



ECOLOGY

RESOURCES

ECOLOGY | ARBORICULTURE

16 KNOSSINGTON ROAD, BRAUNSTON Pre-Development Tree Survey Report

Karen Nagel

November 2023



Version History			
Issue Status	Version	Prepared/date	Reviewed/date
Draft	1	MG / 07.12.23	BP / 08.12.23
Final	1	MG / 08.12.23	-

Report citation: Ginepro, M (2023): Pre-development Tree Survey Report. 16 Knossington Road, Braunston. Ecology Resources Ltd, Oakham.

The recommendations contained in this Report represent Ecology Resources' professional opinions, in exercising the duty of care required of a suitably experienced and qualified Arboricultural Consultant / Surveyor. All data recorded and recommendations made are based on observable factors present at the time of inspection. Unless stated otherwise, the inspection consisted of a Stage 1 Visual Tree Assessment only. Where access limitations such as vegetation, topography, fencing or other constraints impede a full inspection, appropriate notes will be made within the survey schedule by the Arboricultural Surveyor. The report has been prepared by Ecology Resources Ltd for the sole and exclusive use of the Client and for the specific purpose for which the inspection was commissioned. Ecology Resources 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. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user.

© Ecology Resources Ltd 2023

TABLE OF CONTENTS

1. INTRODUCTION	3
2. METHODOLOGY.....	4
3. TREE SURVEY FINDINGS.....	5
4. ARBORICULTURAL IMPLICATIONS	6
5. RECOMMENDATIONS.....	7
6. ENVIRONMENTAL AND ECOLOGICAL CONSIDERATIONS.....	10
7. TREE SURVEY SCHEDULE	11

Tables

TABLE 1 – CATEGORY GRADING BREAKDOWN.....	5
TABLE 2 – SUMMARY OF RECOMMENDATIONS.....	8
TABLE 3 – PROPOSED NEW TREES.....	9
TABLE 4 – KEY TO SURVEY SCHEDULE	11

Figures

FIGURE 1 – TREE CONSTRAINTS PLAN.....	15
FIGURE 2 – TREE PROTECTION PLAN.....	16

Appendices

APPENDIX 1 – TREE PROTECTION MEASURES	17
APPENDIX 2 – TREES AND THE PLANNING SYSTEM.....	19
APPENDIX 3 – TREE SURVEY EXPLANATORY NOTES	21
APPENDIX 4 – GENERAL GUIDANCE NOTES FOR DEVELOPMENT.....	24

1. INTRODUCTION

- 1.1 Ecology Resources Ltd has been instructed by Karen Nagel ('the Client') to carry out a pre-development arboricultural survey at 16 Knossington Road, Braunston, Rutland ('the Site' hereafter), to inform a planning application for residential development. The survey was completed on the 7th November 2023; weather conditions were bright and dry, with temperatures in the region of 15 °C.
- 1.2 Survey and reporting have been delivered by Martino Ginepro, who has been involved in tree surveying since 2014 and holds a LANTRA award in Professional Tree Inspection (PTI), is a Technician member of the Arboricultural Association (TechArborA), a certified user of the Quantified Tree Risk Assessment (QTRA) and a professional member of the Consulting Arborist Society (CAS).

Background Information

- 1.3 The Site is located at the west end of Braunston, Rutland, at Grid Reference SK 83042 06697. It comprises a bungalow, front and rear garden and a driveway, collectively occupying an area of ca 0.2ha.
- 1.4 The Site adjoins residential properties to the east and the west, a paddock to the south and Knossington road to the north. The wider landscape is largely characterised by intensively farmed land.
- 1.5 The Client is seeking planning approval for the demolition of a residential property and the development of a new dwelling, with associated driveway and soft-landscaping.

Purpose Of This Report

- 1.6 This report has been produced in adherence with the criteria set out in *BS5837: 2012. Trees in the Context of Design, Demolition and Construction*, to assess the arboricultural implications associated with the proposals.
- 1.7 At the time of instruction, it was understood that this document will form part of a formal planning application and, as such, will be open to public scrutiny and comment.

2. METHODOLOGY

- 2.1 Tree condition has been assessed from ground level using the Visual Tree Assessment methodology¹, focusing on:
 - Structural condition - growth defects and their likelihood to induce failure;
 - The identification of signs indicating ongoing decay and diseases;
 - The review of Health and Safety implications;
 - The prescription of remedial actions aimed to preserve structural integrity and ensure longevity.
- 2.2 For survey purposes, location and parameters of all the surveyed trees were recorded using the Pocket GIS Android app².
- 2.3 The Tree Constraints Plan (TCP) was produced in GIS, overlaying the Topographical survey produced by Midland Survey Ltd (drawing ref. 43674/1).
- 2.4 The Tree Protection Plan (TPP) was produced by overlaying the TCP with the proposed site plan produced by Habitat Architects (HA23006_PL005 REV C).
- 2.5 Surveyed trees were assigned a unique alphanumerical reference (i.e. T1, TG1, etc.) and all the relevant parameters - including species, height, stem diameter, age class, overall condition and structural defects – were recorded in the tree survey schedule referenced in Chapter 7.
- 2.6 Tree heights were taken using a Suunto Clinometer PM-5/360 PC, in conjunction with a laser measurement tool. The stem diameter of trees was measured using a Richter DBH tape; tree tags were not applied given the ease of identification through consultation of the Tree Constraints and Tree Protection Plans.
- 2.7 To attribute them a Retention Category and derive a Root Protection Area (RPA), the trees were assessed in line with the criteria set out in BS5837: 2012 'Trees in relation to Design, Demolition & Construction'; what each of these parameters indicate is documented in Appendix 3 – Tree Survey Explanatory Notes.
- 2.8 The survey applied to any trees found within the red-line boundary, as well as to trees outside of the development curtilage which could be at risk from construction activities without suitable precautionary measures in place.

Survey Limitations

- 2.9 Trees T17 and T18 could not be accessed, because of their location within 3rd party land; therefore, survey parameters and condition had to be estimated.
- 2.10 All other trees could be accessed without impediment and all the relevant parameters were recorded applying the afore-referenced methodology.
- 2.11 Trees are dynamic living organisms, whose health and condition can be subject to rapid change depending on several external and internal factors (natural/anthropogenic damage driving microbial infection, extreme weather events). The conclusions as to the health and structural integrity contained herein relate to the trees as observed at the time of inspection and did not rely on methods aimed to reveal asymptomatic decay (i.e. using decay detection equipment) as these were deemed unnecessary at the time of survey.

¹ Mattheck C. and Breloer H.; *The Body Language of Trees: A Handbook for Failure Analysis*

² <http://pocket.co.uk/>

3. TREE SURVEY FINDINGS

- 3.1 A total of 18 no. trees and 2 groups were recorded as part of this survey. Table 1, below, provides a breakdown of the arboricultural stock by category grading (refer to Appendix 3.2 for details).

Table 1 – Category Grading Breakdown

Category Grading	Individual Trees	Groups of Trees
U Unsuitable for retention	n/a	n/a
A High Quality	2	n/a
B Moderate Quality	11	1
C Poor Quality	4	1

- 3.2 The tree stock concentrates in the rear garden of the property. A description of the most notable trees is provided below; all trees within scope of survey are reviewed in Chapter 7 - Tree Survey Schedule and details of any applicable trees within Braunston's Conservation Area, the boundaries of which can be viewed in Appendix 2.
- 3.3 Tree T5 is an early-mature specimen of *Ginkgo biloba* situated 13m to the southeast of the existing dwelling. The tree is young and displays a regular architecture and good vitality, with no evidence of biomechanical defects. The tree was attributed a category B for its quality and potential to develop into a prominent specimen.
- 3.4 Tree T6 is a mature ornamental maple *Acer spp.*, (likely a Japanese variety), found approximately 25m to the south of the existing dwelling. It is characterised by two codominant stems developing from the base of the tree, together forming a large, widespread, and well-balanced canopy displaying good vitality. The tree was attributed a category B for its quality and integrity.
- 3.5 Tree T7 is a mature wild cherry *Prunus avium*, situated along the eastern boundary approximately 30m to the southeast of the existing dwelling, along the current boundary. Despite the extensive presence of ivy across the base and the stem, owing to the absence of deadwood and notable biomechanical defects, together with the regular shape, size and colour of the foliage and the density of the crown, the tree is deemed in good condition. It was attributed a category B for its prominence and projected lifespan.
- 3.6 Tree T16 is a mature silver birch *Betula pendula* situated approximately 5.5m from the north-west corner of the existing property in amongst a stand of scrub. The tree is mature and well-formed, with a balanced crown and no deadwood or visible biomechanical defects. It was attributed a category B for its landscape and arboricultural significance.
- 3.1 Trees T17 and T18 are two mature specimens of walnut *Junglas regia* currently situated on third party land, to the east of the property. Their presence has been noted because it is understood that the land within which they grow will likely be annexed to the Site. Whilst a close-up assessment of the trees was not possible due to access restrictions, they both displayed vigour and a well-balanced canopy. Both trees have been attributed category A because of their landscape and arboricultural significance.

4. ARBORICULTURAL IMPLICATIONS

4.1 Having overlaid the Tree Constraints Plan with the proposed site layout, it was observed that:

- the construction of the new dwelling will require the removal of trees T1, T2, T3 and T4 either because of overlap with the new dwelling's footprint (T1 and T3) or because the extent of encroachment on the Root Protection Area (RPA) is such that the structural and biological integrity of the tree would be irreversibly compromised.
- the root system of tree T16 is exposed to damage through resurfacing of the driveway (assumed to be part of the property's redevelopment).
- albeit only marginally exposed to construction activities, the removal and replacement of Tree T15 is proposed in light of its poor arboricultural value.

4.2 The retention of all other trees within the Site is deemed possible, with the implementation of suitable protection measures where appropriate.

5. RECOMMENDATIONS

- 5.1 The recommendations set out herewith focus on avoiding or, where not possible, minimising encroachment on the Root Protection Area (RPA) during demolition and construction activities. The RPA is the area within which excavation, stockpiling of materials and any other construction activities would likely result in the damage of below and above ground parts of the tree.
- 5.2 Some recommendations for compensation and enhancement, to be delivered when construction activities allow (typically, in the final stages), are also made for consideration by the design team.

Mitigation during Demolition

- 5.3 The demolition of the residential dwelling could result in damage to trees T14 and T5. To prevent this, protective fencing *shall* be installed in line with the specifications set out in Para. 5.8 – 5.11 and as shown in Figure 2.
- 5.4 The resurfacing of the hardstanding at the fore of the existing dwelling could lead to the damage of aerial and below-ground parts of tree T16. To minimise and suitably control this risk, protective fencing and protective matting *shall* be installed, the latter to be placed across the area of RPA protruding beyond the fence (as shown in Figure 2).

Mitigation during the Construction Phase

- 5.5 During the construction phase, the only trees deemed at risk of damage both above and below ground are T16 and T14, due to exposure to vehicular traffic and because their RPAs extend within the footprint of the driveway, which is likely to be resurfaced. To mitigate against damage, the protective fencing and matting (where applicable) installed during the demolition phase shall remain in place throughout the duration of the project.
- 5.6 Elsewhere, exclusion can be effectively afforded through the installation of protective fencing along the southern edge of the construction impact zone, as shown in Figure 2.
- 5.7 The installation of protection measures and of any additional measures aimed to prevent/minimise arboricultural impact *shall* be delivered in accordance with the methodology set out in the paragraphs to follow.

Precautionary Method of Works

PROTECTIVE FENCING AND MATTING

- 5.8 Specifications for the installation of protective fencing and matting are referenced in Appendix 1.
- 5.9 Fencing *shall* be of the 'Heras' type and constructed in such a way as to prevent its repositioning or removal.
- 5.10 Protection matting shall be installed in line with the specifications set out in Appendix 1.
- 5.11 A weather-proof sign stating: 'PROTECTED AREA – DO NOT ENTER' *shall* be affixed to the fence and kept in place until completion of construction works.
- 5.12 The installation of tree protection fencing should be overseen by a suitably qualified Arboricultural Clerk of Works (ACoW).

PRECAUTIONARY MEASURES AND NO-GO ZONES

- 5.13 Construction activities *shall* be phased in such a way that the movement of plant and machinery, the removal of spoil and demolition waste and the receipt, storage and handling of materials are carried out without placing extra pressure on existing trees and *avoiding* the risk of damage or

pollution. To this end, the following methodology *shall* be followed throughout the construction phase:

- a. Plant to be refuelled and serviced at least 10 metres from the edge of the Root Protection Areas.
- b. No fires to be lit on site where flames can reach within 5m of the crown of a tree, taking the size of the fire, wind speed and direction into account.
- c. No materials to be stored or discharged within 5 metres of a tree bole.
- d. No mixing of cement or dispensing of fuel or chemicals to take place within 15 metres of the bole of any onsite trees.
- e. ***No stripping of topsoil, excavation or changing of levels to occur within the RPA.***

REMEDIAL WORKS

- 5.14 Any remedial works specified in Chapter 7 *shall* be delivered by a suitably qualified arboricultural contractor working to BS3998³ specifications, to ensure that cuts are applied correctly and that trees are cared for in line with up-to-date best practice guidance.

SUMMARY OF PRESCRIPTIONS

- 5.15 All the applicable measures for the protection of trees during the construction phase are summarised in Table 2.

Table 2 – Summary of recommendations

ITEM	TARGET	REQUIREMENTS	TIMING
Demolition of buildings and hard standing areas	T16	Installation of tree protection fencing and ECoW supervision	Pre-commencement and during demolition phase
Installation of Tree Protection Fencing	T16, T14 and south of tree T4	Install protection fencing as specified in Figure 2 and Appendix 1.	Prior to works commencing
Installation of Tree Protection matting	T16	Install protection matting as specified in Figure 2 and Appendix 1.	Prior to works commencing
Precautionary measures when handling waste, materials, fuel and plant	All arboricultural assets within the site	Avoid stockpiling demolition waste and overburden within the RPA of trees; store materials, fuel and plant (when not in use) away from trees and hedges.	Throughout the construction phase

Recommendations for Compensation and Enhancement

- 5.1 At the time of writing, it is understood that the proposed development will involve the removal of 5 existing trees. To compensate for the arboricultural losses incurred, the scheme shall replace to a 2:1 ratio. This will be achieved by planting an orchard at the south-west end of the rear garden and by planting 4 landscape trees, 2 at the front and 2 at the rear of the new dwelling. A

³ BS3998:2010 Tree work – Recommendations. BSI Publications

palette of species deemed suitable for inclusion in the soft-landscape proposal is outlined in Table 3.

Table 3 – Proposed New Trees

COMMON NAME	LATIN NAME	HEIGHT AT MATURITY (m)	TOLERANCE	
			DROUGHT	SHADE
Apple	<i>Malus domestica</i>	Rootstock dependent	MODERATE	MODERATE
Pear	<i>Pirus communis</i>	Rootstock dependent	MODERATE	LOW
Greengage	<i>Prunus domestica var. Italica</i>	Rootstock dependent	MODERATE	LOW
Damson	<i>Prunus domestica</i>	Rootstock dependent	MODERATE	LOW
Plum	<i>Prunus domestica</i>	Rootstock dependent	MODERATE	LOW
Quince	<i>Cydonia oblonga</i>	Rootstock dependent	MODERATE	LOW
Corkscrew hazel	<i>Corylus avellana 'Contorta'</i>	<10m	MODERATE	LOW
Red snake-bark maple	<i>Acer capillipes</i>	10-15	LOW	MODERATE
Rowan	<i>Sorbus aucuparia</i>	10-15	MODERATE	MODERATE
Japanese cherry	<i>Prunus serrulata</i>	12	MODERATE	MODERATE

- 5.16 Trees should be selected of standard size (6-8ft) and bare root, preferably from local suppliers and certified as pest and disease free.
- 5.17 When planted, trees should be supported by double stakes and hessian tape. To ensure that no contact with the stakes can occur, these shall be placed ca. 30cm away from the trunk and facing the prevailing winds' direction.
- 5.18 A biodegradable hemp mulch mat shall be applied around the base, to suppress weed growth and retain moisture; ca. 10cm of mulching material (i.e. seasoned hardwood woodchip) shall be laid on top.
- 5.19 A strimmer guard may also be applied to the tree's stem, to prevent bark damage from strimming during establishment.
- 5.20 A water irrigation bag can also be applied to ensure that the moisture level of the ground is maintained to suitable level during establishment. Water bags need refilling on a regular basis and additional watering may still be required during prolonged dry summer spells.

6. ENVIRONMENTAL AND ECOLOGICAL CONSIDERATIONS

- 6.1 Mature trees are significant features in the landscape and should be valued for their provision of a range of ecosystem services such as habitat, shading, cooling, flood attenuation and wellbeing to residents and other members of the public; therefore, their inclusion in the design is recommended. Additional recommendations relating to trees and the planning system are set out in Appendix 4.
- 6.2 Should remedial works need to be undertaken, trees shall first be assessed for presence/absence of protected wildlife species to ensure compliance with the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010.
- 6.3 The possibility of birds nesting in canopies must be considered if works are to be carried out during the bird-nesting season (late February to September inclusive, weather dependent). A bird activity survey should be carried out by a competent person within the 24-hour period prior to the commencement works and then again, immediately prior to works start.
- 6.4 Should an active nest be found in any of the trees requiring work, suitable mitigation measures shall be required to avoid committing an offence. This may include provision for postponement of the works until such time as there is unequivocal evidence that the nest is no longer in use.

7. TREE SURVEY SCHEDULE

Key to Tree Survey Schedule

The table below details the parameters recorded as part of this assessment and explains them.

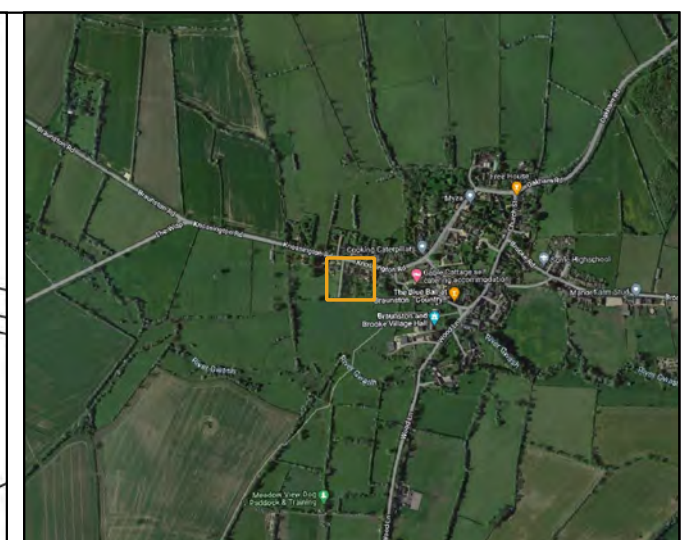
Table 4 – Key to Survey Schedule

COLUMN HEADING	EXPLANATION
Tree/Group Ref.	Unique number/reference attributed to an individual tree
Species	Tree species (common English name)
Tree Height	Tree height (either measured or in bands) in meters
Crown Spread	Measured/estimated spread of the crown in meters, provided either as N-S and E-W or to each of the cardinal points from the main stem.
Stem type	Identified as either single or multi-stem.
DBH	Diameter measured at breast height (1.5m from ground level)
Age Class	Life stage of the tree, defined as: Y=Young; MA=Middle Aged; M=Mature; OM=Over Mature; V=Veteran
Observations	Brief description of the tree, including comments on physiological and structural defects
ERC	Estimated Remaining Contribution in years (see Appendix 3 for details)
Category Grading	Recommendations for remedial works / management

Tree Ref.	Species	Height (m)	Crown Spread (m)				Stem Type	DBH (mm)	Age Class	Cat Grad	ERC	Observations	Recommendations for Remedial Work
			N	S	E	W							
T1	Silver birch	15.8	2	2.5	1	1.5	Single	243	Semi-mature	B	20 to 40 yrs	healthy, mature specimen with no visible structural defects, no deadwood in crown and a well-formed branch pattern	Remove to facilitate development
T2	Corkscrew hazel	5.5	2.5	2	2.2	2.5	Multi	110	Mature	B	10 to 20 yrs	no visible defects; multi-stem, with a dense crown displaying good vitality	n/a
T3	Robinia spp. (cultivar)	9	6	6	5	5	Single	320		B	>40 yrs	Healthy, well-formed specimen. Develops co-dominance at 3m, stems meeting in a strong union with a visible bark ridge. Minimal deadwood >50mm observed in the lower canopy.	Remove to facilitate development
T4	Thuja	7	1	1	1	1	Single	200	Semi-mature	B	>40 yrs	Healthy tree, displaying no visible defects	n/a
T5	Ginkgo Biloba	9.2	3	3	3	3	Multi	1	Mature	B	20 to 40 yrs	Healthy specimen with well-developed architecture/branch pattern, crown displays good vitality. basal growth observed	n/a
T6	Maple Acer spp.	7.5	4	3	3.5	3	Multi	220	Mature	B	>40 yrs	Two codominant stems developing from the base of tree, together forming a large, widespread and well-balanced crown displaying good vitality.	n/a
T7	Wild Cherry	14.6	0	4	3	0	Single	460	Mature	B	20 to 40 yrs	stem co-dominance at 3.2 m, ivy clad to 80% of the NE stem and 60% of the SE stem. Basal area covered by ivy, unable to inspect but no visible signs of bulging/heave. Some basal growth observed. Crown displays good vitality.	Thin crown

Tree Ref.	Species	Height (m)	Crown Spread (m)				Stem Type	DBH (mm)	Age Class	Cat Grad	ERC	Observations	Recommendations for Remedial Work
			N	S	E	W							
T8	Apple Malus spp.	5	2	2.5	2	2	Single	200	Young	C	10 to 20 yrs	Well-shaped crown, achieved through formative pruning. Good overall vitality.	n/a
T9	Thuja	5.5	2	2	2	2	Single	150 (est.)	Semi-mature	C	20 to 40 yrs	Unable to measure stem diameter due to crown density. Good vitality.	n/a
T10	Common ash	7.5	2	1	1.5	1	Single	170	Young	C	>10 yrs	Some deadwood in the western portion of crown; no evidence of ash dieback.	n/a
T11	Crack willow	4	1	1	1	1	Single	1	Mature	C	10 to 20 yrs	Rooted on the east bank of the onsite pond; some deadwood in crown >50mm in diameter, crown otherwise displaying good vitality.	n/a
T12	Common ash	7	1.5	1.5	1.5	1.5	Single	150	Young	B	20 to 40 yrs	Rooted on the east bank of the onsite pond; unable to access for close-up inspection, appears healthy displays healthy but light canopy	n/a
T13	Cedar <i>Cedrus spp.</i>	13.1	2	3	3	2	Single	250	Early-mature	B	20 to 40 yrs	Good morphophysiological condition	n/a
T14	Japanese maple	3	1	1	1	1	Single	125	Young	B	20 to 40 yrs	Good morphophysiological condition	n/a
T15	Cupressus spp.	6.8	2	2	2	2	Multi	175	Mature	C	20 to 40 yrs	Well shaped, uniform crown	Remove to facilitate development
T16	Silver birch	18	2.5	3	3	2.5	Single	330	Mature	B	20 to 40 yrs	Ivy clad 70% of the main stem; well-formed, balanced crown, with no deadwood and visible defects	n/a
T17	Common walnut	16	5	5	5	5	Single	600mm (est.)	Mature	A	>40 yrs	Tree located on 3rd party land, parameters estimated. Well formed crown displaying good vitality. Assessment of the base	n/a

Tree Ref.	Species	Height (m)	Crown Spread (m)				Stem Type	DBH (mm)	Age Class	Cat Grad	ERC	Observations	Recommendations for Remedial Work
			N	S	E	W							
											and stem not possible due to access limitations.		
T18	Common walnut	15.5	4	4	4	4	Single	600mm (est.)	Mature	A	>40 yrs	Tree located on 3rd party land, parameters estimated. Well formed crown displaying good vitality. Assessment of the base and stem not possible due to access limitations.	n/a
TG1	Yew, cypress, thuja	6.5	0.5	0.5	0.5	0.5	n/a	150 (est. ave.)	Semi-mature to mature	B	20 to 40 yrs	Yew facing North West and yew highest in group 6.5m 3 cypress facing south west of group 4.5m 1 cypress South against yew	n/a
TG2	Ash, hawthorn	4	1	1	1	1	n/a	80 (ave.)	Young to semi-mature	C	>40 yrs	1 young Ash and 4 hawthorn trees rooted on the north edge of the pond, in fair condition	n/a



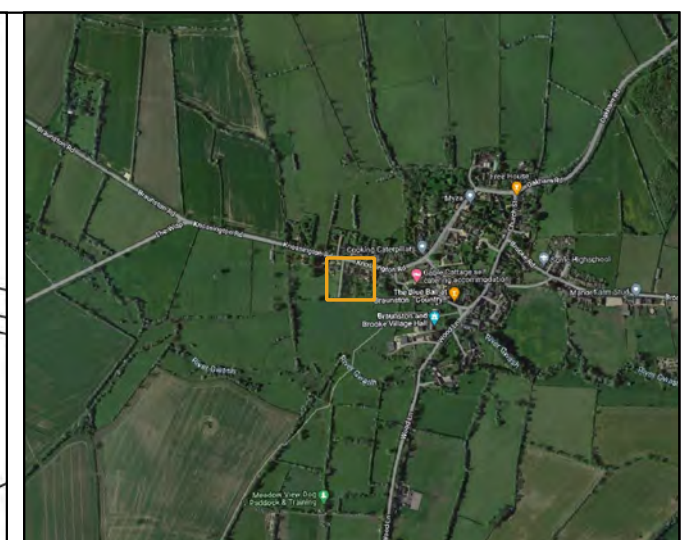
LEGEND

- Site Boundary
- Stem
- Canopy
- Root Protection Area (RPA)
- Shading
- Proposed Development - Building
- Proposed Development - Hardstanding

Figure 1 - Tree Constraints Plan

PROJECT	16 Knossington Road	
CLIENT	Karen Nagel	
Revision	Date	Produced by
-	05 Dec 23	Rob Harmsworth
Scale @ A3	Ecology Resources Reference	
1:400	23190	





LEGEND

- Site Boundary
- Stem
- Canopy
- Root Protection Area (RPA)
- Shading
- To be removed
- Ground Protection Matting
- Protection Fencing
- Proposed Development - Building
- Proposed Development - Hardstanding

Figure 2 - Tree Protection Plan

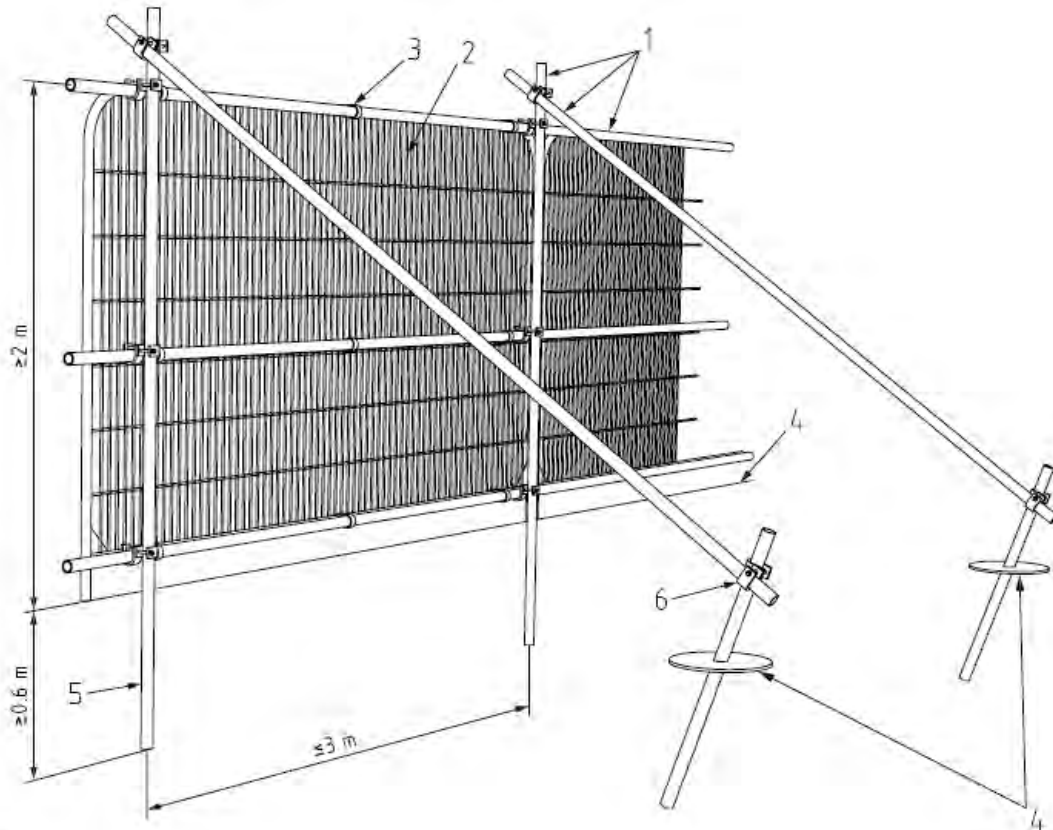
PROJECT	16 Knossington Road	
CLIENT	Karen Nagel	
Revision	Date	Produced by
-	08 Dec 23	Rob Harmsworth
Scale @ A3	Ecology Resources Reference	
1:400	23190	



APPENDIX 1 – TREE PROTECTION MEASURES

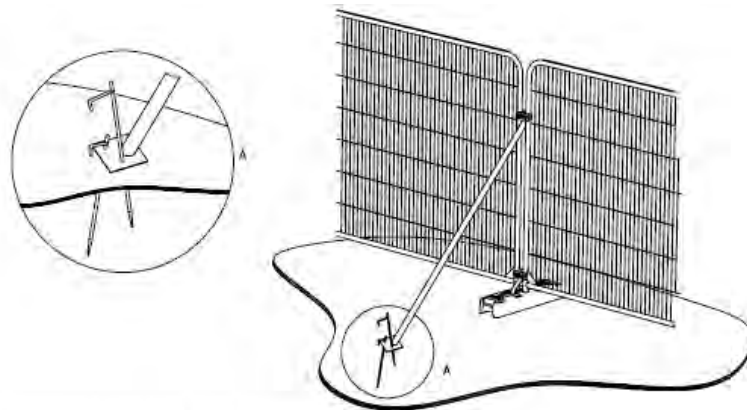
Protected areas (as identified in the Tree Protection Plan) should be regarded as sacrosanct and, once installed, barriers and ground protection should not be removed or altered without prior consultation with the project arboriculturist and, where necessary, approval from the local planning authority.

PROTECTION FENCING

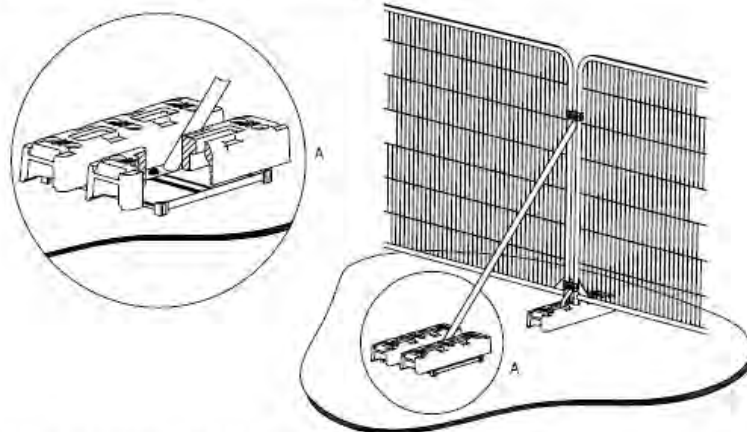


Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps



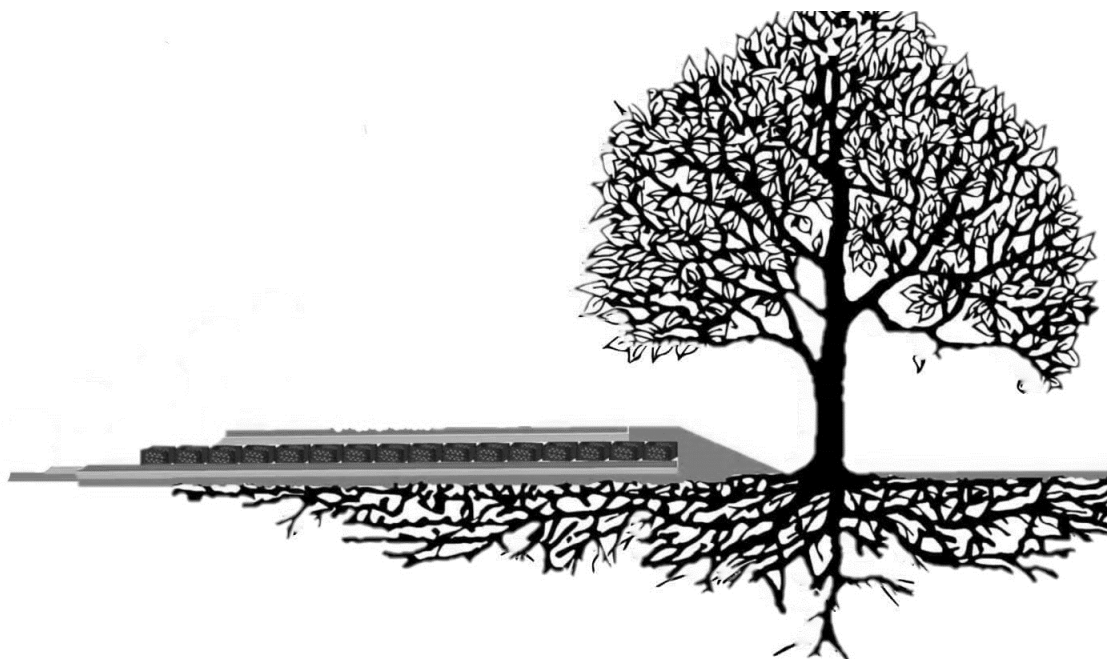
a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

GROUND PROTECTION MATTING

Ground protection matting is installed to prevent root damage and soil compaction. A number of engineering solutions exist, depending on context and expected likelihood of RPA encroachment. Where possible, RPA encroachment should be avoided altogether through the establishment of effective exclusion zones.



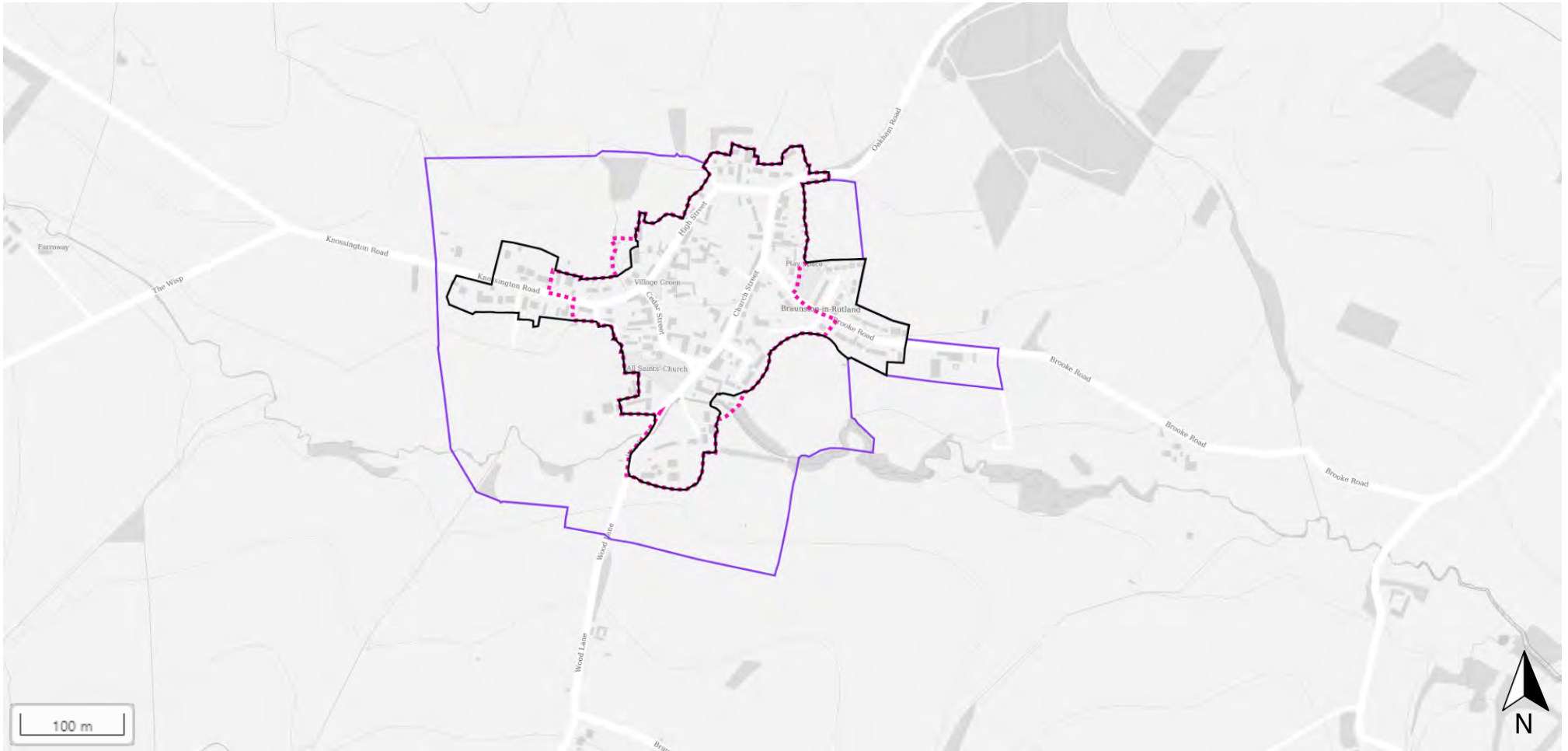
APPENDIX 2 – TREES AND THE PLANNING SYSTEM

(INCLUDES ENQUIRY ON CONSERVATION AREA/TPO)

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

Interrogation of the Local Planning Authority's website⁴ has revealed that all trees are found within Braunston's Conservation Area. A plan showing its extent is appended in the next page.

⁴ <https://rutland.opus4.co.uk/planning/localplan/maps>




Development Control Map


Friday, December 8, 2023 at 1:33 PM

Center: 52.65051, -0.76737 Zoom: 16

Rutland County Council

© Crown copyright and database rights 2023 Ordnance Survey TBC

 Conservation Areas

 Article 4 Conservation Areas

 Planned Limits

APPENDIX 3 – TREE SURVEY EXPLANATORY NOTES

3.1 ESTIMATED REMAINING CONTRIBUTION (ERC)

This parameter is aimed to provide an estimate of the remaining lifespan of a tree having taken into consideration its overall condition, structural integrity and longevity typically expected by the particular species.

ERC (years)	DETAILS
<10	Tree presenting evidence of biomechanical defects and/or ongoing decline. Removal generally recommended on Health & Safety grounds.
40+	Trees of high quality and value, capable of making a significant contribution to the area for 40 or more years. Retention and proper care highly recommended.
20+	Trees of moderate quality or value, capable of making a significant contribution to the area for 20 or more years. Retention and proper care highly recommended.
10+	Trees of low quality, adequate for retention for a minimum of 10 years expecting new planting to take place; or young trees that are less than 15 cm in diameter which should be considered for re-planting where they are expected to conflict with new/existing structures in the med-long term.

3.2 TREE CATERGORY GRADING

This parameter defines the quality attributed to a particular tree, having taken into account its arboricultural, landscape and cultural value as described in the cascade chart below.

CATEGORY	ARBORICULTURAL VALUE	LANDSCAPE VALUE	CULTURAL VALUE (including Conservation)
U	<ul style="list-style-type: none"> 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 R category trees (i.e. 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 (e.g. Dutch elm disease), or very low-quality trees suppressing adjacent trees of better quality <p>Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).</p>		
A	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or woodpasture)
B	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits
C	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits

3.3 ROOT PROTECTION AREA (RPA)

The 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, where the protection of the roots and soil structure is treated as a priority.

For single stem trees, the RPA should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter. The table below details RPA for single-stem diameters ranging between 75 and 1250+ mm.

Single stem diameter mm	Radius of nominal circle m	RPA m ²	Single stem diameter mm	Radius of nominal circle m	RPA m ²
75	0.90	3	675	8.10	206
100	1.20	5	700	8.40	222
125	1.50	7	725	8.70	238
150	1.80	10	750	9.00	255
175	2.10	14	775	9.30	272
200	2.40	18	800	9.60	290
225	2.70	23	825	9.90	308
250	3.00	28	850	10.20	327
275	3.30	34	875	10.50	346
300	3.60	41	900	10.80	366
325	3.90	48	925	11.10	387
350	4.20	55	950	11.40	408
375	4.50	64	975	11.70	430
400	4.80	72	1 000	12.00	452
425	5.10	81	1 025	12.30	475
450	5.40	92	1 050	12.60	499
475	5.70	102	1 075	12.90	519
500	6.00	113	1 100	13.20	547
525	6.30	124	1 125	13.50	573
550	6.60	137	1 150	13.80	598
575	6.90	150	1 175	14.10	625
600	7.20	163	1 200	14.40	652
625	7.50	177	1 225	14.70	679
650	7.80	191	1 250+	15.00	707

APPENDIX 4 – GENERAL GUIDANCE NOTES FOR DEVELOPMENT

Trees are a material consideration in the UK planning system because of the social, economic and environmental benefits that they deliver in the built environment. With a view to preserving existing trees as landscape assets and making optimal use of the site, it is advisable that the “*Avoid-Mitigate-Compensate*” approach set out below is duly followed at design stage. It is important that existing, established trees are acknowledged as an asset to development sites and as such, adequately preserved.

That due consideration is given to the positive financial impact that established trees have in the context of new development.

Avoid

The site layout should always seek to avoid the RPA. Where possible, building lines should be at least 2m outside the root protection area to provide working space for construction, thus minimising the chances of causing damage. That said, suitable protection measures can be adopted where such clearance cannot be achieved.

Mitigate

Where intrusion within the RPA is unavoidable, several measures are available to lessen the impact upon the affected tree, such as:

- Foundations that avoid trenching, e.g. using screw piles, suspended floor slabs or casting at ground level for lightweight structures such as bin and cycle stores.
- The designation of affected areas for parking, drives or hard surfaces by adopting construction methods (i.e. root cellular confinement systems) that enable hard surfaces to be built above existing soil levels.
- The installation of service runs that cannot be routed outside the root protection area(s) by thrust boring, directional drilling, hand digging or any other methods that enable a controlled approach to the task.

The feasibility of these methods shall always be reviewed by a qualified arboriculturist, whose supervision may be required when some of the operations described above are undertaken.

Compensate

Where the removal of the trees on site is unavoidable, on-site replacement planting may ensure the continuity of tree cover. To be successful, a replacement planting scheme must consider on-site ground conditions (to inform enhancement where needed) several steps pre-planting and adequate maintenance during establishment. Offsetting by planting off-site may be considered in some circumstances, subject to the scrutiny of the Local Planning Authority; however, on-site replacement is generally regarded as the preferred option in order to maintain tree-associated ecosystem services.