

ARBORICULTURAL IMPACT ASSESSMENT

CLIENT - Cicero Estates
PROJECT - Land at Battlefields Lane
DOC. REF - P1708-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.	n/a	V1	V2	V3	V4	V5	V6	V7
Arb. Impact Assessment	P1708-AIA01		X	X					
Arb. Site Plan (Existing)	P1708-ASP01		X						
Arb. Site Plan (Proposed)	P1708-ASP02		X	X					

1. SUMMARY

1.1 PROPOSED DEVELOPMENT

- 1.1.1 Erection of 185 dwellings, with associated landscaping and public open space.

1.2 TREE SURVEY

- 1.2.1 13 individual trees, 14 groups of trees, and 2 hedges were recorded as being significant within the context of the development proposals.

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 3.5*.

1.4 TECHNICAL DESIGN CONSIDERATIONS

- 1.4.1 The design team must consider and implement the design advice provided in *Section 3.6* of this document.

1.5 OPPORTUNITIES FOR NEW TREE PLANTING

- 1.5.1 Within the landscaping of the proposed scheme there is ample room for good levels of high-quality tree plantings. These should include trees with small medium and large ultimate growth potentials, good species and genus diversity and with a consideration of long-term change of climate.

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 (See Appendix 1 For Methodology)			
	A	B	C	U
Trees to be removed	-	-	T13, G8, G10, G11, G12, G13, G14	-
Trees to be pruned	-	-	-	-
Trees with general management recommendations	-	-	T10	-
Trees to be subjected to RPA	-	-	-	

incursions (excl. no-dig techniques)			
Trees to be protected through special measures (other than barriers and ground protection)	-	-	-

** Group subject to partial removal*

- 1.6.2 Considering the anticipated arboricultural impact from the construction 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 result in a net arboricultural gain, when considered over the medium to long-term.

2 GENERAL INFORMATION

2.1 BRIEF

- 2.1.1 Ligna Consultancy Ltd were instructed by the client, Cicero Estates, to undertake a tree survey in accordance with BS 5837:2012 and to prepare an arboricultural impact assessment for the proposed scheme at Land at Battlefields Lane

2.2 PROPOSED DEVELOPMENT

- 2.2.1 Erection of 185 dwellings, with associated landscaping and public open space.

2.3 SITE

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

Land at Battlefields Lane
Holbeach,
Spalding,
UK

2.4 PROJECT CONTACTS

Role	Name	Telephone	Email
Arboricultural Consultant	Ligna Consultancy Ltd	01284 598008	benjamin@lignaconsultancy.co.uk
Client	Cicero Estates	-	-

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) (P1708-ASP01 V1)
- Arboricultural Site Plan (Proposed) (P1708-ASP02 V2)

2.6 DOCUMENTS PROVIDED

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

- Topographical Survey
- Site Masterplan (December 2020)

- Land Use Plan (Jan 2021)

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.

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3 ARBORICULTURAL IMPACT ASSESSMENT

ASSESSMENT & APPRAISAL OF IMPACTS

The following section lists and discusses any aspects of the proposed design and its implementation that has the potential to harm nearby trees, and outlines possible mitigation measures:

3.1 TREES TO BE REMOVED TO FACILITATE THE PROPOSED SCHEME

Affected Trees T13, G8, G10, G11, G12, G13, G14 (Cat. C)

Impact Appraisal G8, a mixed species hedgerow with multiple semi-mature ash trees of moderate quality, will require removal to facilitate the fronting of the proposed adjacent dwellings onto Battlefields Lane South. Arboriculturally, the impact of the removal of these trees can be offset with new tree and hedge plantings throughout the site. The amenity impact of the group's removal would be more noticeable. As such, if G8 is removed, then it is recommended that new roadside plantings of native trees are included along the frontage with Battlefields Lane South.

However, it must be noted that the stems of the tree's may be situated externally to the site, meaning permission would need to be sought from the landowner prior to their removal. If this is the case and their removal is not agreeable, the trees will need to be retained, and the adjacent dwellings set back enough to allow for the installation of alternative access; this would be achievable with the use of specialist no-dig surfacing withing the rooting areas of the trees.

G10, G11, G12, G13 and G14, groups of young/self-set trees and shrubs of little arboricultural and amenity value will require removal to facilitate the proposed site layout. Owing to their low value, the loss of these groups will be more than offset by the inclusion of multiple high quality tree plantings within the landscaping of the site.

T13, a mature leylandii tree, will be removed so as to reduce shading of the proposed dwellings to its northern side. No notable arboricultural or amenity impact will result from its removal.

Mitigation i) Inclusion of high-quality tree plantings of varying ultimate sizes throughout the proposed scheme, including roadside tree plantings along Battlefields Lane South.

Significance Positive – The proposed new plantings will result in a net arboricultural gain over the medium to long-term

3.2 TREE WORKS FOR THE PURPOSES OF GOOD MANAGEMENT

<i>Affected Trees</i>	T10 (Cat. C)
<i>Impact Appraisal</i>	T10, an overmature willow tree on neighbouring land, has a history of stem/limb failure, as such, prior to the development of the site, it is recommended that the landowner is contacted, and asked to have their tree inspected and any required safety works such as pollarding or removal are undertaken.
<i>Mitigation</i>	n/a
<i>Significance</i>	n/a

3.3 IMPLEMENTATION OF PROPOSED SCHEME

<i>Affected Trees</i>	All retained trees
<i>Impact Appraisal</i>	During the construction process, all retained trees are susceptible to damage from general construction related activities. This may be in the form of direct damage such as branch breakage, or indirect damage such as compaction of a tree's rooting environment. To reduce the risk of construction damage to the site's retained trees, tree protection barriers must be installed before the commencement of any site works.
<i>Mitigation</i>	i) Erection of tree protection barriers and implementation of a construction exclusion zone.
<i>Significance</i>	Negligible

TREE RELATED SHADING AND NUISANCES

3.4 LONG-TERM IMPACT OF RETAINED TREES ON PROPOSED SCHEME

3.4.1 Shading

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

3.4.2 Canopy Growth

- 3.4.2.1 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.

3.4.3 Nuisances

- 3.4.3.1 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:

3.5 PROTECTIVE MEASURES

3.5.1 Tree Protection Barriers

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

3.6 TECHNICAL DESIGN CONSIDERATIONS

3.6.1 Routing and Installation of Utility Apparatus

- 3.6.1.1 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.
- 3.6.1.2 Where it is necessary for underground services to intersect an RPA, specialist excavation methods should be used.
- 3.6.1.3 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.

3.6.2 Foundation Design

- 3.6.2.1 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.

3.7 OPPORTUNITIES FOR NEW TREE PLANTING

- 3.7.1 Within the landscaping of the proposed scheme there is ample room for good levels of high-quality tree plantings. These should include trees with small medium and large ultimate growth potentials, good species and genus diversity, and with a consideration of long-term change of climate.

CONCLUSION

3.8 SUMMARY OF THE DEVELOPMENT'S OVERALL IMPACT

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

	Tree Category (See Appendix 1 For Methodology)			
	A	B	C	U
Trees to be removed	-	-	T13, G8, G10, G11, G12, G13, G14	-
Trees to be pruned	-	-	-	-
Trees with general management recommendations	-	-	T10	-
Trees to be subjected to RPA incursions (excl. no-dig techniques)	-	-	-	
Trees to be protected through special measures (other than barriers and ground protection)	-	-	-	

** Group subject to partial removal*

3.8.2 Considering the anticipated arboricultural impact from the construction 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 result in a net arboricultural gain, when considered over the medium to long-term.

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) (P1708-ASP01)
4	Arboricultural Site Plan (Proposed) (P1708-ASP02)

APPENDIX 1 TREE SURVEY

APPENDIX 1 – TREE SURVEY

A1.1 SITE VISIT

- i) A site visit was undertaken by Jennifer Sinclair of Ligna Consultancy, on the 01/12/2020.

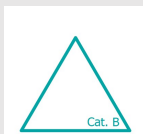
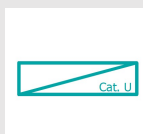
A1.2 METHOD OF DATA COLLECTION

- 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: • Newly planted • Young • Semi-mature • Mature • Over-mature • Veteran • Dead
Structural	Summary statement relating to the structural condition of a tree: • Good (no apparent problems / normal optimal condition for a tree of its species.) • Fair (minor problems, no instabilities) • Poor (major problems, potential instabilities) • Unstable (extreme problems, likely to result in failure)
Vitality	Summary statement relating to the overall observed vitality of a tree: • Good (no apparent problems / normal optimal vitality for a tree of its species) • Fair (minor / temporary reduction in tree vitality) • Poor (major reduction in tree vitality, often with some branch dieback) • Dead / Dying (extreme / total reduction in tree vitality)
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	
Trees worthy of being a material constraint:				
Category A 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.	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)	
Category B 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).	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	
Trees worthy of material consideration:				
Category C 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.	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	
Trees unsuitable for retention owing to condition:				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.	- 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) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - 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			

A1.5 SUMMARY OF DATA

- i) 13 individual trees, 14 groups of trees, and 2 hedges were recorded as being significant within the context of the development proposals.
- 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	-	6	7	-
Groups	-	3	11	-
Woodland Groups	-	-	-	-
Hedges / Shrubs	-	-	2	-

Table 1 - Table showing category distribution within site.

	Life Stage						
	Newly Planted/Self Set	Young	Semi-Mature	Mature	Over-Mature	Veteran	Dead
Individual Trees	-	-	3	9	1	-	-
Groups	4	1	3	6	-	-	-
Woodland Groups	-	-	-	-	-	-	-
Hedges / Shrubs	-	-	-	2	-	-	-

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 ²)	Cat.
T1		Alnus glutinosa (Common alder)	16.5	4 / 5 / 4 / 4	1.8	350	Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches. Moderate ivy on stem.		-		Good	4.2	55.4	B1
T2		Alnus glutinosa (Common alder)	16.5	4 / 5 / 4 / 4	1.8	360	Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches.		-		Good	4.3	58.6	B1
T3		Eucalyptus spp. (Eucalyptus)	16.5	10.5 / 10.5 / 10.5 / 10.5	1.8	650	Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches. Minor ivy on mid stem.		-		Moderate	7.8	191.1	B1
T4		Prunus spp. (Cherry)	4.5	2 / 2 / 2 / 2	1.5	277	Semi-Mature	Good	Fair	Estimated dimensions used as tree located on adjacent site.		-		Moderate - Good	3.3	34.6	C1
T5		Prunus avium (Cherry)	12	6 / 6 / 6 / 6	2.5	370	Mature	Good	Good	Estimated dimensions used as tree located on adjacent site.		-		-	4.4	61.9	B1
T6		Ilex spp. (Holly)	5.5	2.5 / 2.5 / 2.5 / 2.5	-	220	Semi-Mature	Good	Good	Estimated stem diameter.		-		Good	2.6	21.9	C1
T7		Prunus spinosa (Blackthorn)	6	2.5 / 2.5 / 2.5 / 2.5	0.5	n/a	Mature	Good	Good			-		Moderate - Good	n/a	n/a	C1
T8		Betula pendula (Silver birch)	12	3.5 / 3.5 / 3.5 / 3.5	2	340	Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches.		-		Poor - Moderate	4.1	52.3	B1
T9		Chamaecyparis spp. (False cypress)	12	3 / 3 / 3 / 3	1	350	Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches.		-		Good	4.2	55.4	C1
T10		Salix spp. (Willow)	12.5	4.5 / 3 / 6 / 4.5	-	518	Over-Mature	Poor	Fair	Estimated dimensions used as tree located on adjacent site with overhanging branches. 1 stem has failed and has collapsed onto site.	Request tree owner removes/pollards tree for safety reasons.	24 months		Good	6.2	121.5	C1
T11		Acer pseudoplatanus (Sycamore)	13.5	4 / 4 / 4 / 4	2.5	566	Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches. Tree has historically been crown lifted leaving torn pruning wounds.		-		Moderate	6.8	145.1	B1
T12		Prunus laurocerasus (Laurel)	6.5	4 / 4.5 / 4.5 / 4	1.8	n/a	Semi-Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches.		-		Good	n/a	n/a	C1
T13		Cupressus x leylandii (Leylandii)	13.5	4 / 1 / 4 / 3.5	1.5	507	Mature	Good	Good	Tree was formerly part of a group but owing to the removal of an adjacent tree the eastern crown lacks foliage.		-	Fell	Good	6.1	116.3	C1
G1		Prunus spp. (Plum)	4.5	1.5 / 1.5 / 1.5 / 1.5	1.8	180	Semi-Mature	Good	Good	Estimated dimensions used as group located on adjacent site with overhanging branches. Group of 3 plum trees.		-		Moderate - Good	2.2	14.7	C1
G2		Populus nigra 'Italica' (Lombardy poplar)	22	4.5 / 4.5 / 4.5 / 4.5	1.8	700	Mature	Good	Good	Estimated stem diameter due to low branch growth.		-		Moderate - Good	8.4	221.7	B2
G3		Mixed group	7.5	5.5 / 5.5 / 5.5 / 5.5	1	220	Mature	Good	Good	Line of 4 blackthorn and 1 beech.		-		-	2.6	21.9	C1
G4		Cupressus x leylandii (Leylandii)	9	4.5 / 4.5 / 4.5 / 4.5	-	450	Mature	Good	Good	Estimated dimensions used as group located on adjacent site with overhanging branches. Group of 3 plum trees.		-		Good	5.4	91.6	C1
G5		Cupressus x leylandii (Leylandii)	16.5	6 / 6 / 6 / 6	0.75	390	Mature	Good	Good	Line of 6 trees. Estimated dimensions used as group located on adjacent site with overhanging branches.		-		Good	4.7	68.8	B2

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 ²)	Cat.
G6		Fagus sylvatica (Beech)	6.5	2.5 / 2.5 / 2.5 / 2.5	0.5	150	Semi-Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches. Line of 12 beech trees that have been previously Pollarded at 1.5m.		-		Poor	1.8	10.2	C1
G7		Prunus spp. (Cherry)	10.5	4.5 / 4.5 / 4.5 / 4.5	1.8	300	Mature	Good	Good	Estimated dimensions used as tree located on adjacent site with overhanging branches. Minor deadwood in crowns.		-		Moderate - Good	3.6	40.7	C1
G8		Mixed group	11.5	7.5 / 2 / 7.5 / 2	0.5	220	Semi-Mature	Fair	Fair	Line of predominantly ash, elm and hawthorn along road edge. Moderate amount of deadwood throughout group with evidence of ash dieback. High presence of ivy on stems. Ownership of group needs to be confirmed.	Crown lift to give 4.5m clearance over road. Remove deadwood over road.	24 months	Fell	-	2.6	21.9	C1
G9		Populus nigra 'Italica' (Lombardy poplar)	23	2.5 / 2.5 / 2.5 / 2.5	1	550	Mature	Good	Good	Line of 17 trees. Minor deadwood throughout group with 3 westernmost trees having high presence of ivy on stems.		-		Moderate - Good	6.6	136.8	B2
G10		Mixed group	8.5	8.5 / 8.5 / 8.5 / 8.5	-	120	Newly Planted / Self-Set	Good	Good	Group consisting of silver birch and willow.		-	Fell	-	1.4	6.5	C1
G11		Mixed group	6.5	6.5 / 6.5 / 6.5 / 6.5	-	100	Newly Planted / Self-Set	Good	Good	Group consisting of willow, silver birch and hawthorn.		-	Fell	-	1.2	4.5	C1
G12		Mixed group	4.5	4.5 / 4.5 / 4.5 / 4.5	-	n/a	Newly Planted / Self-Set	Good	Good	Group consisting of willow, silver birch and hawthorn.		-	Fell	-	n/a	n/a	C1
G13		Buddleja davidii (Butterfly bush)	3.5	3.5 / 3.5 / 3.5 / 3.5	-	n/a	Newly Planted / Self-Set	Good	Good	Group of overgrown buddleia shrubs.		-	Fell	-	n/a	n/a	C1
G14		Mixed group	6.5	6.5 / 6.5 / 6.5 / 6.5	-	210	Young	Good	Good	Group consisting of willow and silver birch.		-	Fell	-	2.5	20.0	C1
H1		Cupressus x leylandii (Leylandii)	2.5	1.5 / 1.5 / 1.5 / 1.5	0.5		Mature	Good	Good	Hedge recently topped to 2.5m. High presence of brambles throughout.		-		Good			C1
H2		Ligustrum ovalifolium (Privet)	3	1 / 1 / 1 / 1	-		Mature	Good	Good	Hedge recently topped to 3m. High presence of brambles throughout.		-		Good			C1

APPENDIX 2 SITE PHOTOGRAPHS



Figure 1 - Photo taken in north-eastern end of site, looking southeast.



Figure 2 - Photo taken in north-eastern end of site, looking northeast at site boundary.



Figure 3 - Photo taken in north-eastern end of site, looking south.



Figure 4 - Photo taken in south-western end of site, looking southwest.



Figure 5 - Photo taken in south-western end of site, looking west.



Figure 6 - G8 (proposed removal).

APPENDIX 3

ARB. SITE PLAN (EXISTING)

APPENDIX 4

ARB. SITE PLAN (PROPOSED)

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 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. Using this identification number, further information for each tree/group can be found within the survey schedule of the Arboricultural Report.

	Category A - High or exceptional arboricultural, landscape or ecological value. (Worthy of being a material constraint.)		Category B - Moderate arboricultural, landscape or ecological value. (Worthy of being a material constraint.)
	Category C - Low quality or small in size. (Not worthy of being a material constraint.)		Category D - Such poor quality or condition that renders it unsuitable for retention. (Not worthy of being a material constraint.)

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 minimum tree area in m² 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.

	Root Protection Area (RPA) - The minimum area around each tree which should be left undisturbed during the development of the site.		RPA Incursion - Anticipated incursion into the root protection area of a proposed tree which may result in root disturbance.
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Further Object Key

	Tree Canopy - Spread of tree canopy. Line colour represents category designation. (Green = Cat A; Blue = Cat B; Grey = Cat C; Black = Cat D)		Tree Removal - Trees designated for removal. Will comprise of a dashed canopy outline & red category label.
	Tree Stem - Diameter of stem at ~1.5m		Facilitation Tree Works - Trees requiring facilitative tree works as part of the proposed scheme.
	Site Boundary - Extent of site boundary (illustrative only)		



Project:	Land at Battiefields Lane		
Client:	Cicero Estates		
Drawing:	Arboricultural Site Plan (Proposed)		
Drawing Ref:	Rev:	Date:	
P1708-ASP02	V2	27/01/2021	
Scale:	1:750 - A1	Drawn By:	B. Hallinan
Based on:	Land Use Plan (Jan 2021)		

All dimensions should be checked on site. No dimensions to be scaled from this drawing. Please refer to the Arboricultural Impact Assessment for further details. This drawing is for illustrative purposes only and should not be used for construction purposes.

This drawing was produced in colour - a monochrome copy should not be relied upon.

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