

# ARBORICULTURAL IMPACT ASSESSMENT

(INC. TREE SURVEY TO BS 5837:2012)

CLIENT - Uppingham School  
PROJECT - Meadhurst  
DOC. REF - P1845-MEAD-AIA01 V2  
PLANNING REF - n/a  
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## PURPOSE OF DOCUMENT

This document assesses the anticipated impact that the proposed scheme will have on the surrounding tree population, and outlines possible technical design considerations and mitigation measures that should be implemented in order to minimise the overall arboricultural impact.

## ARBORICULTURAL DOCUMENT REGISTER

Planning Documents		Version Issued	
Document	Ref.	Current Version	Document Date
Arb. Impact Assessment	P1845-MEAD-AIA01	V2	29/01/2024
Arb. Site Plan (Existing)	P1845-MEAD-ASP01	V2	12/12/2023
Arb. Site Plan (Proposed)	P1845-MEAD-ASP02	V2	29/01/2024

## 1. SUMMARY

### 1.1 PROPOSED DEVELOPMENT

- 1.1.1 Partial demolition and reconstruction of 'Meadhurst' boarding house, to provide high quality accommodation, and the installation of a new substation.

### 1.2 TREE SURVEY

- 1.2.1 The following woody vegetation was considered to be of note in relation to any development of the site: 57 individual trees, 2 groups of trees, and 8 hedges.

### 1.3 PROTECTION MEASURES

- 1.3.1 The implementation of tree protection measures will be required to ensure that the site's retained trees remain undamaged. Information as to the requirements of such can be found in *Section 3.11*.

### 1.4 TECHNICAL DESIGN CONSIDERATIONS

- 1.4.1 The design team must consider and implement the design advice provided in *Section 3.12* of this document.

### 1.5 PROVISION OF NEW TREE PLANTINGS

- 1.5.1 The proposed planting plan for the scheme includes 17 new trees. This is sufficient to meet the replacement planting requirements outlined in section 3.1 of this report.
- 1.5.2 In addition to this, a further 16 pleached holm oaks are to be planted to provide screening with the carpark to the west of the site.

### 1.6 CONCLUSION

- 1.6.1 The table below summarises the trees which will be lost, pruned, or protected by special measures during the development project.

	Tree Category			
	A	B	C	U
Trees/groups to be removed (* groups to have sections removed)	-	T26	T25, G2	-
Hedges/shrubs to be removed (* hedges to have sections removed)	-	-	H3, H4, *H2	-
Trees to be transplanted	-	-	T29, T30, T31, T32, T33	-
Trees/groups/hedges to be pruned	-	-	-	-
Trees to be subjected to RPA incursions (excl. no-dig techniques)	T34	T53, T54	-	-
Trees to be protected through arboricultural measures / supervision (other than barriers and ground protection)	T28, T34, T35	T27, T53, T54, G1	-	
Trees requiring specialist design considerations (for purposes of minimising arboricultural impact)	T28, T100	T54, T55, T101, G1	-	

1.6.2 Considering the anticipated arboricultural impact from the construction and demolition activities associated with the development of the site, and the implementation of the proposed mitigation measures outlined in this document, the proposed development’s arboricultural impact is considered to be **low**.

## 2 GENERAL INFORMATION

### 2.1 BRIEF

- 2.1.1 Ligna Consultancy Ltd were instructed by the client, Uppingham School, to undertake a tree survey in accordance with BS 5837:2012 and to prepare an arboricultural impact assessment for the proposed scheme at Meadhurst.

### 2.2 PROPOSED DEVELOPMENT

- 2.2.1 Partial demolition and reconstruction of 'Meadhurst' boarding house, to provide high quality accommodation, and the installation of a new substation.

### 2.3 SITE

- 2.3.1 The site discussed within this report is located at:

Meadhurst  
 Ayston Road  
 Uppingham  
 Oakham  
 LE15 9RL

### 2.4 PROJECT CONTACT

Role	Name	Telephone	Email
Arboricultural Consultant	Ben Hallinan	01284 598008	<a href="mailto:benjamin@lignaconsultancy.co.uk">benjamin@lignaconsultancy.co.uk</a>

### 2.5 SCOPE OF REPORT

- 2.5.1 This report consists of the following:

- Appraisal of arboricultural impact
- Outline of tree protection & mitigation measures

- 2.5.2 Appendices included with this report are:

- Tree Survey
- Site Photos
- Arboricultural Site Plan (Existing) (P1845-MEAD-ASP01 V2)
- Arboricultural Site Plan (Proposed) (P1845-MEAD-ASP02 V2)

### 2.6 DOCUMENTS PROVIDED

- 2.6.1 The following documents were submitted to Ligna Consultancy Ltd for consideration:

- Topographical Survey
- Proposed Site Plans
- DR-L-1001\_revP11

- DR-L-1002\_revP04
- External Site Services Strategy (J7359 XX XX SK E 00005) – out of date
- Outline Planting Plan Rev. P02

## 2.7 AUTHOR

2.7.1 Benjamin Hallinan is a professional member of the Arboricultural Association. He has worked in arboriculture for over ten years, including management and supervisory roles undertaking both domestic and commercial arboricultural work. He possesses a FdSc in arboriculture, LANTRA Professional Tree Inspection training, and has also received advanced training in tree related subsidence and BS 5837. A full CV and list of experience and CPD is available on request.

## 2.8 LIMITATIONS

- 2.8.1 Detailed inspections and recommendations relating to tree condition and health are not included within this report.
- 2.8.2 Any engineering solutions presented within this document are recommendations for their suitability from an arboricultural viewpoint. The architect and structural engineers should make the final decision on the suitability of the methods advised.
- 2.8.3 Information provided by third parties, considered in the creation of this report, is assumed to be correct.

## 2.9 PROTECTED TREES

- 2.9.1 Details of trees (if any) that are protected by Tree Preservation Orders (TPOs) or are situated within Conservation Area are available upon request.
- 2.9.2 It is the standard approach of Ligna Consultancy not to obtain this information from the LPA prior to an application, as the LPA will provide details of nearby protected trees as part of the consultation.
- 2.9.3 It should also be noted that granted planning permission that includes tree work specifications overrides Tree Preservation Orders and Conservation Area protections (approved works only).

## 2.10 NESTING BIRDS / BATS

- 2.10.1 Officially, the 'Bird Nesting Season' is between February and August (Natural England). During this time, it is recommended that vegetation works (tree or hedge cutting) or site clearance is avoided if there is a reasonable potential for the disruption of nesting birds.
- 2.10.2 All parties involved in the management and/or development of a site must actively avoid causing disturbance and disruption to nesting birds. Failure to do this may result in an infringement of the ***Wildlife and Countryside Act 1981*** and the ***European Habitats Directive 1992 / Nesting Birds Directive***.
- 2.10.3 When tree or vegetation clearance work has to be undertaken during the

nesting season, a pre works survey needs to be carried out by a suitably competent person.

2.10.4 Generally, it should be assumed that birds will be nesting in trees, and it is down to the site/project manager that any activities that have the potential to disturb nesting birds are assessed for their suitability and potential impact, and records are kept that show that any works carried out in the management of trees and other vegetation have not disturbed nesting birds.

## 2.11 SUMMARY OF TERMS

Term	Definition
Species	The type of tree.
Stem	The main woody upright portion of a tree that is supported by the roots and supports the crown.
Branch Spread	The length of a tree's branches from stem to tip measured from the north, east, south and western sides of the crown.
BS 5837	The commonly used name for the official guidance document relating to trees and development ( <i>BS 5837:2012 - Trees in relation to design, demolition and construction – Recommendations</i> )
Canopy / Crown	The branches, leaves, and reproductive structures extending from the trunk or main stems of a tree/trees.
DBH	Diameter of a tree's stem, measured as per BS 5837:2012
RPA	The root protection area (RPA) is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
Facilitation Tree Works	Tree pruning/felling required in order to facilitate the implementation of the proposed development.
Tolerance	The relative tolerance the species can show to construction related activities such as root-loss, soil compaction and other development pressures.
Category (Cat.)	Categorisation of the tree's value based on the methodology shown in Appendix 1, A1.4. This rating takes into account the size, quality, condition, estimated remaining life expectancy and legal status of each tree.

## 2.12 COPYRIGHT

2.12.1 This report was prepared for use by the Clients and their contractors for planning purposes. The report and its appendices may not be copied, modified, or distributed beyond the necessary parties without the written consent of Ligna Consultancy Ltd.







### 3.3 TREES TO BE TRANSPLANTED TO A DIFFERENT LOCATION WITHIN SCHOOL GROUNDS

**Affected Trees** Cat. C: T29, T30, T31, T32, T33 (*Sequia giganteum*)

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**Impact Appraisal & Mitigation** 5 young *Sequia giganteum* trees are to be transplanted elsewhere within the wider school site. This is to allow for the planting of 16 pleached *Quercus ilex* trees, which are to provide screening of the carpark.

There is no notable impact resulting from the transplanting of these trees.

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**Significance (with mitigation)** Negligible

### 3.4 INSTALLATION OF NEW SUBSTATION

**Affected Trees** Cat. A: T28 (*Pinus nigra*)  
 Cat. B: G1 (Mixed group), T101 (*Acer pseudoplatanus*)

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**Impact Appraisal & Mitigation** The proposed substation has been sited so as to minimise any impact on the adjacent trees, however, its connecting cabling does require excavation within the RPAs of T27, T28 and G1.

*The exact routing of this cabling is not yet available, however, in instances where it must pass through an RPA, the cabling will be routed together in common ducts, with any inspection chambers being located outside of the RPAs.*

*In addition to this, specialist excavation methods such as moling or airspade/vacuum excavation will be required so as to minimise any rooting area disruption when within an RPA.*

*Details of the cable routing and the method of installation can be detailed within an Arboricultural Method Statement at a later date.*

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**Significance (with mitigation)** Acceptable to Low

### 3.5 DEMOLITION OF EXISTING STRUCTURES

**Affected Trees** All retained trees

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**Impact Appraisal & Mitigation** Whilst the demolition of the existing building will not directly impact any retained tree, it has the potential to cause damage to nearby trees if done incorrectly. Damage can be prevented through the use of the following arboriculturally sensitive methods:

*- Any plant and vehicles engaged in demolition works must either operate from outside the RPA of all trees or from atop existing*

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surfacing or temporary ground protection.

- Where within 3m of the crown of any trees' branches, the demolition should be undertaken inwards, within the footprint of the existing building (often referred to as "top down, pull back" demolition).

- If possible, when within an RPA, existing building foundations should be left in-situ, to avoid unnecessary rooting area disruption. Should the retention of the existing foundations be unfeasible, their removal must be accomplished via excavation on the internal edge of the foundations. Excavations on the outer edge of the foundations should be avoided.

- The removal of the existing foundations from within an RPA must be done under the supervision of the Arboricultural Clerk of Works.

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**Significance**  
(with mitigation) Negligible

### 3.6 REMOVAL/REPURPOSING OF EXISTING SURFACING WITHIN RPAS

**Affected Trees** Cat. A: T34 (Cedrus deodara), T35 (Sequoia giganteum)

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**Impact Appraisal & Mitigation** As part of the proposed scheme, the existing surfacing within the RPAs of T34 and T35 is to be modified, with some areas being re-laid to lawn and others areas being retained as surfacing.

The removal of hard surfacing from within an RPA has the potential to cause significant damage to any underlying roots.

*Damage can be prevented through the use of arboriculturally sensitive methods; these must include:*

- Any machinery involved in the removal of the surfacing from within an RPA must be situated atop intact existing surfacing or ground protection matting.

- During the removal of the surfacing, no excavating of the underlying soil is to be permitted.

- Any roots that are exposed during the removal of surfacing must be covered with topsoil within 48 hours.

- The exposed RPA's must be cordoned off using tree protection barriers, with no machinery or pedestrian access throughout the project.

- This process must be done under the supervision of the scheme's arboriculturalist.

- When re-establishing the ground level with additional topsoil and grass seed, it must not be higher than the tree's root collar or the surrounding ground level.

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- Where new surfacing is to be added in place of old surfacing, the existing subbase must be retained and repurposed with any additional subbase reinforcement being added atop the existing.

**Significance**  
*(with mitigation)* Negligible

**3.7 EXCAVATIONS & INSTALLATION OF FOUNDATIONS**

**Affected Trees** Cat. A: T34 (Cedrus deodara)  
Cat. B: T53 (Prunus avium), T54 (Tilia x Europaea)

**Impact Appraisal & Mitigation**

The excavation and installation of the proposed building foundations will result in negligible RPA incursions of <2% to T34, T53 and T54.

Owing to the relative tolerance of the affected species to root disturbance and loss, and considering the small size of the incursions, any lasting impact on the overall health and condition of the trees are believed to be well within tolerable limits. In addition to this, the lost rooting area can be compensated for elsewhere, contiguous with their RPAs.

*To minimise the impact of the incursion on the tree, during the excavation of the foundations, should any roots with a diameter in excess of 20mm be uncovered, they will require cutting with pruning loppers. This task must be done under the supervision of the schemes arboriculturalist.*

Furthermore, the casting of the foundations has the potential to result in the poisoning of nearby tree roots (uncured cement is toxic to plants).

*To prevent the poisoning of surrounding tree roots, an impermeable membrane must first be laid within any excavations within the RPA of a retained tree prior to the pouring of concrete.*

**Significance**  
*(with mitigation)* Negligible

**3.8 INSTALLATION OF SURFACING WITHIN RPAS**

**Affected Trees** Cat. A: T28 (Pinus nigra), T100 (Acer pseudoplatanus)  
Cat. B: T54 (Tilia x Europaea), T55 (Tilia x Europaea), T101 (Acer pseudoplatanus)

<b>Impact Appraisal &amp; Mitigation</b>	<p>New specialist no-dig surfacing is proposed within the RPAs of 5 trees (2x Cat. 'A', 3x Cat. 'B')</p> <p><i>To prevent the root loss and disturbance that the installation of traditional surfacing would result in, a specialist no-dig 3D cellular system (Cellweb TRP) must be used as the subbase for the new surfacing (see Arb. Site Plan Proposed for required area of specialist surfacing).</i></p> <p><i>T28, T54, T55 and T100 are to have a system of ≥150mm thickness used, owing to its intended use for vehicular traffic (refer to manufacturer's guidance on suitable loading)</i></p> <p><i>T101 is to utilise a 75mm thick system, owing to it being used for pedestrian access only (refer to manufacturer's guidance on suitable loading).</i></p> <p>This type of specialist surfacing allows for the retention of underlying tree roots while protecting against possible soil compaction damage and allowing the continuation of water and gas exchange between soil and air.</p>
<b>Significance (with mitigation)</b>	Negligible

3.9 IMPLEMENTATION OF PROPOSED SCHEME

<b>Affected Trees</b>	All retained trees
<b>Impact Appraisal &amp; Mitigation</b>	<p>During the construction process, all retained trees are susceptible to damage from general construction related activities.</p> <p><i>In order to reduce the risk of construction damage to the site's retained trees, tree protection barriers and temporary ground protection must be installed before the commencement of any site works.</i></p>
<b>Significance (with mitigation)</b>	Negligible

TREE RELATED SHADING AND NUISANCES

3.10 LONG-TERM IMPACT OF RETAINED TREES ON PROPOSED SCHEME

3.10.1 Shading

3.10.1.1 None of the trees observed are considered to possess a significant potential for a negative shading impact on the proposed building; any tree-related shading of property is expected to be minimal, transient and well within the recommended levels outlined in BRE 209 guidance.

*Note - Shading arcs, as discussed in BS 5837, have not been included on the Arb. Site Plans owing to their poor accuracy, and the extreme unlikelihood that the shading will not be within tolerable levels. Ligna Consultancy Ltd have undertaken many detailed shading assessments, and in all situations, light levels have been shown to be well within acceptable levels (BRE 209). Situations where lighting levels may not be suitable are most likely to involve rows of large dense conifers near to dwellings.*

### 3.10.2 Canopy Growth

3.10.2.1 The layout of the scheme has been designed with consideration of the location and growth potential of nearby trees. Owing to such, no noteworthy contention between tree canopies and property are anticipated.

### 3.10.3 Nuisances

3.10.3.1 Owing to the tree species present within and around the site, and the layout of the proposed scheme, additional unreasonable tree-related nuisances, such as leaf and fruit-fall, are not thought to exist beyond what might generally be considered as acceptable limits.

## MITIGATION PROPOSAL

*The following proposals, if approved, should be detailed within an arboricultural method statement and tree protection plan prior to the commencement of any development associated works:*

### 3.11 PROTECTIVE MEASURES

#### 3.11.1 Tree Protection Barriers

3.11.1.1 Barriers shall be erected, and a construction exclusion zone established, to protect all retained trees during the construction of the proposed scheme.

#### 3.11.2 Temporary Ground Protection

3.11.2.1 Where access is required, ground protection boards shall be installed within RPAs to protect the adjacent trees from soil compaction damage during the implementation of the proposed scheme.

#### 3.11.3 Demolition of Structures Within <3m of a Retained Tree.

3.11.3.1 Any plant and vehicles engaged in demolition works must either operate from outside the RPA of all trees or from atop existing surfacing or temporary ground protection.

3.11.3.2 Where within 3m of the crown of any trees' branches, the

demolition should be undertaken inwards, within the footprint of the existing building (often referred to as "top down, pull back" demolition).

3.11.3.3 If possible, when within an RPA, existing building foundations should be left in-situ, to avoid unnecessary rooting area disruption. Should the retention of the existing foundations be unfeasible, their removal must be accomplished via excavation on the internal edge of the foundations. Excavations on the outer edge of the foundations should be avoided.

#### 3.11.4 Arboriculturally Sensitive Removal/Repurposing of Surfacing

3.11.4.1 Where existing surfacing is to be removed from within the RPA of a retained tree, the following methods must be used:

- Any machinery involved in the removal of the surfacing from within an RPA must be situated atop intact existing surfacing or ground protection matting.
- During the removal of the surfacing, no excavation of the underlying soil is to be permitted.
- Any roots that are exposed during the removal of the surfacing must be covered with topsoil within 48 hours.
- The exposed RPA's must be cordoned off using tree protection barriers. Any access within the cordoned off area must be preapproved by the Arboricultural Clerk of Works.
- Where new surfacing is to be added in place of old surfacing, the existing subbase must be retained and repurposed.

#### 3.11.5 Pruning of Exposed Roots

3.11.5.1 To ensure minimal impact to any exposed roots during the excavation of foundations within RPAs, root pruning must be undertaken during the excavations. This will involve the pruning of any exposed roots >20mm diameter. This must be done using purpose made pruning loppers so as to ensure a clean cut.

### 3.12 TECHNICAL DESIGN CONSIDERATIONS

#### 3.12.1 Installation of Strip/Trench Foundations Within RPAs

3.12.1.1 When within the RPA of a retained tree, an impermeable membrane must first be laid within any excavations prior to the pouring of concrete (uncured cement is toxic to plants).

#### 3.12.2 Use of Specialist No-Dig Surfacing within RPAs

3.12.2.1 A no-dig 3D geocell system (we recommend Cellweb TRP) must be used for all new surfacing within the RPAs of T28, T54, T55, T100 and T101.

- 3.12.2.2 T28, T54, T55 and T100 are to have a system of  $\geq 150$ mm thickness used, owing to its intended use for vehicular traffic.
- 3.12.2.3 T101 is to utilise a 75mm thick system, owing to it being used for pedestrian access only.
- 3.12.2.4 Owing to the nature of no-dig surfacing, the FSL will likely be increased as a result of its use. This may result in the need to increase the level of areas of adjacent existing surfacing so as to provide a consistent surface level.

### 3.12.3 Installation of Substation

- 3.12.3.1 The proposed substation has been sited so as to minimise any impact on the adjacent trees, however, its connecting cabling does require excavation within the RPAs of T27, T28 and G1.
- 3.12.3.2 The exact routing of this cabling is not yet available, however, in instances where it must pass through an RPA, the cabling will be routed together in common ducts, with any inspection chambers being located outside of the RPAs.
- 3.12.3.3 In addition to this, specialist excavation methods such as moling or airspade/vacuum excavation will be required so as to minimise any rooting area disruption.
- 3.12.3.4 Details of the cable routing and the method of installation can be detailed within an Arboricultural Method Statement at a later date.

### 3.12.4 Routing and Installation of Utility Apparatus

- 3.12.4.1 Wherever possible, utility apparatus should be routed outside of any RPAs. Failing this, services should be routed together in common ducts, with any inspection chambers being located outside of the RPA.
- 3.12.4.2 Where it is necessary for underground services to intersect an RPA, specialist excavation methods such as moling or airspade/vacuum excavation.
- 3.12.4.3 In such situations, the design team should consult with Ligna Consultancy in order to establish a suitable services route, and specify the specialist excavation method most suitable.

### 3.12.5 Potential for Subsidence & Heave

- 3.12.5.1 Where shrinkable sub-soils may be present, the potential for tree related subsidence and/or ground heave (resultant from proposed tree removals) must be considered by a structural engineer prior to the final specification of foundation depth/type.

## 3.13 PROVISION OF NEW TREE PLANTINGS

- 3.13.1 The proposed planting plan for the scheme includes 17 new trees. This is



sufficient to meet the replacement planting requirements outlined in section 3.1 of this report.

3.13.2 In addition to this, a further 16 pleached holm oaks are to be planted to provide screening with the carpark to the west of the site.

## CONCLUSION

### 3.14 SUMMARY OF THE DEVELOPMENT’S OVERALL IMPACT

3.14.1 The table below summarises the trees which will be lost, pruned, or protected by special measures during the development project.

	Tree Category			
	A	B	C	U
Trees/groups to be removed (* groups to have sections removed)	-	T26	T25, G2	-
Hedges/shrubs to be removed (* hedges to have sections removed)	-	-	H3, H4, *H2	-
Trees to be transplanted	-	-	T29, T30, T31, T32, T33	-
Trees/groups/hedges to be pruned	-	-	-	-
Trees to be subjected to RPA incursions (excl. no-dig techniques)	T34	T53, T54	-	-
Trees to be protected through arboricultural measures / supervision (other than barriers and ground protection)	T28, T34, T35	T27, T53, T54, G1	-	
Trees requiring specialist design considerations (for purposes of minimising arboricultural impact)	T28, T100	T54, T55, T101, G1	-	

3.14.1 Considering the anticipated arboricultural impact from the construction and demolition activities associated with the development of the site, and the implementation of the proposed mitigation measures outlined in this document, the proposed development’s arboricultural impact is considered to be **low**.

## 4 APPENDICES

### 4.1 APPENDICES

4.1.1 The following appendices are included within this document:

Appendix	Document
1	Tree Survey
2	Site Photos
3	Arboricultural Site Plan (Existing) (P1845-MEAD-ASP01)
4	Arboricultural Site Plan (Proposed) (P1845-MEAD-ASP02)

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# APPENDIX 1 TREE SURVEY

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## APPENDIX 1 – TREE SURVEY

### A1.1 SITE VISIT

- i) A site visit was undertaken by Jennifer Sinclair of Ligna Consultancy, on the 06/03/2023.

### A1.2 METHOD OF DATA COLLECTION

- i) Data was collected using the recommendations laid out in British Standard 5837:2012 as a guide. All observations were from ground level without detailed or invasive investigations.
- ii) Measurements have been calculated using a laser measurer and diameter tape/calipers. Where this was not possible or reasonably practical, measurements have estimated by eye.
- iii) The trees were surveyed and assessed impartially and irrespective of the proposed development. Management recommendations should be implemented regardless of any proposed development for reasons of sound arboricultural management or safety.
- iv) The method used for categorising the trees can be seen in section A1.3. This is an improved variation of the method suggested in BS 5837:2012.
- v) BS 5837:2012 recommends that better quality (category A and B trees) are retained where possible. Planning permission overrides a Tree Preservation Order and Conservation Area. Furthermore, trees are a material consideration in the UK planning system irrespective of their legal status. Trees in land adjacent to the site are considered where they may be impacted by development; for example, when roots or branches encroach onto the site.
- vi) Trees may be recorded as group or woodland where:
  - The canopies touch.
  - The trees have more group value than individual merit.
  - They are part of a formal landscape feature like an avenue.
  - It is impractical to record them individually.
- vii) Trees within groups or woodlands etc. are recorded individually where it is necessary to distinguish them from others.

### A1.3 SURVEY KEY & GLOSSARY OF TERMS

Term	Definition
Ref.	Tree reference number
Tag	Physical tag attached to some trees with unique identification number (not the same as Ref.)
Species	The trees' scientific and common name
Height	The measured/estimated height of the tree (measured in metres)
Branch Spread	The length of a tree's branches from stem to tip measured from the north, east, south and western sides of the crown.
Crown Clearance	Crown clearance is the measurement of height between the trees branches in the outer third of its crown and the floor. Crown clearance has only been recorded where it is considered to be of relevance to the proposed scheme. The height of the first significant branch is also generally recorded and is discussed where relevant.
DBH	Diameter of a trees' stem, measured as per BS 5837:2012
RPA	The root protection area (RPA) is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
Life Stage	A quantification of a trees' state of physical maturity: <ul style="list-style-type: none"> <li>• Young</li> <li>• Semi-mature</li> <li>• Early-Mature</li> <li>• Mature</li> <li>• Late-mature</li> <li>• Veteran</li> <li>• Dead</li> </ul>
Structural	Summary statement relating to the structural condition of a tree: <ul style="list-style-type: none"> <li>• Good (no apparent problems / normal optimal condition for a tree of its species.)</li> <li>• Fair (minor problems, no instabilities)</li> <li>• Poor (major problems, potential instabilities)</li> <li>• Unstable (extreme problems, likely to result in failure)</li> </ul>
Vitality	Summary statement relating to the overall observed vitality of a tree: <ul style="list-style-type: none"> <li>• Good (no apparent problems / normal optimal vitality for a tree of its species)</li> <li>• Fair (minor / temporary reduction in tree vitality)</li> <li>• Poor (major reduction in tree vitality, often with some branch dieback)</li> <li>• Dead / Dying (extreme / total reduction in tree vitality)</li> </ul>
General Management Recommendations	Remedial tree works recommended regardless of whether the site is developed or not.
Facilitation Tree Works	Tree pruning/felling required in order to facilitate the implementation of the proposed development.
Development Related Tree Works	Tree works that are required as part of the proposed scheme.
Tolerance	The relative tolerance the species can show to construction related activities such as root-loss, soil compaction and other development pressures.
Cat.	Categorisation of the tree's value based on the methodology shown in A1.4. This rating takes into account the size, quality, condition, estimated remaining life expectancy and legal status of each tree.

**A1.4 TREE CATEGORISATION METHODOLOGY**

Category and definition	Criteria / Subcategories			Label on plan
	1 – Mainly arboricultural qualities	2 – Mainly landscape qualities	3 – Mainly cultural values/conservation	
<b>Trees worthy of being a material constraint:</b>				
<p><b>Category A</b></p> <p>Trees of high quality, capable of providing a significant contribution to local amenity (usually large in size) and that generally possess an estimated remaining life expectancy of 40+ years.</p>	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Cat. A</div>
<p><b>Category B</b></p> <p>Trees of moderate quality and with an estimated remaining life expectancy of 20+ years, that are capable of providing a notable contribution to local amenity but are lacking the condition of category A trees (usually medium to large in size).</p>	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage); or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Cat. B</div>
<b>Trees worthy of material consideration:</b>				
<p><b>Category C</b></p> <p>Trees of a low quality, small size, or incapability to be protected within the legal framework. These trees generally possess an estimated remaining life expectancy of 10+ years.</p>	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Cat. C</div>
<b>Trees unsuitable for retention owing to condition:</b>				
<p><b>Category U</b></p> <p>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.</p>	<ul style="list-style-type: none"> <li>Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality</li> </ul>			<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Cat. U</div>

**A1.5 SUMMARY OF DATA**

- i) The following woody vegetation was considered to be of note in relation to any development of the site: 57 individual trees, 2 groups of trees, and 8 hedges.
- ii) The following tables show the category distribution and life stage of the trees distributed within the site:

	Tree Category			
	A	B	C	U
Individual Trees	10	12	35	-
Groups	-	1	1	-
Woodland Groups	-	-	-	-
Hedges	-	-	8	-
Shrubs	-	-	-	-

Table 1 - Table showing category distribution within site.

	Life Stage						
	Young	Semi-Mature	Early-Mature	Mature	Late-Mature	Veteran	Dead
Individual Trees	22	8	5	16	6	-	-
Groups	-	-	1	1	-	-	-
Woodland Groups	-	-	-	-	-	-	-
Hedges	2	1	5	-	-	-	-
Shrubs	-	-	-	-	-	-	-

Table 2 - Table showing life stage distribution within the site.



Ref.	Tag	Species	Height (m)	Crown (N/E/S/W)	Crown Clearance (m)	DBH (mm)	Life Stage	Structural	Vitality	Additional Notes	General Management Recommendations	Priority	Development Related Tree Works	Tolerance	RPA Radius (m)	RPA Area (m <sup>2</sup> )	Cat.
T1		Acer pseudoplatanus (Sycamore)	15.5	7 / 7 / 7 / 7	4.5	350	Mature	Good	Good	Estimated canopy and stem dimensions used as tree located on adjacent site with overhanging branches.				Moderate	4.2	55.4	B1
T2		Taxus baccata (Yew)	4.5	3 / 3 / 3 / 3	1.8	197	Early-Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches.				Moderate - Good	2.4	17.6	C1
T3		Ilex spp. (Holly)	6	2.5 / 2.5 / 2.5 / 2.5	1.5	153	Early-Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches.				Good	1.8	10.5	C1
T4	1 4 2 5	Taxus baccata (Yew)	16.5	5 / 7 / 5 / 5	1	736	Mature	Good	Good	Stem forks at ground level east to west, not of structural concern.				Moderate - Good	8.8	244.7	B1
T5	1 4 2 4	Taxus baccata (Yew)	16.5	5.5 / 7 / 5.5 / 5.5	1.5	469	Mature	Good	Good					Moderate - Good	5.6	99.3	B1
T6	1 4 2 3	Fraxinus excelsior (Ash)	15	7.5 / 9 / 8 / 8	2	1000	Late-Mature	Good	Good	Tree historically pollarded with mature regrowth.				Moderate	12.0	452.4	A2
T7	1 4 2 2	Tilia x Europaea (Common Lime)	22	8.5 / 8.5 / 10.5 / 7.5	1.8	1260	Late-Mature	Good	Good	Stem forks into 5 stems at ~1.5m . Minor amount of minor size deadwood throughout crown - negligible risk posed.				-	15.1	718.2	A2
T8	1 6 5 0	Prunus spp. (Cherry )	4	2 / 2 / 2 / 1.5	1	70	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		Moderate - Good	0.8	2.2	C1
T9	1 6 5 1	Corylus colurna (Turkish hazel)	4	1 / 1 / 1 / 1		70	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		-	0.8	2.2	C3
T10		Corylus colurna (Turkish hazel)	4.5	1 / 1 / 1 / 1		70	Young	Good	Good					-	0.8	2.2	C3
T11	1 6 5 3	Prunus shirofugen (Cherry)	4	2 / 2 / 2 / 2		80	Young	Good	Good					-	1.0	2.9	C3
T12		Prunus shirofugen (Cherry)	4	2 / 2 / 2 / 2		80	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		-	1.0	2.9	C3
T13	1 6 5 7	Prunus shirofugen (Cherry)	4	1.5 / 1.5 / 1.5 / 1.5		70	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		-	0.8	2.2	C3
T14		Platanus orientalis minaret (Oriental plane tree)	4.5	1.5 / 1.5 / 1.5 / 1.5		70	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		-	0.8	2.2	C3
T15	1 6 6 0	Platanus orientalis minaret (Oriental plane tree)	3.5	1 / 1 / 1 / 1		70	Young	Good	Good					-	0.8	2.2	C3
T16		Prunus kanzan (cherry)	4.5	1.5 / 1.5 / 1.5 / 1.5		70	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		-	0.8	2.2	C3
T17		Prunus kanzan (cherry)	4	1.5 / 1.5 / 1.5 / 1.5		80	Young	Good	Good					-	1.0	2.9	C3
T18		Cupressus spp. (Cypresses)	16	6 / 6 / 6 / 6	2	550	Mature	Good	Good	Estimated stem and canopy dimension used as tree located on adjacent site with overhanging branches.				Good	6.6	136.8	B2
T19		Corylus colurna (Turkish hazel)	4.5	1 / 1 / 1 / 1	1.8	79	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		-	0.9	2.8	C3
T20		Prunus spp. (Cherry )	4	1.5 / 1.5 / 1.5 / 1.5	1	80	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		Moderate - Good	1.0	2.9	C3
T21		Prunus spp. (Cherry )	3.5	1.5 / 1.5 / 1.5 / 1.5		90	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		Moderate - Good	1.1	3.7	C3

Ref.	Tag	Species	Height (m)	Crown (N/E/S/W)	Crown Clearance (m)	DBH (mm)	Life Stage	Structural	Vitality	Additional Notes	General Management Recommendations	Priority	Development Related Tree Works	Tolerance	RPA Radius (m)	RPA Area (m <sup>2</sup> )	Cat.
T22		Prunus spp. (Cherry)	4	1 / 1 / 1 / 1		70	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		Moderate - Good	0.8	2.2	C3
T23		Prunus spp. (Cherry)	3.5	1.5 / 1.5 / 1.5 / 1.5		80	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		Moderate - Good	1.0	2.9	C3
T24		Corylus colurna (Turkish hazel)	4.5	1.5 / 1.5 / 1.5 / 1.5	1.8	80	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		-	1.0	2.9	C3
T25		Ilex spp. (Holly)	8	2.5 / 2.5 / 2.5 / 2.5	2	240	Semi-Mature	Good	Good	Dense shrubs growing around base.			Remove	Good	2.9	26.1	C1
T26	1 3 9 4	Ilex spp. (Holly)	15	4 / 4 / 4 / 4	2	308	Mature	Good	Good				Remove	Good	3.7	42.9	B2
T27		Ilex spp. (Holly)	16	3 / 3 / 3 / 3	1.5	170	Semi-Mature	Good	Good	Estimated height used.				Good	2.0	13.1	B3
T28	1 3 9 1	Pinus nigra (Austrian pine)	21	4.5 / 9.5 / 9 / 5.5	5	790	Mature	Good	Good	Estimated northern and southern crown. Southern canopy consisting of significant size lateral scaffold limb that overhangs adjacent building, unable to assess branch union but no obvious signs of defect or cause for concern. Moderate amount of minor size deadwood predominantly in mid to bottom of crown with a low to moderate risk of harm posed.				Good	9.5	282.3	A3
T29		Sequoia giganteum (Giant redwood)	3	0.5 / 0.5 / 0.5 / 0.5		70	Young	Good	Good				Transplant to elsewhere in school site.	Moderate	0.8	2.2	C3
T30		Sequoia giganteum (Giant redwood)	3	0.5 / 0.5 / 0.5 / 0.5		70	Young	Good	Good				Transplant to elsewhere in school site.	Moderate	0.8	2.2	C3
T31		Sequoia giganteum (Giant redwood)	3	0.5 / 0.5 / 0.5 / 0.5		70	Young	Good	Good				Transplant to elsewhere in school site.	Moderate	0.8	2.2	C3
T32		Sequoia giganteum (Giant redwood)	3	0.5 / 0.5 / 0.5 / 0.5		70	Young	Good	Good				Transplant to elsewhere in school site.	Moderate	0.8	2.2	C3
T33		Sequoia giganteum (Giant redwood)	3	0.5 / 0.5 / 0.5 / 0.5		70	Young	Good	Good				Transplant to elsewhere in school site.	Moderate	0.8	2.2	C3
T34		Cedrus deodara (Deodar cedar)	22.5	11.5 / 11.5 / 8.5 / 9.5	2.5	1376	Late-Mature	Good	Good					Good	16.5	856.6	A1
T35	1 4 2 9	Sequoia giganteum (Giant redwood)	22.5	7.5 / 7.5 / 7.5 / 7.5	2	1280	Late-Mature	Good	Good					Moderate	15.4	741.2	A1
T36	1 4 3 0	Cedrus deodara (Deodar cedar)	24	8 / 8 / 8 / 8	2	930	Late-Mature	Good	Good					Good	11.2	391.3	A1
T37	1 4 3 1	Cedrus deodara (Deodar cedar)	21.5	8.5 / 9.5 / 10 / 8.5	4	980	Mature	Good	Good	Estimated eastern and southern crown as they overhang neighbouring house and garden.				Good	11.8	434.5	A1
T38		Prunus spp. (Cherry)	4.5	1 / 1 / 1 / 1	1	90	Young	Good	Good	Stake and tie still present.	Remove stake and tie.	12 months		Moderate - Good	1.1	3.7	C3
T39	1 4 3 2	Betula pendula (Silver birch)	9.5	3 / 3 / 3 / 3	3	220	Early-Mature	Good	Good					Poor - Moderate	2.6	21.9	C1
T40		Ilex spp. (Holly)	8	2.5 / 2.5 / 2.5 / 2.5		140	Early-Mature	Good	Good	Growing from base of adjacent larger pine tree.				Good	1.7	8.9	C1
T41	1 4 3 3	Pinus nigra (Austrian pine)	19.5	7.5 / 5.5 / 8 / 9.5	3.5	720	Mature	Good	Good	Crown appears to be thinner than it should be, maybe due to ground compaction atop RPA from adjacent gravel driveway, although this is not considered to be of significant concern.				Good	8.6	234.5	A3
T42		Buxus sempervirens (Common box)	3.5	1.5 / 1.5 / 1.5 / 1.5	1	70	Semi-Mature	Good	Good					Moderate	0.8	2.2	C1

Ref.	Tag	Species	Height (m)	Crown (N/E/S/W)	Crown Clearance (m)	DBH (mm)	Life Stage	Structural	Vitality	Additional Notes	General Management Recommendations	Priority	Development Related Tree Works	Tolerance	RPA Radius (m)	RPA Area (m <sup>2</sup> )	Cat.
T43	1 4 3 4	Tilia x Europaea (Common Lime)	24	12 / 9.5 / 9 / 12	2	1150	Late-Mature	Good	Good	Estimated eastern and southern crown as they overhang adjacent building and garden. Minor amount of minor size deadwood throughout the crown low risk posed.				-	13.8	598.3	A1
T44		Taxus baccata (Yew)	7	3.5 / 3.5 / 3.5 / 3.5		340	Semi-Mature	Good	Good	Minor amount of minor size deadwood throughout the crown - negligible risk posed.				Moderate - Good	4.1	52.3	C1
T45		Tilia x Europaea (Common Lime)	15	7 / 8 / 7 / 6	2	640	Mature	Good	Good	Estimated height and canopy dimension used. Southern crown overhang neighbouring site.				-	7.7	185.3	B1
T46		Ilex spp. (Holly)	5	2 / 2 / 2 / 2		149	Early-Mature	Good	Good					Good	1.8	10.0	C1
T47		Tilia x Europaea (Common Lime)	16	8.5 / 10.5 / 8 / 8	2	650	Mature	Good	Good	Estimated stem diameter used as unable to access tree.				-	7.8	191.1	B1
T48		Taxus baccata (Yew)	7	3.5 / 3.5 / 3.5 / 3.5		387	Semi-Mature	Good	Good					Moderate - Good	4.6	67.6	C1
T49		Ilex spp. (Holly)	4.5	2 / 2 / 2 / 2		220	Semi-Mature	Good	Good	Well maintained tree.				Good	2.6	21.9	C1
T50		Crataegus monogyna (Hawthorn)	4.5	3 / 3 / 3 / 3	2	140	Semi-Mature	Good	Good	Tree located on adjacent grass verge.				Moderate - Good	1.7	8.9	C1
T51		Prunus avium (Cherry)	6	3.5 / 3.5 / 3.5 / 3.5	2	310	Mature	Good	Good	Tree located on adjacent grass verge.				-	3.7	43.5	C1
T52		Betula papyrifera (Paper Birch)	9	5.5 / 5.5 / 5.5 / 5	1.8	340	Semi-Mature	Good	Good	Tree located on adjacent grass verge.				Poor - Moderate	4.1	52.3	C1
T53		Prunus avium (Cherry)	7.5	5 / 5 / 5 / 4.5	2	380	Mature	Good	Good	Tree located on adjacent grass verge.				-	4.6	65.3	B3
T54	1 6 3 9	Tilia x Europaea (Common Lime)	9.5	1 / 1 / 1 / 1	2	760	Mature	Good	Good	Tree has historically been heavily pollarded to a single pole with epicormic regrowth.				-	9.1	261.3	B3
T55		Tilia x Europaea (Common Lime)	9.5	1.5 / 1.5 / 1.5 / 1.5	2	700	Mature	Good	Good	Tree has historically been heavily pollarded to a single pole with epicormic regrowth.				-	8.4	221.7	B3
G1		Mixed group	19.5	4.5 / 4.5 / 4.5 / 4.5	1.5	950	Mature	Good	Good	1 Multistemmed cypress and 1 multiple stemmed sycamore tree growing in close proximity to each other with intertwined rooting systems and canopies. Minor amount of deadwood in sycamore trees, negligible risk posed.				-	11.4	408.5	B1
G2		Prunus laurocerasus (Laurel)	2	1.5 / 1.5 / 1.5 / 1.5		60	Early-Mature	Good	Good				Remove	Good	0.7	1.6	C1
H1		Taxus baccata (Yew)	1.5	0.25 / 0.25 / 0.25 / 0.25			Semi-Mature	Good	Good	Well maintained hedge along fence line.				Moderate - Good			C3
H2		Mixed group	1	0.25 / 0.25 / 0.25 / 0.25			Young	Good	Good	Well maintained mixed species hedge around edge of car park.			Remove 53m section from northern and eastern ends.	-			C3
H3		Prunus lusitanica (Portuguese laurel)	4	1.5 / 1.5 / 1.5 / 1.5		60	Early-Mature	Good	Good				Remove	-	0.7	1.6	C1
H4		Mixed group	1	0.25 / 0.25 / 0.25 / 0.25			Early-Mature	Good	Good	Well maintained hedge.			Remove	-			C3
H5		Taxus baccata (Yew)	2.6	0.75 / 0.75 / 0.75 / 0.75		50	Early-Mature	Good	Good	Well maintained yew hedge.				Moderate - Good	0.6	1.1	C1
H6		Taxus baccata (Yew)	1.8	0.25 / 0.25 / 0.25 / 0.25			Young	Good	Good					Moderate - Good			C3
H7		Ligustrum ovalifolium (Privet)	2	0.25 / 0.25 / 0.25 / 0.25			Early-Mature	Good	Good	Well maintained hedge along site frontage.				Good			C3
H8		Ilex spp. (Holly)	1.8	1 / 1 / 1 / 1			Early-Mature	Good	Good	Well maintained hedge along site frontage.				Good			C1

Ref.	Tag	Species	Height (m)	Crown (N/E/S/W)	Crown Clearance (m)	DBH (mm)	Life Stage	Structural	Vitality	Additional Notes	General Management Recommendations	Priority	Development Related Tree Works	Tolerance	RPA Radius (m)	RPA Area (m <sup>2</sup> )	Cat.
T100	1401	Acer pseudoplatanus (Sycamore)	18	10.5 / 10.5 / 9 / 10.5	5	930	Mature	Good	Good	Stem forks into 4 at 3m - not of current structural concern.				Moderate	11.2	391.3	A1
T101	1388	Acer pseudoplatanus (Sycamore)	15	9 / 9 / 9 / 9	6	780	Mature	Good	Good	Estimated crown dimensions used. Tarmac driveway within RPA.				Moderate	9.4	275.2	B1

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# APPENDIX 2

# SITE PHOTOGRAPHS

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## APPENDIX 2 – SITE PHOTOGRAPHS

Note - Below is a selection of site photographs intended for general site context. Should you require supplementary site/tree photographs please contact [info@lignaconsultancy.co.uk](mailto:info@lignaconsultancy.co.uk):



*Figure 1 – Looking northwards at the existing building.*





*Figure 2 – Looking westwards at T34-T36, all Cat. 'A' trees.*



## APPENDIX 2 – SITE PHOTOGRAPHS



*Figure 3 – Looking northwards with H3 to the left of the photo and the existing building to the right.*

## APPENDIX 2 – SITE PHOTOGRAPHS



*Figure 4 – Looking westwards towards the carpark.*

APPENDIX 2 – SITE PHOTOGRAPHS



*Figure 5 – T28.*

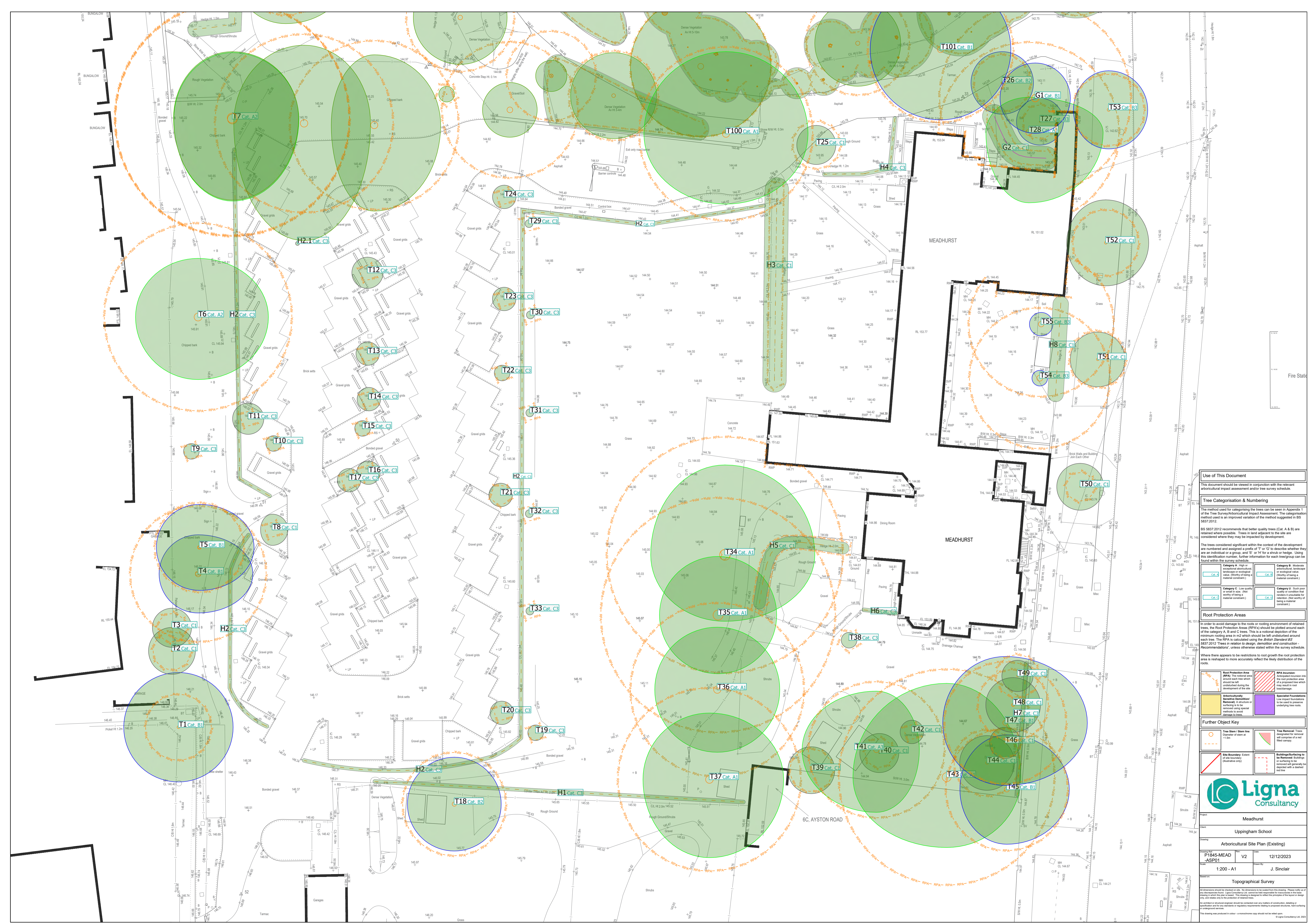
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# APPENDIX 3

## ARB. SITE PLAN (EXISTING)

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**Use of This Document**  
 This document should be viewed in conjunction with the relevant arboricultural impact assessment and/or tree survey schedule.

**Tree Categorisation & Numbering**  
 The method used for categorising the trees can be seen in Appendix 1 of the Tree Survey/Arboricultural Impact Assessment. The categorisation method used is an improved variation of the method suggested in BS 5837:2012.  
 BS 5837:2012 recommends that better quality trees (Cat. A & B) are retained where possible. Trees in land adjacent to the site are considered where they may be impacted by development.  
 The trees considered significant within the context of the development are numbered and assigned a prefix of 'T' or 'G' to describe whether they are an individual or a group, and 'S' or 'V' for a shrub or hedge. Using this identification number, further information for each tree group can be found within the survey schedule.

<b>Category A:</b> High or exceptional decorative, landmark or ecological value (likely of being a material constant).	<b>Category B:</b> Moderate decorative, landmark or ecological value (likely of being a material constant).
<b>Category C:</b> Low quality or poor decorative, landmark or ecological value (likely of being a material constant).	<b>Category U:</b> Shrub or hedge (likely of being a material constant).

**Root Protection Areas**  
 In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPA) should be plotted around each of the category A, B and C trees. This is a notional description of the minimum rooting area in m<sup>2</sup> which should be left undisturbed around each tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations', unless otherwise stated within the survey schedule.  
 Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

<b>Root Protection Area:</b> RPA for trees in the survey schedule.	<b>RPA Incursion:</b> RPA for trees in the survey schedule.
<b>Arboriculturally Sensitive Development:</b> Areas of surfacing to be removed using special methods to avoid disturbance to roots.	<b>Specialist Foundations:</b> Low impact foundations to be used to prevent underlying tree roots.

**Further Object Key**

<b>Tree Stem:</b> Free Stem Line (Diameter of stem at 1.3m).	<b>Tree Removal:</b> Trees designated for removal will comprise of a red filled canopy.
<b>Site Boundary:</b> Extent of site boundary (illustrative only).	<b>Buildings/Surfacing to be removed:</b> Buildings or surfacing to be removed will be shown with a dashed red line.

**Ligna Consultancy**  
 Meadhurst  
 Uppingham School  
 Arboricultural Site Plan (Existing)  
 P1845-MEAD-ASP01 V2 12/12/2023  
 1:200 - A1 J. Sinclair  
 Topographical Survey



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# APPENDIX 4

## ARB. SITE PLAN (PROPOSED)

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Tree to be transplanted to elsewhere on school site.

Tree to be transplanted to elsewhere on school site.

Tree to be transplanted to elsewhere on school site.

Tree to be transplanted to elsewhere on school site.

Tree to be transplanted to elsewhere on school site.

Tree to be transplanted to elsewhere on school site.

Remove 32m section of H2, this will ease the construction process and allow more room around the building for footpaths to run adjacent to the driveway.

Specialist no-dig surfacing.

Specialist no-dig surfacing.

Soft Landscaping

Acceptable 2% RPA incursion.

Bin store within footprint of existing building (no impact on adjacent trees).

Repurposing of existing surfacing (subbase retained)

Arboriculturally sensitive removal of surfacing.

Acceptable 1% RPA incursion.

Acceptable 2% RPA incursion

**Use of This Document**

This document should be viewed in conjunction with the relevant arbicultural impact assessment and/or tree survey schedule.

**Tree Categorisation & Numbering**

The method used for categorising the trees can be seen in Appendix 1 of the Tree Survey/Arbicultural Impact Assessment. The categorisation method used is an improved variation of the method suggested in BS 5837:2012.

BS 5837:2012 recommends that better quality trees (Cat. A & B) are retained where possible. Trees in land adjacent to the site are considered where they may be impacted by development.

The trees considered significant within the context of the development are numbered and assigned a prefix of 'T' or 'S' to describe whether they are an individual or a group, and 'C' or 'R' for a shrub or hedge. Using this identification number, further information for each tree/group can be found within the survey schedule.

<b>Category A:</b> High or exceptional architectural, landscape or ecological value ( rarity of being a material constant).	<b>Category B:</b> Moderate architectural, landscape or ecological value ( rarity of being a material constant).
<b>Category C:</b> Low quality or small in size, but worthy of being a material constant.	<b>Category U:</b> Such poor quality or condition that removal is considered to be inevitable for reasons of safety or being a material constant.

**Root Protection Areas**

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and C trees. This is a notional depiction of the minimum rooting area in m<sup>2</sup> which should be left undisturbed around each tree. The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations', unless otherwise stated within the survey schedule.

Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

<b>Root Protection Area:</b> The notional area around each tree which should be left undisturbed during the development of the site.	<b>RPA Incursion:</b> An area of ground within the root protection area which is to be removed or excavated, which may result in root damage.
<b>Arboriculturally Sensitive Demolition/Removal:</b> A structure or surfacing to be removed using special methods to avoid damage to trees.	<b>Specialist Foundations:</b> Low impact foundations to be used to prevent underlying tree roots.

**Further Object Key**

<b>Tree Stem / Stem Line:</b> Diameter of stem at 1.3m.	<b>Tree Removal:</b> Trees designated for removal will comprise of a red filled canopy.
<b>Site Boundary:</b> Extent of site boundary (illustrative only).	<b>Buildings/Surfacing to be Removed:</b> Building or surfacing to be removed will generally be shown with a dashed red line.

**Ligna Consultancy**

**Meadhurst**

Uppingham School

Arbicultural Site Plan (Proposed)

P1845-MEAD-ASP02 V2 Date: 29/11/2024

1:200 - A1 Drawn by: B. Hallinan

**Proposed Site Plan**

All dimensions should be checked on site. No dimensions to be used from this drawing. Please refer to the development level. Ligna Consultancy Ltd. cannot be held responsible for misinterpretation of this drawing or any other part of the drawing. The drawing is designed to assist the process of the layout or design and is not intended to be a substitute for professional advice.

An arbicultural or structural engineer should be consulted over any matters of construction, building or foundation work for any structures or equipment requirements, trees to be removed, and any other matters relating to the site plan.

This drawing was produced in Ligna's professional capacity and should not be relied upon.

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