	150	1	2	-	Y	Fair	Small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
T2*	Acer pseudoplatanus (Sycamore)	8	2	2	2	2	13	150	1	2	-	Y	Fair	Small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
S3*	Mixed	8	-	-	-	-	-	100 (avg.)	-	2	-	Y	Fair	Mixed species scrub growth - buddleja, bramble, hawthorn, dogwood.	10+	C2
T4*	Fraxinus excelsior (Ash)	8	3	3	3	3	28	150	1	2	-	Y	Fair	Small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
T5*#	Crataegus monogyna (Hawthorn)	8	2	2	2	2	13	150	1	2	-	Y	Fair	Not plotted on topographical survey location estimated, small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
T6*#	Crataegus monogyna (Hawthorn)	8	2	2	2	2	13	150	1	2	-	Y	Fair	Not plotted on topographical survey location estimated, small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
T7*#	Crataegus monogyna (Hawthorn)	8	2	2	2	2	13	150	1	2	-	Y	Fair	Not plotted on topographical survey location estimated, small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
T8*#	Quercus robur (Common Oak)	8	2	2	2	2	13	150	1	2	-	Y	Fair	Not plotted on topographical survey location estimated, small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
T9*	Fraxinus excelsior (Ash)	8	3	3	3	3	28	150	1	2	-	Y	Fair	Small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
T10*#	Crataegus monogyna (Hawthorn)	8	2	2	2	2	13	150	1	2	-	Y	Fair	Not plotted on topographical survey location estimated, small sapling growth adjacent to road but behind wall, no particular merit.	10+	C2
S11*	Mixed	8	-	-	-	-	-	100 (avg.)	-	2	-	Y	Fair	Mixed species scrub growth - buddleja, bramble, hawthorn, dogwood.	10+	C2
T12*	Acer negundo (Box Elder)	8	3	3	3	3	28	150	1	2	-	Y	Fair	Small sapling growth adjacent to road but behind wall, no particular merit, unusual species for location.	10+	C2
T13*	Quercus robur (Common Oak)	10	6	6	6	6	113	550	1	4	-	M	Fair/Poor	Set within fencing compoud, no access possible, dimensions estimated, splits, cracks and cavities within canopy, not a full rounded canopy due to large snap out of western canopy, dieback in tops likely due to activity and hardstanding beneath tree.	20+	B2
T14*	Salix caprea (Goat Willow)	10	2	3	4	3	27	350	1	4	-	EM	Fair/Poor	Small self-set scrappy tree growing out from boundary security fence, no particular arb merit.	10+	C2

Note: This survey is based on a brief visual inspection from the ground.
It is not intended as a full arboricultural inspection.
- indicates estimated/offsite tree. * - indicates off site tree. FSB - First Signifigant Branch.

Appendix D

Site Photographs

A view across the existing access point from Freezeland Way looking northwest. T1(left) T2(centre)

A view across site Scrub Area 11 looking southeast.T5 & T4 to the left.

View looking northwest into the site. Taken from the eastern boundary. The proposed access point is located in the distance on the higher ground in the centre of the photo.

Appendix E

Arboricultural Glossary

Age-class - A general classification of the tree into either - young, semi-mature, early mature, mature, over-mature, or veteran.

Apical Bud/Shoot – The apical bud, also known as the leading shoot, is responsible for shoot extension and is dominant.

Apical Dominance – A singular, leading shoot remains dominant.

Arboreal - In connection with, or in relation to, trees.

Arboriculturalist – Person who has, through relevant education, training and experience, gained recognised qualifications and expertise in the field of trees in relation to construction.

Arboricultural Implications Assessment (AIA) – Study, undertaken by an arboriculturalist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

Arboricultural Method Statement (AMS) – Methodology for the implementation of any aspect of development that has the potential to result in the loss of or damage to a tree. Note The AMS is likely to include details of an on-site tree protection monitoring regime.

Asymmetric crown- Crowns that have a morphological bias in a particular direction. This can give the tree an aesthetically unfavourable appearance, but can also subject the tree to uneven wind- loading forces and potentially result in failure.

Basal – Referring to the bottom part of a tree's stem.

Basifugal mortality – A natural process seen in trees in an advanced life stage whereby the trees extremities die back and the inner crown expresses new growth, in order to conserve energy reserves.

Bifurcated - A growth characteristic, where two stems of similar size grow from the same point. Can create an inherent weakness.

Branch union/junction - The point at which a branch joins a larger stem. Can be a point of weakness, especially in certain species.

Brown Rot- Decay caused by certain species of fungus which results in the affected wood becoming brittle and liable to suddenly 'break out', especially if in key structural areas.

Buttress flares – Extensions of the basal stem of a tree that provide additional structural support. See reaction wood.

Bifurcated- A growth characteristic, where two or more stems of similar size grow from the same point. Can create an inherent weakness.

1 **Cable braces** – Cable braces used to support the crown of a tree, reduce impacts caused by wind- throw oscillation.

Canker – A clearly defined area of dead and sunken or malformed bark, caused by bacteria or fungi. Can have a bearing on structural integrity of infected limb(s) depending on size and location.

Central leader- See apical dominance.

Chalara ash dieback- A disease affecting ash trees caused by the fungus *Hymenoscyphus fraxineus*. Usually fatal, the disease causes leaf loss and crown dieback in infected trees. It was first confirmed in Britain in 2012.

Chlorosis- yellowing of leaves which can be caused by a range of factors, often an indicator of nutrient deficiency.

Compaction - The compressing & hardening of soil around tree root systems, due to vehicular/pedestrian use etc. Loss of pore space between soil granules limits water movement and gaseous exchange, and inhibits root growth.

Companion shelter- Shelter provided by neighbouring trees in groups to one another, factors such as wind throw are reduced due to supporting branches and interlocking root systems. Removing individual trees on the peripheries of such groups can expose neighbouring trees to environmental factors they have not previously been subjected to and can lead to individual failure.

Competent person – Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached

Note 1 A competent person understands the hazards and the methods to be implemented to eliminate or reduce the risks that can arise. For example, when on site, a competent person is able to recognise at all times whether it is safe to proceed.

Note 2 A competent person is able to advise on the best means by which the recommendations of this British Standard may be implemented.

Condition – Assessment based on a visual and professional view giving consideration to many factors such as tree health, structural integrity and suitability of its position.

Conservation dead- wooding- Removal of deadwood using 'coronet cuts' that mimic the way a branch would naturally break off, maximising deadwood habitat availability for invertebrates.

Coppice - The method of managing trees by cutting the stems at between 1.0 inch and 1.0 foot from the ground level on a regular cycle, the cut stumps of the trees or shrubs are allowed to re-grow many new stems.

Crown spread - Gives distances between extreme limits of the crown and the stem, usually along the four compass points. Helps to show crown symmetry.

Crown Reduction – The removal of branch ends to reduce the extreme limits of a trees branch spread and height.

Crown Thin – The removal of selected branches within the crown to thin the internal branch structure.

D.B.H. - 'Diameter at Breast Height', an industry standard to gauge tree stem size and development. Within arboriculture, breast height is taken to be 1.5m above ground level.

Dieback - The reduction in crown vigour and extension growth progressing to death of distal parts; often associated with decline.

Epicormic growth - New growth from dormant buds that can often form tenuous attachments. Although some species readily form such shoots, it can be an indication of stress.

Form - A general assessment of the shape and position of the tree within its environment.

Hanger – Term used to describe a branch that has become detached and is being supported by other branches. Can be a hazard to persons and property below.

Hazard Beam – After the loss of a distal part, a limb concentrates growth upwards creating adverse end weights that can render the limb susceptible to failure.

Included bark – Growth characteristic usually caused when two or more stems/branches growing in close proximity 'fuse' together entrapping the bark from when the parts were separate in the middle, creating a structural weakness.

Invertebrate tower – Pollarding of a (usually dead) tree to a safe height that leaves part of the main stem as a deadwood habitat for invertebrate species.

Occlusion/Occluded – Normally used to describe the overgrowth of a wound. Also, immoveable foreign objects in contact with a tree part can become encased or 'occluded' by the tree as it grows incrementally.

Pathogen - An agent that causes disease, especially a living microorganism such as a bacterium or fungus.

Phototropic growth – Growth responding to a light stimulus i.e. the sun. This can influence the form of a tree, particularly where other factors e.g. buildings or other trees, affect the amount/ direction light is received.

Pollard – The removal and subsequent regular re-removal of the crown of a tree above animal browsing height. Can be an effective method of controlling the size of trees in urban areas. This is ideally begun in the trees early stages and maintained throughout its life.

Reaction wood - Essentially additional wood laid down by the tree to compensate for structural defects such as cavities.

Rhizosphere - The rhizosphere is the narrow region of soil that is directly influenced by root secretions and associated soil microorganisms. In particular, mycorrhizal fungi form a symbiotic relationship with trees and assist in the assimilation of phosphates essential to the trees health.

Ring barking/Girdling – the removal of bark around the entire circumference of a stem or branch, causing the death of all distal parts.

Root Protection Area (RPA) – Layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m².

Scaffold limbs - The main structural branches within the crown.

Tree protection plan – scale drawing prepared by an arboriculturalist showing the finalised layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement (AMS), which can be shown graphically.

U.L.E – 'Useful Life Expectancy' is an estimate based on currently known factors of the possible remaining life of the tree as an asset. AKA 'Estimated remaining contribution'.

Veteran tree – Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Vigour - A general classification, as to the present and future potential growth and development of a tree. A comment regarding the health status of the tree specific to its species.

White Rot - A type of decay caused by certain species of fungi which results in the affected wood becoming flexible with little compressive strength.