Arboricultural Impact Assessment

Clapperbrook Lane, Exeter

30 April 2025

Ecology
Arboriculture
Land Management

Quality Assurance

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Final	30 April 2025	Matt Underwood BSc MArborA CEnv	Adam Earl BSc MArborA MCIEEM	Adam Earl BSc MArborA MCIEEM	N/A

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Site Details

Site Name and Location	Clapperbrook Lane, Exeter
Central OS Grid Reference	SX 927 906
Client	1 Energy Group Ltd.

Boundary

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1 Introduction

This report presents the results of an Arboricultural Impact Assessment at Clapperbrook Lane, Exeter in relation to an outline planning application. The surveys were commissioned by 1 Energy Group Ltd. The area within the application boundary is hereafter referred to as the 'Site'.

The Site is located to the south of Clapperbrook Lane East and west of Exeter Ship Canal, with an existing access track to the north of Clapperbrook Lane East, in the Marsh Barton area of Exeter. The Site is approximately 1.80 hectares (ha) and comprised an urban brownfield site bordered by early mature and mature trees.

This arboricultural survey report has been prepared in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. All trees located within the Site boundary have been surveyed as part of this assessment. Additionally, those trees located immediately adjacent to the Site boundary and that have the potential to constrain the development (either through above or below portions of the tree) have also been surveyed as part of this assessment.

An Arboricultural Constraints and Opportunities Plan (ACOP) including a tree survey schedule and tree constraints plan was prepared during the design stage to inform the scheme design.

In order to undertake the assessment, the following documentation was provided by the client:

- BS3935 – Topographical Survey
- EDS24.03.L.00.01.250320.sk1 (P2) Proposed Site Layout

2 Statutory Protection

2.1 Legislation

Some trees receive legal protection within England through the following:

- Tree Preservation Orders (TPOs);
- Conservation Areas;
- Planning Conditions;
- Forestry Act 1967.

As part of this assessment, the relevant Local Planning Authority (LPA) has been contacted or online mapping systems accessed to establish if any arboricultural features surveyed as part of this report are subject to any legal protection.

Unauthorised work to protected trees could lead to prosecution, resulting in enforcement action such as fines or a criminal record.

2.2 Planning Policy

2.2.1 National Planning Policy Framework (NPPF)

Paragraph 136 – *'Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible.'*

Paragraph 193c – *'Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.'*

Paragraph 194d – *'Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.'*

2.2.2 *Exeter City Council Core Strategy, Adopted February 2012*

Chapter 10. Environment – *'Networks of Green Infrastructure (GI) will be required to enhance quality of life in the region and support the successful accommodation of change. Biodiversity and sustainable movement networks will comprise multifunctional, accessible, connected assets, planned around existing environmental characteristics.'*

2.2.3 *Exeter City Council Trees in Relation to Development Supplementary Planning Document, September 2009*

Chapter 2 Tree and Development – *'...To successfully integrate trees into a development it will be a planning requirement to allow enough space in the design to allow trees to mature and flourish and to agree protection measures during the entire construction phase. Trees should be considered at the earliest design stage to allow them to be successfully integrated into new development, a survey of trees on and adjacent to the site should be one of the first steps in the design process...*

...If a tree is in a satisfactory condition to be retained then consideration should be given to its inclusion into an A, B or C category. The Council regards pre application discussions as a useful process for both the applicant and the Council. For both sides to gain the maximum benefit from pre-application discussions the categorisation of trees, and a constraints plan should be agreed with the Council at an early stage...

...It should not be assumed that C category trees that constrain development may be removed. The Council will consider each site individually and on its own merit, giving consideration to the surrounding landscape, and existing tree cover.'

3 Methodology

3.1 Site Survey

The arboricultural survey was undertaken on 26 April 2024 by Matt Underwood BSc MArborA CEnv. The visibility at the time of survey was adequate to undertake a thorough assessment of the trees from ground level. The trees were surveyed in the context of the existing land use.

The trees were surveyed in accordance with BS5837:2012. The key information for each arboricultural feature can be found in the tree survey schedule in **Appendix 2**.

The key information for each arboricultural feature is used to calculate the root protection area, radius and to categorise the tree using an alphanumeric system. **Table 1** below provides a brief overview of how each feature is categorised.

Table 1: Overview of Tree Categorisation Process

	1 – Mainly arboricultural qualities	2 – Mainly landscape qualities	3 – Mainly cultural/ conservation values
Category A (Life expectancy of 40+ years)	Features which are good examples of their species; or those that form an essential component to a wider feature.	Feature of particular visual importance as arboricultural and/or landscape feature.	Feature of significant conservation, historical, commemorative or other value (e.g. veteran trees).
Category B (Life expectancy of 20+ years)	Features that may be included in category A but have been downgraded due to impaired condition such that they have a predicted lifespan of < 40 years.	Tree groups or woodland which collectively have a higher rating than the component 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.
Category C (Life expectancy of 10+ years)	Unremarkable tree of 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 greater collective landscape value; and/or trees offering low or only temporary landscape benefits.	Trees with no material conservation or other cultural value.
Category U (Life expectancy of <10 years)	Features that are dead or show signs of significant, immediate decline or have serious, irremediable structural defects which could result in collapse.		

3.2 Survey Limitations

The survey was limited to a visual inspection from ground level. Where existing constraints were present e.g. dense vegetation around tree stems or where the tree is located on third party property, the dimensions were estimated on site to the best of the surveyor's ability. Where an arboricultural feature has not been accurately plotted on the topographical survey or within the plans provided, the feature reference has been suffixed with PA to highlight its position as being approximate.

Due to the dynamism of living organisms and the potential for Site conditions to change, the recommendations provided in this report are only considered valid for two years of the date of the survey. Furthermore, the recommendations provided in this report cannot account for detrimental impacts to trees through climatic extremes and/or physical damage.

Whilst every effort has been made to identify any physiological and structural defects of the trees surveyed, this report should not be considered a tree risk assessment. No tree can be considered absolutely safe with even 'sound' trees known to fail.

No invasive soil investigation works have been undertaken as part of this assessment and as such this report does not address issues with regards to soil heave and shrinkage. This report cannot be used to assess risks with regards to subsidence, in relation to the existing trees or as a result of the recommendations provided in this report.

A structural engineer should be consulted in all matters relating to the design and construction of foundations near trees. NHBC provides guidance for 'Building near trees'.

4 Results

4.1 Categorisation Summary

A summary of the arboricultural features and their categorisation can be found in **Table 2** below. Full details of each arboricultural feature can be found in the tree survey schedule in **Appendix 2**.

Table 2: Summary of Arboricultural Feature Categorisation

Categorisation	Arboricultural Feature		
	Tree	Tree Group	Hedgerow
A	-	-	-
B	6	6	-
C	3	4	-
U	-	-	-

4.2 Site Appraisal

4.2.1 Soils

The soil type has been assessed using the British Geological Survey Maps as 'loamy and clayey floodplain soils with naturally high groundwater'.

4.2.2 Trees

In general, the tree stock on Site is considered to have moderate arboricultural merit. The majority of the trees surveyed lie outside the redline boundary of the Site.

The tree most significant trees associated with the Site are two category B groups (G11, G12). These trees are a prominent landscape feature and provide screening from Clapperbrook Lane East and the canal to the northwest.

4.3 Statutory Protection

There are no TPOs and the site is not located within a conservation area (as confirmed by Exeter City Council by email on 7th December 2023).

However, any persons proposing to undertake works to the trees on site should re-check the status of the trees with the LPA immediately prior to undertaking the works.

5 Arboricultural Impact Assessment

5.1 Description of Proposed Development

The development proposals to which the survey relates include an energy centre and associated infrastructure, as shown in the EDS24.03.L.00.01.250320.sk1 (P2) Proposed Site Layout.

The project design team were provided with an Arboricultural Constraints and Opportunities Plan (ACOP) which provides an overview of the existing tree stock and details any constraints they may pose to development on a tree constraints plan.

5.2 Removal of Arboricultural Features

Those trees that require removal to facilitate the proposed development are shown on the Tree Retention Plan in **Appendix 1** and detailed in **Table 3**.

Table 3: Required Removal of Arboricultural Features

Arboricultural Feature	Species	Category	Quantity	Justification
G12	Poplar	B	1	Replacement tree planting

One tree in G12 requires removal for an access road. However, an existing access track previously existed in this area of the Site meaning that there is likely to be historic soil compaction, and rooting morphology is likely to limited in this area. Therefore, it is recommended that alternatives to removal be investigated and submitted as part of a subsequent reserved matters application. However, this is shown as removed in this instance to ensure all eventualities are fully assessed.

The removal of the above arboricultural feature will be compensated by the implementation of a tree replacement strategy during the soft landscape phase of the development. Therefore, any impact on the amenity value is only likely to be short-term, whilst the replacement planting matures sufficiently to replace and enhance the value of the site.

When selecting new planting, consideration will be given to the future growth of the tree (including root systems, stem and canopy). Where possible, the tree will have sufficient space to reach maturity without causing physical contact with nearby structures or causing excessive shading.

5.3 Pruning of Arboricultural Features

Those trees that require pruning to facilitate access or construction are detailed in **Table 4** below.

Table 4: Required Pruning of Arboricultural Features

Arboricultural Feature	Species	Works Required	Reason
G3	Elder, Buddleia	Reduce lateral growth by 3m to west	Allow construction access

All pruning works should be carried out in accordance with BS3998:2010 'Tree works – recommendations'. Any further pruning works that cannot be predicted at this stage (based on the information currently available) should be discussed during the pre-commencement meeting with the project arboriculturalist and agreed with the local planning authority arboricultural officer.

5.4 Encroachment into the Root Protection Areas of Arboricultural Features

The proposed access road which will encroach into the root protection areas of tree T4 by < 5 % of the trees total root protection area. In this instance there is ample additional rooting environment to compensate for this minor encroachment is not considered significant to affect the long-term viability of the trees.

5.5 Routing of Services and Utilities

Details of the routing of services have not been provided at this stage. When details of the routing of services become available, they will be reviewed by the project arboriculturalist. The arboriculturalist shall then confirm to the local authority arboricultural officer either that no works will be carried out within root protection areas, or provide details of the methodology required to ensure the works are

carried out in accordance with NJUG Vol. 4 'Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees' and BS5837: 2012.

5.6 Shade Created by Arboricultural Features

The proposals have been designed to avoid shading constraint posed by retained trees.

5.7 Seasonal Nuisance Caused by Arboricultural Features

The proposed roads, parking bays, and gate house will in some instances lie closed to the canopy of retained trees. Therefore, the path and road may require regular sweeping/clearing to ensure they remain free of leaf debris build-up during the autumn. Such tasks can be included within the site wide management plan and fall under the remit of the appointed management company. Guttering on the gate house should be fitted with gutter guards to prevent leaf debris build-up.

5.8 Future Pressure on Arboricultural Features as a Result of Development

Trees G12 are likely to require future pruning to avoid encroaching the access road and gate house. Such cyclical pruning is likely to be light and infrequent and therefore unlikely to affect the long-term viability of the trees.

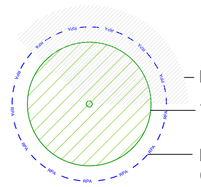
6 Further Considerations

6.1 Protected Species

All trees should be checked for protected species e.g. roosting bats and nesting birds prior to any works being undertaken. Failure to undertake adequate inspections that result in the disturbance of protected species may result in the contravention of wildlife legislation and the committing of a criminal offence.

Appendix 1 – Tree Constraints Plan and Tree Retention Plan

Key:



Indicative Tree Shadow Extent

Tree Canopy

Root Protection Area
(colour coded to indicate tree category)

Category B

Category C

0 20m 40m 60m 80m 100m

Scale @ A1: 1:1000

Drawing should be viewed in colour.

Location of trees suffixed with PA (position approximate) have been estimated on site.

Drawing Title:
Tree Constraints Plan

Project:
Clapperbrook Lane, Exeter

Client:
1 Energy Group Ltd.

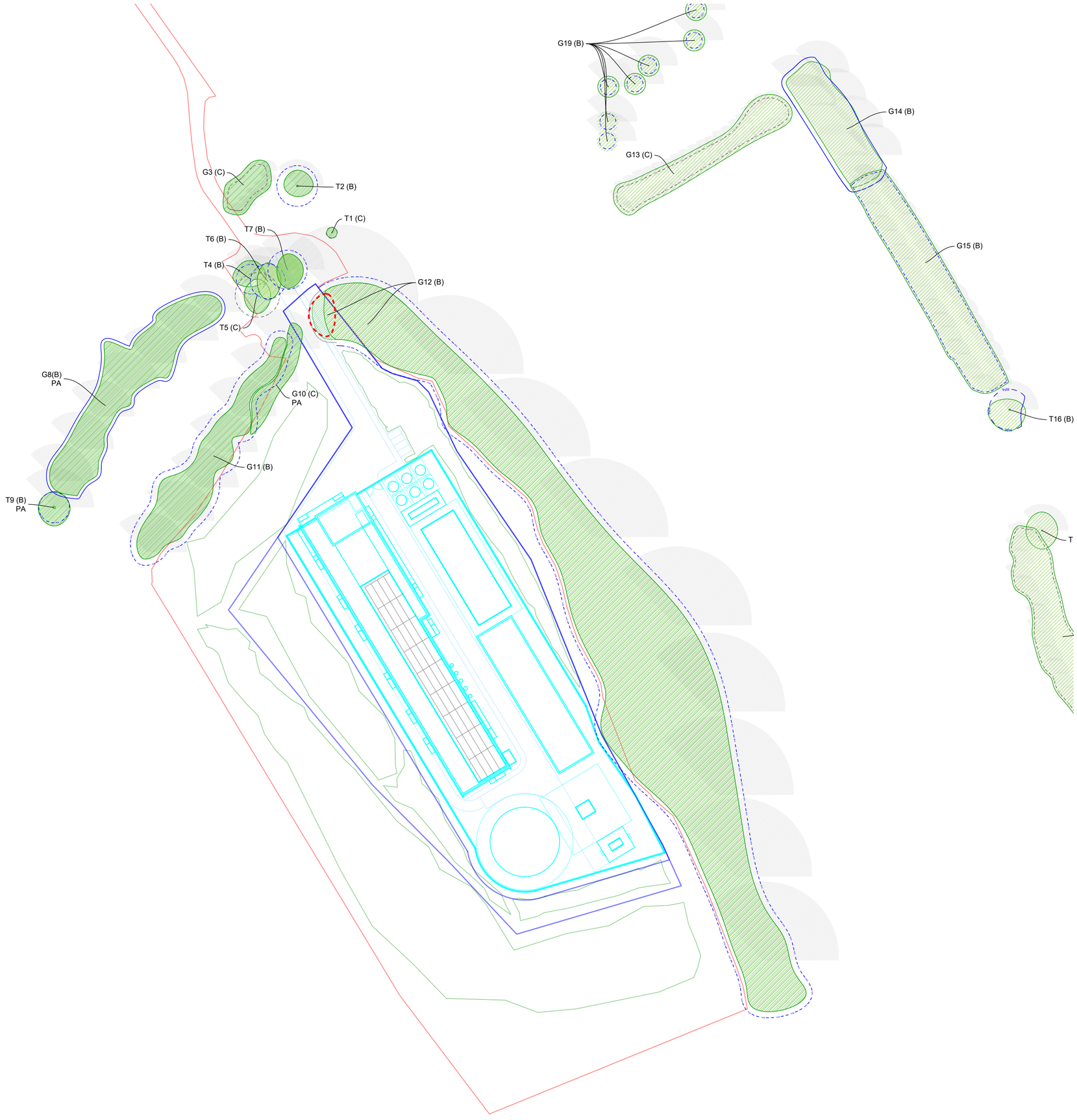
Date:
31/05/2024

Drawn:
JP

Drawing Number:
2199-TCP-JP

Revision:
1

N



Key:

Trees To Be Retained

- Indicative Tree Shadow Extent
- Tree Canopy
- Root Protection Area
  (colour coded to indicate tree category)

Category B

Category C

Trees To Be Removed

Tree to be Removed

0 15m 30m 45m 60m 75m

Scale @ A1: 1:750

Drawing should be viewed in colour.

Location of trees suffixed with PA (position approximate) have been estimated on site.

Drawing Title:
Tree Retention Plan

Project:
Clapperbrook Lane, Exeter

Client:
1 Energy Group Ltd.

Date:
30/04/2025

Drawn:
MU

Drawing Number:
2199-TRP-MU

Revision:
1

N

Appendix 2 – Tree Survey Schedule

Client: 1 Energy Group Ltd
Site: Clapperbrook Lane, Exeter

Tree Survey Schedule

Survey Date: 26.04.24
Surveyor: Matt Underwood BSc MArborA

Feature Number	Species	Height (m)	Stem Ø (mm)	Crown Spread (m)				Height above ground (m)		Life Stage	Physiological Condition	Structural Condition	Root Protection Area (m²)	Root Protection Radius (m)	Category	Suitable Useful Life Expectancy
				N	E	S	W	Crown	1st Sig. Branch							
T1	Elder	3.5	170	2	2	2	2	1 W	0 W	Mature	Good	Fair	13.1	2.0	C1	10+
Comments	Brambles throughout. Multi-stemmed from base. Dense scrub inhibited thorough inspection. Dimensions estimated.										**Management**	None at time of survey.				
T2	Alder	10	645	6	6	4	5	1.5 N	1.5 N	Late Mature	Fair	Fair	188.1	7.7	B1	20+
Comments	Minor deadwood and die back in crown. Two co-dominant stems 1 metre from base. Ivy on trunk.										**Management**	None at time of survey.				
G3	Elder, Buddleia	<4	120	3	3	3	3	0.5 S	0.5 S	Early Mature - Mature	Good	Fair	6.2	1.4	C2	40+
Comments	Acts as screen from land to the north. Estimated dimensions due to dense scrub.										**Management**	None at time of survey.				
T4	Silver birch	13	470	7	5	3	6	0.5 N	4 N	Mature	Fair	Good	99.9	5.6	B1	20+
Comments	Dense ivy in crown and on tree.										**Management**	None at time of survey.				
T5	Lime	15	700	6	5	7	5	0 S	2.5 S	Mature	Fair	Fair	221.6	8.4	C1	20+
Comments	Bark necrosis on southern side of stem. V-shaped union at 2m - potential point of future failure. Bleeding canker on stem. Road in RPA to south.										**Management**	None at time of survey.				
T6	Norway maple	13	550	7	5	7	4	2 N	2 S	Mature	Good	Good	136.8	6.6	B1	30+
Comments	Minor deadwood in crown. Unsympathetic pruning to east. Road in RPA to south.										**Management**	None at time of survey.				
T7	Lime	14	620	6	6	7	4	2.5 A	3.5 A	Mature	Good	Good	173.8	7.4	B2	30+
Comments	Road in RPA to south.										**Management**	None at time of survey.				
G8	Horse chestnut, Norway maple	14	Up to 600	6	6	6	7	0 S	2 S	Mature	Good	Good	162.8	7.2	B2	30+
Comments	Bank up to road likely restricts rooting. Five trees. No access. Dimensions estimated.										**Management**	None at time of survey.				
T9	Alder	15	480	6	6	7	6	5 S	5 S	Mature	Good	Good	104.0	5.8	B2	30+
Comments	Bank up to road likely restricts rooting. No access. Dimensions estimated. Dense ivy on stem.										**Management**	None at time of survey.				
G10	Hazel, Goat willow, Hawthorn Guelder rose, Dogwood, Poplar	<3	<75	0.5	0.5	0.5	0.5	0.5 A	NA	Young	Good	Good	2.5	0.9	C2	40+
Comments	New planting.										**Management**	None at time of survey.				
G11	Poplar, Crack willow	15	Up to 620	5	4	5	4	0.5 S	2 S	Mature	Good	Good	174.0	7.4	B2	30+

Key
T: Tree G: Group H: Hedgerow W: Woodland Av: Average
Est: Estimated Dimension Comb: Combined Stem Diameter

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Tree Survey Schedule

Feature Number	Species	Height (m)	Stem Ø (mm)	Crown Spread (m)				Height above ground (m)		Life Stage	Physiological Condition	Structural Condition	Root Protection Area (m²)	Root Protection Radius (m)	Category	Suitable Useful Life Expectancy
				N	E	S	W	Crown	1st Sig. Branch							
Comments	Minor deadwood in crowns. Ivy on stems.										**Management**	None at time of survey.				
G12	Poplar, Crack willow, Lime, Ash, Norway maple	Up to 29	Up to 780	8	3	7	8	1 N	2.5 W	Mature	Good	Good	275.0	9.3	B2	30+
Comments	RPA restricted by culvert to east. Evidence of excavation in RPA.										**Management**	None at time of survey.				
G13	Hazel, Elm, Elder	4	100 Av	2.5	2.5	2.5	2.5	0 Av	0 Av	Early mature	Good	Fair	4.5	1.2	C 2	40+
Comments	Unmanaged hedgerow. Multi-stemmed from base. Dead elm in group.										**Management**	None at the time of survey.				
G14	Ash, Sycamore	Up to 12	Up to 450	4	4	4	4	1.5 W	1.5 W	Early mature	Good	Fair	91.6	5.4	B 1	30+
Comments	Multi-stemmed from base. On riverbank. Coppiced individuals under powerline.										**Management**	None at the time of survey.				
G15	Hawthorn, Blackthorn, Hazel, Ash, Crab apple, Field maple	Up to 6	120 Av	2	2	2	2	0 Av	0.5 Av	Semi-mature to early mature	Good	Good	6.2	1.4	B 2	40+
Comments	Self-set scrub. Footpath to west.										**Management**	None at the time of survey.				
T16	Ash	11	600 Est	4	6	8	8	1.5 Av	1.5 W	Mature	Good	Good	162.8	7.2	B 1/2	30+
Comments	Scrub inhibited thorough inspection. Dimensions estimated. On river bank. Dense ivy in crown.										**Management**	None at the time of survey.				
T17	Ash	10	200x6	7	6	7	6	1.5 W	0 W	Mature	Fair	Fair	109.3	5.9	C 1	20+
Comments	Scrub inhibited thorough inspection. Dimensions estimated. On river bank. Multi-stemmed from base. Epicormic growth in crown.										**Management**	None at the time of survey.				
G18	Hawthorn, Blackthorn, Elm	Up to 6	100 Av	2	2	2	2	0 Av	N/A	Early mature	Fair	Fair	4.5	1.2	C 2	40+
Comments	Dense self-set scrub. Dead elms in group.										**Management**	None at the time of survey.				
G19	Field, Norway maple, Hornbeam	11	250 Av	4	4	4	4	2 Av	2 Av	Early mature	Good	Good	28.3	3.0	B 2	40+
Comments	Linear group. Footpath to the east.										**Management**	None at the time of survey.				

Key
T: Tree G: Group H: Hedgerow W: Woodland Av: Average
Est: Estimated Dimension Comb: Combined Stem Diameter

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