

**CAR PARKING DC1 & DC2,  
PROLOGIS PARK BIRMINGHAM  
INTERCHANGE,  
BLACKFIRS LANE, SOLIHULL**

**ARBORICULTURAL IMPACT  
ASSESSMENT**

A Report to: CBRE Ltd

Report No: RT-MME-153311-02 **Rev A**

Date: October 2020  
**Revised: December 2020**



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## REPORT VERIFICATION

This study has been undertaken in accordance with British Standard 5837:2012 “*Trees in Relation to Design, Demolition and Construction - Recommendations*”.

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	06/10/2020	Ben Jones MSc (Arboricultural Consultant) & Stefan Harrison BSc (Hons) Tech.Arbor.A (Arboricultural Consultant)	Dean Moore Dip Arb (Senior Arboricultural Consultant)	Tom Docker CEcol MCIEEM (Managing Director)
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## DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

## VALIDITY OF DATA

The findings of this study are based upon the survey data produced as part of the Preliminary Arboricultural Assessment which is valid for a period of 12 months from the date of survey. If a planning application has not been submitted by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees and hedgerows on site to inform a review of the conclusions and recommendations made.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such, following any significant meteorological event or changes in the growing environment of the trees they should be re-assessed by a suitably qualified and experienced arboriculturist.

This Arboricultural Impact Assessment has been produced following a review of a proposed development layout for the site based on data provided by the client. Should the development proposals change, this report will need to be updated to assess the impact of the amended development.

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## 1. INTRODUCTION

### 1.1 PROJECT BACKGROUND

Middlemarch Environmental Ltd were commissioned by CBRE Ltd to undertake an Arboricultural Impact Assessment as part of a planning application for commercial development at Prologis Park Birmingham Interchange in Marston Green, Solihull. A survey of the trees on site and within influencing distance of the boundaries was undertaken on the 1<sup>st</sup> September 2020 as part of a Preliminary Arboricultural Assessment (RT-MME-153311-01) which was produced to identify the existing trees and hedgerows on the site to aid design and avoid unnecessary tree removal.

This Arboricultural Impact Assessment has been carried out in accordance with British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*' (hereafter referred to as BS5837). BS5837 sets out a structured assessment methodology to assist in determining which trees would be considered suitable or unsuitable for retention in the context of the proposed development. This Impact Assessment details the potential impact that the proposed development will have upon the site's existing tree stock and sets out recommendations for the subsequent mitigation or avoidance of impact.

### 1.2 SITE DESCRIPTION

The site under consideration is located at Prologis Park Birmingham Interchange in Marston Green, Ordnance Survey Grid Reference SP 18570 85126.

The site is located in a predominantly rural area on the south-eastern fringes of Birmingham. Tree cover across the site was generally found to be of moderate quality and predominantly located along the boundaries of the site.

The location of the trees surveyed can be found on Middlemarch Environmental Ltd Drawing Number C153311-01-01, attached to this report.

### 1.3 DEVELOPMENT PROPOSALS

The proposed development of the site includes the construction of new car parking areas to serve the existing Prologis Park buildings, designated DC1 and DC2.

The proposed development has been designed so that safe and healthy existing trees are retained wherever possible and that those trees to be retained are not significantly impacted upon by the development.

### 1.4 DOCUMENTATION CONSIDERED

This assessment is based upon the information provided by the client in addition to information collected by Middlemarch Environmental Ltd during the Preliminary Arboricultural Assessment. The documents and drawings considered are detailed within Table 1.1.

**Table 1.1: Documentation Considered**

Author	Document	Drawing Number	Date
JB Landscape Associates	Landscape Proposals (Sheet 1 of 2)	2109-PL001-2 Rev L	Dec 2018
JB Landscape Associates	Landscape Proposals (Sheet 2 of 2)	2109-PL001-2 Rev Q	Dec 2018
JB Landscape Associates	Preliminary Landscape Proposals Potential Additional Car Parking Spaces – Option 1	2136-PL001-2	Sept 2019
AJA Architects LLP	Site Layout Plan with potential additional car parking spaces – Option 1	6632-01 Rev C	Sept 2019
AJA Architects LLP	Existing Site Plan	6632-11	Sept 2020
Baynham Meikle	Proposed Attenuation Sketch Sections	12992_SK102 Rev B	Nov 2020

## 2. STATUTORY PROTECTION

### 2.1 TREE PRESERVATION ORDER AND CONSERVATION AREA DESIGNATIONS

Following consultation with the Local Planning Authority, Solihull Metropolitan Borough Council, it is understood that Tree Preservation Order (TPO) No. 921 applies to several trees present within the assessment area and therefore statutory constraints apply to the development in respect of trees. The table below details which trees are included in the TPO and trees covered by the TPO are identified in the Tree Survey Plan and Appendix A.

Middlemarch Tree No	TPO reference no.
T32	TG3
T33	TG3
T35	TG3

No works must be undertaken on the trees protected by Tree Preservation Order number 921 without prior permission from the Local Authority unless authorised as part of an approved planning application. Works include pruning, topping, lopping, uprooting or wilful damage or wilful destruction of these trees. Any proposed pruning works not currently approved will need to be fully specified and agreed within a future planning application. If works are not included within the planning application, a separate TPO application should be submitted to the Local Authority for permission to undertake any works (approximately an 8-week process).

Reference to the Multi Agency Geographical Information for the Countryside (MAGIC) website indicates that an area of ancient woodland has not been recorded within 15.0 metres of the survey area.

### 2.2 PROTECTED SPECIES

#### Bats

Mature trees often contain cavities, hollows, peeling bark or woodpecker holes which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. Consequently, causing damage to a bat roost constitutes an offence.

Generally, should the presence of a bat roost be suspected whilst completing works on any trees on site then an appropriately licensed bat worker should be consulted for advice.

#### Birds

Trees and hedgerows offer potential habitat for nesting birds which are protected under the Wildlife and Countryside Act WCA 1981 (as amended). Some species (listed in Schedule 1 of the WCA) are protected by special penalties. This legislation makes it an offence to intentionally or recklessly damage or destroy an active bird nest or part thereof.

As the trees on, and adjacent, to the site provide potential habitat for nesting birds all tree work should ideally be completed outside the nesting bird season (Generally March to September).

If this is not possible then the vegetation should be subject to a nesting bird inspection by a suitably experienced ecologist prior to commencement of works. If any active nests are identified then the vegetation, and a defined buffer zone, will need to remain in place until the young have naturally fledged.

### 3. PRELIMINARY ARBORICULTURAL ASSESSMENT RESULTS SUMMARY

Forty individual trees, six groups of trees, three hedgerows and one woodland were surveyed as part of the Preliminary Arboricultural Assessment. Trees assessed during the survey are listed as individual trees and groups of trees in the Tree Schedule (Appendix A) in accordance with BS5837:2012 recommendations. Table 3.1 below provides a summary of the survey results in terms of categorisation.

**Table 3.1: Summary of Trees, Groups, Hedgerows and Woodlands in BS5837:2012 Categories**

BS5837:2012 Category	Tree/Group/Hedgerow/Woodland Reference	Frequency			
		T	G	H	W
U	T6, T22, T23.	3	-	-	-
A	T16, T17, T27, T32, T33, T35, T42, T43, T44, T45, T47, G3, G4, W1.	11	2	-	1
B	T3, T4, T5, T7, T9, T10, T11, T13, T14, T15, T18, T19, T20, T21, T25, T26, T28, T29, T30, T31, T46, G1, G5.	21	2	-	-
C	T1, T2, T8, T12, T24, G2, G9, H1, H3, H5.	5	2	3	-
<b>Key:</b>					
T: Trees					
G: Groups					
H: Hedgerows					
W: Woodlands					

It should be noted that the tree numbering above is a continuation of the numbers used in the original Arboricultural Survey (Report Number RT-MME-122442-01). A number of trees, groups and hedgerows have been removed since the previous arboricultural survey (February 2016) as part of the approved Planning Application (Ref. PL/2016/02001/PPOL) and consequently the corresponding reference numbers for these arboricultural features have been omitted from this report.

The trees recorded during the survey were predominantly of moderate to high retention value within the local landscape and are generally confined to the eastern and western boundaries of the site. These trees and groups have been considered within the context of the industrial development previously completed and as such their retention within the current scheme is not expected to cause any significant conflicts between new buildings and retained trees.

The retained trees situated along the boundaries of the site are considered to provide amenity value to the general public both as prominent specimens and as screening features from the industrial development. Combined with proposed soft landscaping works around the western and southern extents of the site, it is considered that the overall tree stock and visual amenity of the site will be directly improved by the new development.

## 4. ARBORICULTURAL IMPACT ASSESSMENT

### 4.1 INTRODUCTION

This section of the report details the potential impacts that the proposed development may have upon the site's tree stock. The assessment has been based upon the documents detailed in Table 1.1 with reference to the results of the Preliminary Arboricultural Assessment (RT-MME-153311-01).

The location of the trees can be found on the Tree Survey Plan (C153311-01-01) and a schedule of the trees (Appendix A) attached to this report.

### 4.2 IMPACTS FROM DEVELOPMENT LAYOUT

#### 4.2.1 Tree Retention and Removal

The proposed works will not require the removal of any developed trees within the site. However, it will be necessary to remove a number of newly planted trees within the site. These were not surveyed individually during the arboricultural survey, nor is their loss from the site considered to be a notable constraint to proposed works.

In addition to the removal required for development, the removal of two individual trees along the western site boundary (T22 & T23) is recommended. These trees are in poor structural condition, with multiple significant defects, and considered to be unsuitable for long-term retention within the site.

The trees to be removed are identified on the Tree Retention Plan, Drawing Number (C153311-02-01), attached to this report. All trees, groups and hedgerows not discussed herein or identified on the Tree Retention Plan are to be retained within the proposed development.

#### 4.2.2 Tree Pruning

All tree pruning works should be detailed as part of an Arboricultural Method Statement and completed in accordance with the current best practice guidance set out within BS3998:2010 "*Tree Work – Recommendations*" by suitably competent, qualified and insured arboricultural contractors. It is recommended that the extent of pruning required is then identified to contractors in a pre-commencement site meeting as part of the enabling works.

### 4.3 DIRECT IMPACTS FROM CONSTRUCTION

#### 4.3.1 Works within RPAs

There are no aspects of the proposed scheme which are expected to require works within the RPAs of retained, established trees. While the installation of new hardstanding will require works adjacent to areas of newly planted trees, it is not considered that any retained saplings will be in such proximity to the works that impacts to their long-term health are likely to occur.

#### 4.3.2 Underground and Overhead Utilities

Wherever possible, common service trenches should be specified to minimise land take associated with underground service provision and facilitation access for future maintenance.

### 4.4 IMPACTS FROM CONSTRUCTION RELATED OPERATIONS

#### 4.4.1 Site Access

It is understood that construction access to the site will be provided through the existing access point. However, it is not considered that there are any trees located in such proximity to the proposed access point that access facilitation pruning works will be required.

It may be necessary to ensure retained trees adjacent to the access route are protected from vehicular impact through the installation of tree protection barriers, prior to the commencement of the development. Such works, if required, shall be discussed further in an Arboricultural Method Statement.

#### **4.4.2 Site Compound, Contractors Car Parking, Delivery and Storage of Materials**

Material deliveries to the site will utilise the existing access point. Retained trees will be protected from harm by the prior installation of tree protection barriers and the completion of access facilitation pruning works (if required).

The site compound, contractor's parking and areas for materials storage within the site should be confirmed as part of an Arboricultural Method Statement following approval of the current planning application.

#### **4.5 POST-DEVELOPMENT IMPACTS**

##### **4.5.1 Shading**

The nature of the proposed works is such that shading from retained trees is not deemed to be a notable consideration.

##### **4.5.2 Future Pressure for Removal**

The layout of the proposed development is such that future pressure for tree removal is generally unlikely.

##### **4.5.3 Seasonal Nuisance**

It is unlikely that a significant degree of seasonal nuisance will occur due to the lack of retained tree cover across the site. However, there are a number of newly planted trees which will be located adjacent to the new car parking areas. In the fullness of time, the relative proximity of these specimens may incur minor seasonal nuisance through leaf litter or similar arisings (e.g. sap dropping).

The sweeping up of leaves is considered to be routine seasonal maintenance and as such no notable conflict with the proposed development is considered to occur.

## **5. SUMMARY OF IMPACTS**

The proposed development of the site is unlikely to significantly impact the visual amenity of the local area as a result of the proposed tree removal and the proposed works will not impact significantly upon the long-term health of retained trees.

It is not anticipated that any aspects of the proposed scheme will require works within the RPAs of retained, established trees. However, potential impacts from construction related operations (e.g. site access and material storage) may need to be discussed further within an Arboricultural Method Statement to ensure that appropriate working practices are adopted for the works.



## **6. MITIGATION AND PROTECTION**

### **6.1 INTRODUCTION**

This section of the report details the mitigation for the proposed tree loss, initial protection and avoidance measures suggested to prevent harm to the retained trees.

### **6.2 NEW TREE PLANTING**

New tree planting will form an integral part of the proposed development, however, proposals for new tree planting should be appropriate for the future use of the site and not just aim to mitigate the proposed tree loss.

As part of the previous development proposals (Application Ref. PL/2016/02001/PPOL), an adequate quantity of tree planting has already been demonstrated. Landscape proposals provided by the client (Drawing Ref. 2109-PL001-2) indicate provision for ample new tree planting in areas to the south and west of the Prologis Park buildings DC1 and DC2, the majority of which is to be retained in the context of the proposed car parking areas. The purpose and function of the new tree planting should be carefully considered so that key objectives from a wildlife habitat and landscape perspective can also be achieved.

The landscaping scheme should consider the use of both native tree species (for their low maintenance requirements and nature conservation value) and ornamental species (for their contribution to urban design and amenity value). Species choices should be selected on the basis of their suitability for the final site use. Careful consideration should be given to the following: ultimate height and canopy spread, form, habit, density of crown, potential shading effect, colour, water demand, soil type and maintenance requirements in relation to both the built form of the new development and existing properties.

Through careful species selection, the landscape scheme shall reduce the risk of trees being removed in the future on the grounds of nuisance. Nuisance can be perceived in a number of ways and vary from person to person however most commonly, within the context of trees, low overhanging branches, excessive shading, seasonal leaf fall and the misinformed perception that trees close to buildings cause damage.

Tree planting should be avoided where they may obstruct overhead power lines or cables. Any underground apparatus should be ducted or otherwise protected at the time of construction to enable trees to be planted without resulting in future conflicts.

### **6.3 GENERAL TREE PROTECTION**

#### **6.3.1 Construction Exclusion Zone**

To minimise the potential for harm to the root systems and canopies of retained trees during development construction exclusion zones will be required throughout the site. These are areas surrounding the trees' RPA's and canopies in which construction works, or related activities, will be avoided.

It is recommended that the exclusion zones are afforded protection at all times through the use of tree protection barriers and/or ground protection (specified in accordance with BS5837:2012). No works that cause compaction of the soil or severance of tree roots, except where undertaken in accordance with the guidance provided within this document or detailed within a subsequent AMS, will be undertaken within any exclusion zone.

#### **6.3.2 Tree Protection Barriers**

The protective barriers should be erected following any tree removal or tree surgery works and prior to the commencement of any construction site works e.g. before any construction materials or machinery are brought on site or the stripping of soil commences.

The protective barriers are to be constructed in accordance with the specification detailed in BS5837:2012. Any variation to the specification of the protective barrier should be agreed with the Local Planning Authority Arboricultural Officer or included as part of an Arboricultural Method Statement following approval of the current planning application.

## 7. ARBORICULTURAL METHOD STATEMENT

An Arboricultural Method Statement may be required for the site as various aspects of the proposed development will need to be fully considered due to the presence of retained trees.

The purpose of a Method Statement is to ensure that all site operations can occur with minimal risk of adverse impact upon trees that are to be retained. The document will identify all areas where specific working methods will be required to ensure protection to trees. The document will also specify the location and extent of tree protection barriers and ground protection.

In relation to this development the Method Statement should address the following:

- Tree Surgery
- Site setup and logistics
- Works within Root Protection Areas
- Suitable site access, material storage contractor's car parking and site compound locations.
- Final protective barrier locations and specifications.
- Extent of access facilitation pruning works to be undertaken.
- Pre-commencement site meeting.

## 8. REFERENCES AND BIBLIOGRAPHY

British Standards Institution. (2010). *British Standard 3998:2010, Tree Work - Recommendations*. British Standards Institution, London.

British Standards Institution. (2012). *British Standard 5837:2012, Trees in Relation to Design, Demolition and Construction – Recommendations*. British Standards Institution, London.

Middlemarch Environmental Ltd. (2020). *Report Number RT-MME-153311-01*. Preliminary Arboricultural Assessment.

Littlefair P. (2011). *Site layout planning for daylight and sunlight: a guide to good practice* (BR 209). British Research Establishment, Watford.

## 9. DRAWINGS

Drawing Number C153311-01-01 Rev B – Tree Survey Plan

Drawing Number C153311-02-01 Rev A – Tree Retention Plan

Appendix A: Tree Schedule

**Legend**

- Tree location and stem diameter
- ✕ Stump
- ▨ Area of new tree planting
- Category A
- Category B
- Category C
- Category U
- Current canopy extent
- Root Protection Area
- Indicative tree shadow
- - - Site boundary
- 00 Tree subject to Tree Preservation Order (TPO) No. 921
- T - Tree
- H - Hedgerow
- G - Tree group
- W - Woodland

The original of this drawing was produced in colour - a monochrome copy should not be relied upon

**NOTES**

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturalist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule. Drawing has been produced in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturalist should works commence 12 months after the date of this survey. SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

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Project Car Parking DC1 & DC2, Prologis Park, Birmingham Interchange, Blackfirs Lane, Solihull

**Tree Survey Plan**

Client IAC Group c/o CBRE

Drawing Number C153311-01-01-RevB Revision Rev B

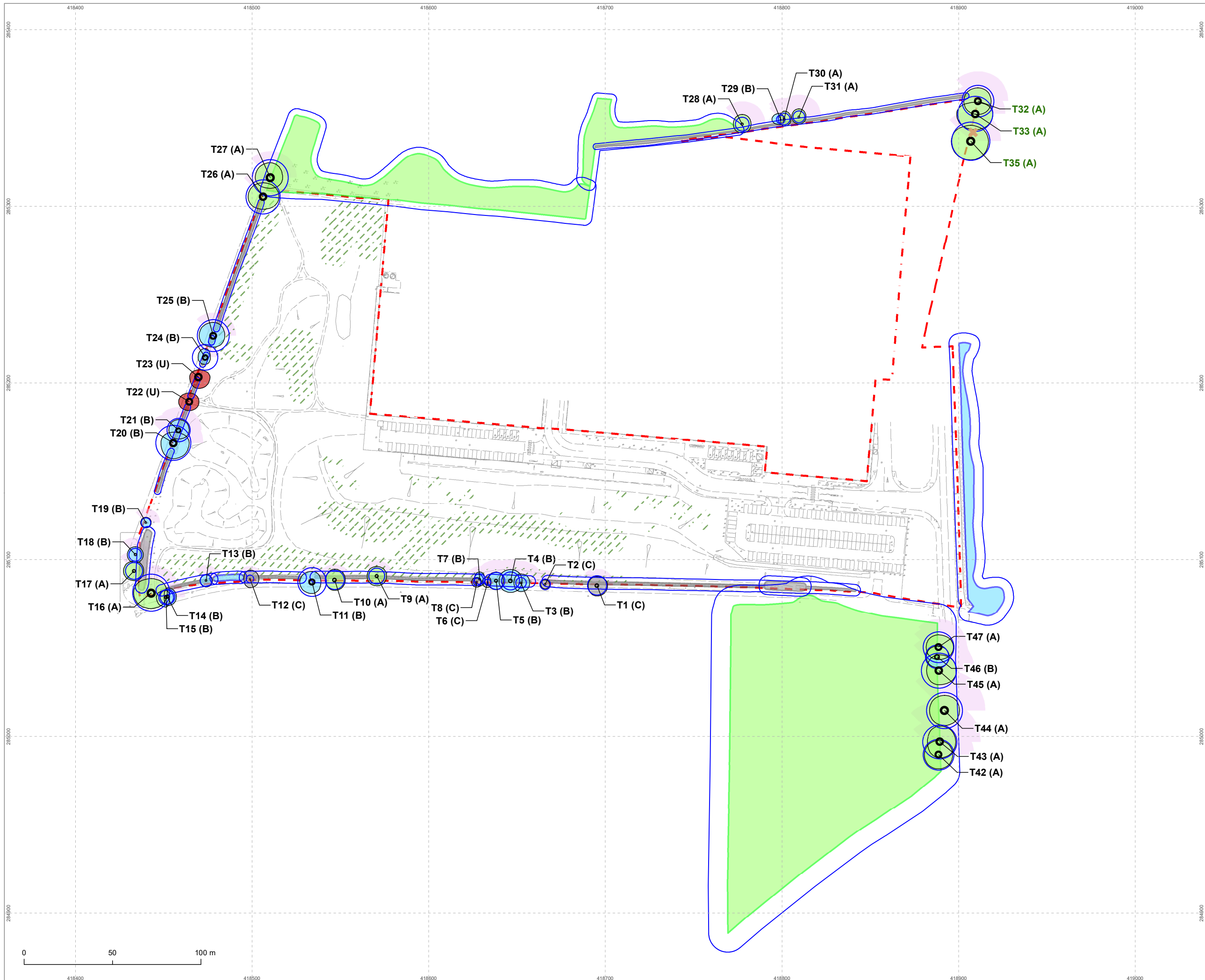
Scale @ A3 1:2,000 Date September 2020

Approved By BJ Drawn By GT



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**Legend**

- Tree location and stem diameter
- ✕ Stump
- ▨ Area of new tree planting removal required for proposed works
- ▨ Area of new tree planting
- Category A
- Category B
- Category C
- Current canopy - tree removal recommended due to poor condition
- Current canopy - tree to be retained
- Root Protection Area
- Indicative tree shadow
- Site boundary
- Proposed site layout
- 00 Tree subject to Tree Preservation Order (TPO) No. 921
- T - Tree
- H - Hedgerow
- G - Tree group
- W - Woodland

The original of this drawing was produced in colour - a monochrome copy should not be relied upon

**NOTES**  
 All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturalist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule. Drawing has been produced in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.  
 Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturalist should works commence 12 months after the date of this survey.  
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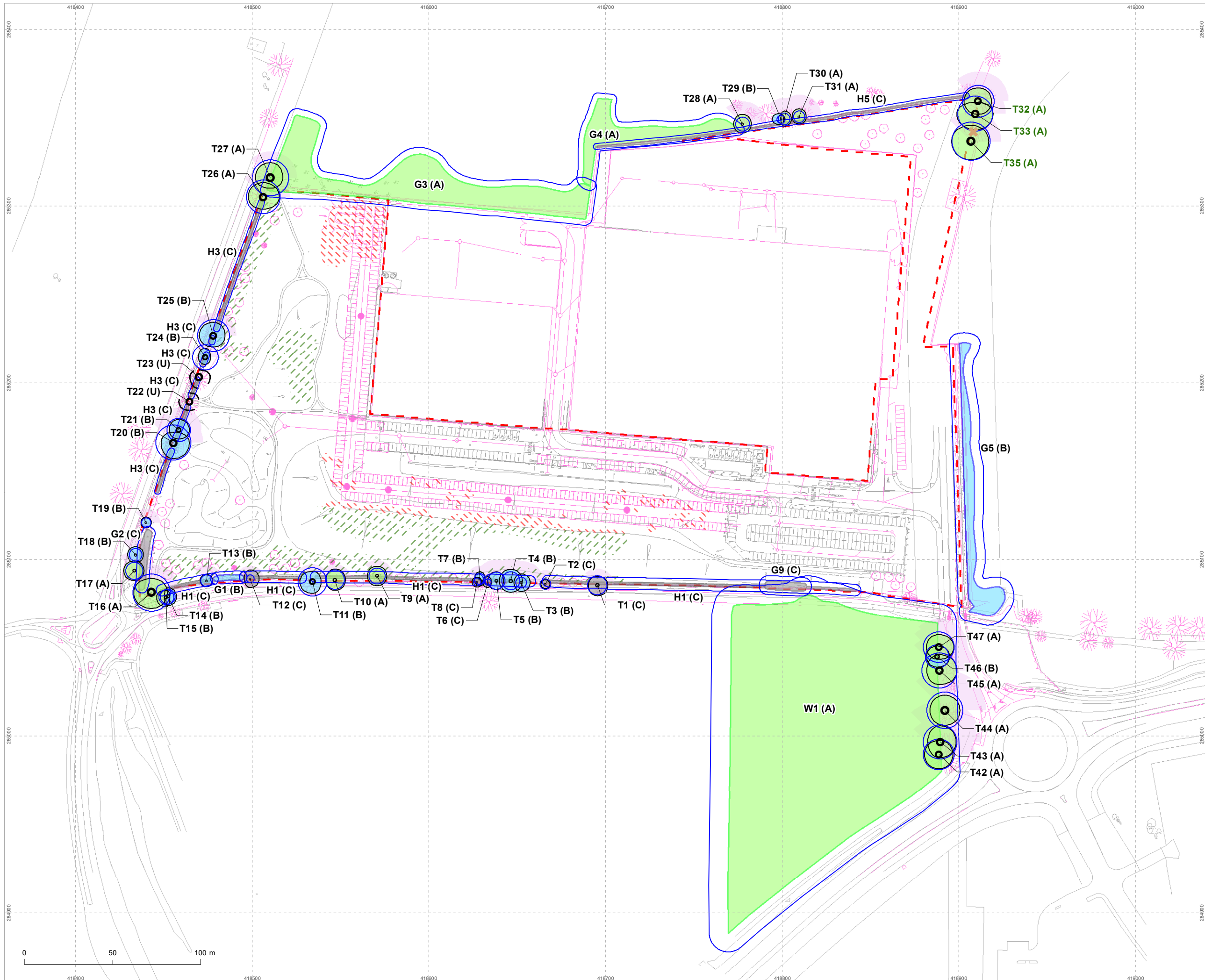
**Tree Retention Plan**

Client	
IAC Group c/o CBRE	
Drawing Number	Revision
C153311-02-01-RevA	00
Scale @ A3	Date
1:2,000	December 2020
Approved By	Drawn By
BJ	RP



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Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
1	Sycamore	3	510	9.5	2.5	5.0	6.0	6.0	5.0	Y	G	F	6.3	124	C	<ul style="list-style-type: none"> <li>• Crossing branches.</li> <li>• Crown has been lifted for traffic clearance.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Minor deadwood present.</li> <li>• Multi-stemmed at ground level.</li> <li>• Occluding wounds present in crown.</li> </ul>	-
2	Silver birch	1	260	8.0	1.5	2.5	2.5	2.5	2.5	Y	G	F	3.3	34	C	<ul style="list-style-type: none"> <li>• Minor deadwood present.</li> <li>• Wound present at ground level.</li> </ul>	-
3	Silver birch	1	250	12.5	3.0	5.0	5.0	5.0	4.0	Y	G	G	3.0	28	B	<ul style="list-style-type: none"> <li>• Hardstanding present within RPA of tree.</li> <li>• Previous crown lift, wounds occluding.</li> <li>• Young tree in good health.</li> </ul>	-
4	Sycamore	2	480	12.5	3.0	6.5	6.5	6.5	6.5	EM	G	G	6.0	113	B	<ul style="list-style-type: none"> <li>• Bifurcate at ground level.</li> <li>• Generally a good specimen.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Minor deadwood present.</li> </ul>	-
5	Sycamore	5	440	12.0	3.5	5.0	5.0	5.0	5.0	Y	G	F	5.4	92	B	<ul style="list-style-type: none"> <li>• Damage to main stem present.</li> <li>• Multi-stemmed at ground level.</li> <li>• Unions included at ground level.</li> </ul>	-
6	Silver birch	1	150	7.5	3.0	2.0	2.0	2.0	2.0	Y	F	F	1.8	10	U	<ul style="list-style-type: none"> <li>• Dead tree.</li> </ul>	-
7	Sycamore	2	250	7.5	3.0	5.0	4.0	5.0	4.0	Y	G	G	3.0	28	B	<ul style="list-style-type: none"> <li>• Co-dominant at 1.0 m from ground level.</li> <li>• Crossing branches.</li> <li>• Minor deadwood present.</li> </ul>	-

Appendix A: Results of Arboricultural Survey (continues)



Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
8	Field maple	3	220	7.5	4.0	3.0	3.0	3.0	3.0	Y	F	F	2.7	23	C	<ul style="list-style-type: none"> <li>• Crossing branches.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Minor deadwood present.</li> <li>• Multi-stemmed at ground level.</li> </ul>	-
9	English oak	2	460	9.0	1.5	6.0	6.0	6.0	6.0	Y	G	G	5.7	102	B	<ul style="list-style-type: none"> <li>• Crossing branches.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Ivy present on main stem and in crown.</li> <li>• Minor deadwood present.</li> <li>• Epicormic growth on main stem.</li> <li>• Tear wounds present in branches.</li> </ul>	-
10	English oak	1	460	9.0	3.0	6.0	6.0	6.0	6.0	Y	G	G	5.7	102	B	<ul style="list-style-type: none"> <li>• Epicormic growth present on main stem.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Minor cavities present in main stem.</li> <li>• Minor deadwood present.</li> <li>• Previous crown lift, wounds occluding.</li> </ul>	-
11	English oak	1	720	10.0	3.0	6.0	5.0	5.0	6.0	EM	F	G	8.7	238	B	<ul style="list-style-type: none"> <li>• Dieback present on apical and lateral branches.</li> <li>• Epicormic growth present on main stem.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Minor deadwood present.</li> <li>• Previous limb removal, wounds occluding and decay present.</li> </ul>	-
12	Sycamore	2	340	7.5	3.0	4.0	4.0	4.0	3.5	Y	G	G	4.2	55	C	<ul style="list-style-type: none"> <li>• Bifurcate at ground level.</li> <li>• Epicormic growth at ground level.</li> <li>• Ivy present on main stem.</li> </ul>	-

Appendix A (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
13	Field maple	1	300	9.0	3.0	4.5	4.5	4.5	4.5	Y	G	G	3.6	41	B	<ul style="list-style-type: none"> <li>Ivy present on main stem.</li> <li>Crossing branches.</li> <li>Birds nest present.</li> <li>Hardstanding present within RPA of tree.</li> </ul>	-
14	English oak	3	360	10.0	3.0	5.0	5.0	5.0	2.0	Y	G	G	4.5	64	B	<ul style="list-style-type: none"> <li>Crown touching powerline.</li> <li>Epicormic growth present on main stem.</li> <li>Hardstanding present within RPA of tree.</li> <li>Minor deadwood present.</li> <li>Trifurcate at ground level.</li> </ul>	-
15	English oak	3	370	10.0	5.0	4.0	2.0	5.5	5.5	Y	G	G	4.5	64	B	<ul style="list-style-type: none"> <li>Epicormic growth present on main stem.</li> <li>Hardstanding present within RPA of tree.</li> <li>Minor deadwood present.</li> <li>Trifurcate at ground level.</li> </ul>	-
16	English oak	1	870	16.0	3.0	7.0	8.0	8.0	8.5	EM	G	G	10.5	346	A	<ul style="list-style-type: none"> <li>Crown touching phoneline post.</li> <li>Hardstanding present within RPA of tree.</li> <li>Major deadwood present in crown.</li> <li>Minor deadwood present.</li> <li>Occluding wound present on buttress root.</li> <li>Tear wound present on main stem.</li> </ul>	-
17	Sycamore	1	420	11.0	2.5	5.5	5.5	5.5	6.0	Y	G	G	5.1	81	A	<ul style="list-style-type: none"> <li>Good specimen.</li> <li>Hardstanding present within RPA of tree.</li> <li>Spoil heaped within RPA.</li> <li>Tree located off-site but canopy overhangs study area.</li> </ul>	-

Appendix A (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
18	Silver birch	1	320	10.0	2.5	4.0	3.0	3.0	4.5	EM	G	G	3.9	48	B	<ul style="list-style-type: none"> <li>• Good specimen.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Spoil heaped within RPA.</li> <li>• Minor deadwood present.</li> <li>• Tree located off-site but canopy overhangs study area.</li> </ul>	-
19	Paperbark birch	1	240	8.0	0.5	3.5	3.5	3.5	3.5	Y	G	G	3.0	28	B	<ul style="list-style-type: none"> <li>• Crossing branches.</li> <li>• Good specimen.</li> <li>• Hardstanding within RPA.</li> </ul>	-
20	English oak	1	870	17.0	4.0	6.0	9.0	9.0	7.0	EM	G	F	10.5	346	B	<ul style="list-style-type: none"> <li>• Dieback present on apical and lateral branches.</li> <li>• Features with bat potential present on main limb.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Major and minor deadwood present.</li> <li>• Minor cavities present in crown.</li> <li>• Remembrance tree.</li> <li>• Split limbs present.</li> <li>• Wound present on main stem at 0.0 to 0.5 from ground level; decay evident.</li> </ul>	-
21	English oak	1	540	13.0	4.0	6.0	6.0	5.0	5.5	EM	F	F	6.6	137	B	<ul style="list-style-type: none"> <li>• Epicormic growth on main stem.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Major and minor deadwood present.</li> </ul>	-

Appendix A (cont'd): Results of Arboricultural Survey (continues)



Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
22	English oak	1	840	13.5	3.0	5.0	4.0	3.5	6.0	EM	P	F	10.2	327	U	<ul style="list-style-type: none"> <li>• Crown re-trenchment present.</li> <li>• Epicormic growth on main stem.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Lightning furrow damage to main stem.</li> <li>• <i>Laetiporus sulphureus</i> fungal fruiting body noted on exposed heartwood.</li> <li>• Major and minor deadwood present.</li> <li>• Static mass in crown.</li> <li>• Tree is in heavy decline.</li> </ul>	Monolith tree.
23	English oak	1	800	10.5	3.0	3.5	5.5	5.5	3.5	EM	P	F	9.6	290	U	<ul style="list-style-type: none"> <li>• Cavities present in crown.</li> <li>• Heavy dieback present on apical and lateral branches.</li> <li>• Hardstanding present within RPA.</li> <li>• Ivy present on main stem.</li> <li>• Limited inspection due to ivy.</li> <li>• Major and minor deadwood present.</li> <li>• Poor tree in decline.</li> </ul>	Monolith tree.
24	English oak	1	600	8.0	2.5	3.5	3.5	3.5	3.5	Y	F	F	7.2	163	C	<ul style="list-style-type: none"> <li>• Hardstanding present within RPA of tree.</li> <li>• Ivy present on main stem.</li> <li>• Limited inspection due to ivy.</li> <li>• Heavily suppressed by ivy.</li> </ul>	Sever ivy.

Appendix A (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
25	English oak	1	750	13.0	3.0	4.5	5.0	6.5	5.5	EM	F	F	9.0	255	B	<ul style="list-style-type: none"> <li>• Flaking bark.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Major and minor deadwood present.</li> <li>• Minor cavities present on main stem and in crown.</li> <li>• Occluding wound present on main stem.</li> </ul>	-
26	English oak	1	790	15.0	1.0	6.5	7.5	6.5	9.0	EM	G	G	9.6	290	B	<ul style="list-style-type: none"> <li>• Hardstanding present within RPA of tree.</li> <li>• Major and minor deadwood present.</li> <li>• Occluding tear wounds present in crown.</li> <li>• Rubbish built-up around main stem.</li> <li>• Wounds present on main stem with heartwood exposed.</li> <li>• Fibre buckling on main stem.</li> <li>• Epicormic growth on main stem.</li> <li>• Woodpecker hole in main stem.</li> </ul>	-
27	English oak	1	880	15.0	5.0	7.0	7.0	5.5	10.0	EM	G	G	10.8	366	A	<ul style="list-style-type: none"> <li>• Cavities present in main stem and crown.</li> <li>• Generally a good specimen.</li> <li>• Hardstanding present within RPA of tree.</li> <li>• Major and minor deadwood present.</li> <li>• Tree located off-site, canopy overhangs study area.</li> <li>• Vehicle impact wounds occluding on main stem.</li> </ul>	-

Appendix A (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
28	Sessile oak	1	380	13.0	1.5	<u>5.5</u>	5.0	5.0	5.0	EM	G	G	4.8	72	B	<ul style="list-style-type: none"> <li>• Generally a good specimen.</li> <li>• Tree located off-site, canopy overhangs study area.</li> </ul>	-
29	Ash	1	210	9.0	2.0	<u>3.5</u>	1.5	3.0	5.0	Y	F	F	2.7	23	B	<ul style="list-style-type: none"> <li>• Minor deadwood present.</li> <li>• Suppressed by T30.</li> <li>• Tree located off-site, canopy overhangs study area.</li> </ul>	-
30	Ash	1	300	12.0	2.0	<u>4.5</u>	4.0	4.0	2.0	EM	G	G	3.6	41	B	<ul style="list-style-type: none"> <li>• Bifurcate at 3.5 m from ground level.</li> <li>• Crown touching lamppost</li> <li>• Exposed roots.</li> <li>• Minor deadwood present.</li> <li>• Tree located off-site, canopy overhangs study area.</li> </ul>	-
31	Ash	1	310	12.5	2.5	<u>4.5</u>	4.0	4.0	4.0	EM	G	G	3.9	48	B	<ul style="list-style-type: none"> <li>• Minor deadwood present.</li> <li>• Surface damage to exposed roots, wounds occluding.</li> <li>• Tree located off-site, canopy overhangs study area.</li> </ul>	-
32 (TG3)	English oak	1	800	14.0	3.0	7.5	7.5	3.5	6.5	M	G	G	9.6	290	A	<ul style="list-style-type: none"> <li>• Generally a good specimen.</li> <li>• Minor deadwood present.</li> </ul>	-
33 (TG3)	English oak	1	1040	14.0	2.5	7.5	9.5	7.0	8.5	EM	G	G	12.6	499	A	<ul style="list-style-type: none"> <li>• Generally a good specimen.</li> <li>• Limited inspection due to vegetation.</li> <li>• Minor deadwood present.</li> <li>• Tree tag 01628.</li> </ul>	-
34	Tree removed since previous arboricultural survey (February 2016)																
35 (TG3)	English oak	1	950	14.0	2.0	6.5	9.5	9.5	10.0	EM	G	G	11.4	408	A	<ul style="list-style-type: none"> <li>• Epicormic growth present on main stem.</li> <li>• Good specimen.</li> <li>• Minor cavity present in crown.</li> <li>• Tree tag 00625</li> </ul>	-

Appendix A (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
36	Tree removed since previous arboricultural survey (February 2016)																
37	Tree removed since previous arboricultural survey (February 2016)																
38	Tree removed since previous arboricultural survey (February 2016)																
39	Tree removed since previous arboricultural survey (February 2016)																
40	Tree removed since previous arboricultural survey (February 2016)																
41	Tree removed since previous arboricultural survey (February 2016)																
42	English oak	1	750	20.0	2.0	8.0	<u>8.0</u>	8.0	8.0	Y	G	G	9.0	255	A	<ul style="list-style-type: none"> <li>• Generally a good specimen.</li> <li>• Limited inspection due to access.</li> <li>• Minor deadwood present.</li> <li>• Tree located off-site, canopy overhangs study area.</li> </ul>	-
43	English oak	1	800	23.0	2.0	9.0	<u>9.0</u>	9.0	7.0	Y	G	G	9.6	290	A	<ul style="list-style-type: none"> <li>• Generally a good specimen.</li> <li>• Limited inspection due to access.</li> <li>• Minor deadwood present.</li> <li>• Tree located off-site, canopy overhangs study area.</li> </ul>	-
44	English oak	1	880	23.0	2.5	8.5	<u>8.5</u>	8.5	8.5	EM	G	G	10.8	366	A	<ul style="list-style-type: none"> <li>• Good specimen.</li> <li>• Minor deadwood present.</li> </ul>	-
45	English oak	1	920	20.0	3.0	6.0	<u>9.5</u>	6.5	7.0	EM	G	G	11.1	387	A	<ul style="list-style-type: none"> <li>• Birds nest present.</li> <li>• Epicormic growth present on main stem and in crown.</li> <li>• Good specimen.</li> <li>• Minor deadwood present.</li> </ul>	-
46	English oak	1	610	18.0	3.0	4.0	<u>4.0</u>	5.5	6.0	Y	G	F	7.5	177	B	<ul style="list-style-type: none"> <li>• Epicormic growth present on main stem and in crown.</li> <li>• Minor deadwood present.</li> <li>• Split main leader.</li> </ul>	-

Appendix A (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
47	English oak	1	710	16.0	4.0	5.0	<u>6.5</u>	6.0	7.0	Y	G	G	8.7	238	A	<ul style="list-style-type: none"> <li>• Epicormic growth present on main stem and in crown.</li> <li>• Generally a good specimen.</li> <li>• Minor cavities present in main stem.</li> <li>• Minor deadwood present.</li> <li>• Previous crown lift, wounds occluding.</li> </ul>	-
48	Tree removed since previous arboricultural survey (February 2016)																
G1	Common lime Silver birch	-	150	9.0	1.0	3.0	3.0	3.0	3.0	Y	G	G	1.8	10	B	<ul style="list-style-type: none"> <li>• Ivy present on main stems.</li> <li>• Crossing branches.</li> <li>• Minor deadwood present.</li> </ul>	-
G2	Norway maple	-	150	6.0	1.0	2.5	2.5	2.5	2.5	Y	G	G	1.8	10	C	<ul style="list-style-type: none"> <li>• Offers screening from road.</li> <li>• Young group in good health.</li> </ul>	-
G3	Ash English oak Field maple Flowering cherry Goat willow Norway maple Scots pine Sycamore Whitebeam	-	300	9.0	3.0	<u>5.0</u>	<u>5.0</u>	<u>5.0</u>	5.0	Y SM	G	G	3.6	41	A	<ul style="list-style-type: none"> <li>• Birds nests' present in a number of specimens.</li> <li>• Dead and dying trees present.</li> <li>• Group located off-site, canopy overhangs study area.</li> <li>• Rabbit warren present within group.</li> </ul>	-
G4	Ash English oak Field maple Flowering cherry Goat willow Norway maple Scots pine Sycamore Whitebeam	-	250	9.0	3.0	<u>3.5</u>	<u>3.5</u>	<u>3.5</u>	3.5	Y	G	G	3.0	28	A	<ul style="list-style-type: none"> <li>• Young group in good health.</li> </ul>	-

Appendix A (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
G5	Ash Blackthorn Damson Hawthorn Plum	-	430	6.5	0.5	5.0	5.0	5.0	5.0	Y EM	G	G	5.4	92	B	<ul style="list-style-type: none"> <li>Young group in good health.</li> </ul>	-
G6	Tree group removed since previous arboricultural survey (February 2016)																
G7	Tree group removed since previous arboricultural survey (February 2016)																
G8	Tree group removed since previous arboricultural survey (February 2016)																
G9	Sycamore English oak Pear Hawthorn	-	240	12.0	0.5	3.5	3.5	3.5	3.5	Y SM	F	F	3.0	28	C	<ul style="list-style-type: none"> <li>Hardstanding within RPAs.</li> <li>Provides screening.</li> <li>Limited contribution.</li> </ul>	-
H1	Ash Beech Crab apple Elder Elm English oak Hawthorn Holly Rowan Sycamore Yew	-	220	5.0	0.0	2.5	2.5	2.5	2.5	Y	G	G	2.7	23	C	<ul style="list-style-type: none"> <li>Sparse in areas.</li> <li>Offers screening from road.</li> <li>Dead and dying trees present.</li> <li>Unmanaged, outgrown hedgerow.</li> </ul>	-
H2	Hedgerow removed since previous arboricultural survey (February 2016)																
H3	Crab apple Elm English oak Field maple Hawthorn	-	100	1.0	0.0	1.5	1.5	1.5	1.5	Y	G	G	1.2	5	C	<ul style="list-style-type: none"> <li>Historically laid in areas.</li> <li>Well managed.</li> </ul>	-
H4	Hedgerow removed since previous arboricultural survey (February 2016)																

Appendix A (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	Crown Clearance (m)	Branch Spread (m)				Age	Phys Cond	Struc Cond	RPA (m)	RPA Radius (m)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W								
H5	Ash Blackthorn Elm English oak Hawthorn Hazel Sycamore Whitebeam	-	100	4.0	0.0	2.0	2.0	2.0	2.0	Y	G	G	1.2	5	C	• Managed in areas.	-
H6	Hedgerow removed since previous arboricultural survey (February 2016)																
W1	English oak Scots pine Silver birch	-	<u>880</u>	20.0	3.0	<u>8.0</u>	<u>8.0</u>	<u>8.0</u>	<u>8.0</u>	Y EM	G	G	10.8	366	A	• Canopy overhangs road. • Dead and dying trees present. • Limited inspection due to access.	-
<b>Key</b> <u>Age Class</u> Y: Young = tree within first third of average life expectancy EM: Early mature = tree within second third of average life expectancy M: Mature = tree within final third of average life expectancy OM: Over mature = tree beyond average life expectancy						<u>Physiological Condition</u> G: Good = no health problems F: Fair = symptoms of ill health that may be remedied P: Poor = poor health						<u>Structural Condition</u> G: Good = no structural defects F: Fair = remedial structural defects P: Poor = significant structural defects  <u>000</u> : Estimated dimension due to access restrictions <b>(000)</b> : TPO Reference Number RPA: Root Protection Area					

Appendix A (cont'd): Results of Arboricultural Survey