



**ArbTS - Arboricultural Technician Services Ltd**

(Tree Consultancy Services)

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## Arboricultural Report

Including:

Tree Survey Data &

Tree Constraints Plan,

Arboricultural Impact Assessment,

Tree Protection Plan and Arboricultural Method Statement

To the British Standard 5837:2012  
*(Trees in relation to design, demolition  
and construction. Recommendations)*

Date – 26<sup>th</sup> June 2025

Site – Seven Sister Avenue, Days Rental Newport

Project Reference – ArbTS\_1906.6\_Seven Sister Avenue

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## 1.0 Introduction

- 1.1 The purpose of this report is to assess the quality of the trees at Seven Sister Avenue, Days Rental Newport, assess the arboricultural impact of the proposed development design and provide details regarding the protection of retained trees during construction work.
- 1.2 This report identifies the quality of the trees on this site as categorised by the *British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations*. The survey and findings, as reported here, represent an unbiased third-party opinion offering professional advice on the value of the trees on or adjacent to this site. To illustrate the constraints identified trees pose to the design of future development, a Tree Constraints Plan (TCP) has been drawn, as found in Appendix 2.
- 1.3 Arboricultural constraints within the surveyed site relate primarily to the preservation of trees recommended for retention. Identified trees must be protected during the construction phase by employing a combination of tree protection methods as illustrated in Appendix 4, Tree Protection Plan and detailed within Section 6 - Arboricultural Method Statement.
- 1.4 The trees' root system and the associated soil structure is often overlooked during the construction process and can be damaged or altered by compaction, causing significant damage to the health of the tree. Generally, the tree's entire root system is within the top 600mm of soil, where it can be easily damaged. A calculated ground area around the tree should be protected during the onsite construction phase. In this report, it is referred to as the Root Protection Area (RPA).

## 2.0 The Tree Survey

- 2.1 The tree survey was conducted by *Stephen Lucocq BSc (Hons), Tech Cert (ArborA), M.Arbor.A* on 2<sup>nd</sup> September 2024.
- 2.2 Trees over 75mm were tagged where appropriate with numbered metal identification tags at around 2.0 metres above ground level.
- 2.3 All observations were made from the ground with an acoustic-sounding hammer. No invasive decay detective instruments were used.
- 2.4 The survey was carried out per *British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations*. This standard gives a systematic, consistent, transparent evaluation method for tree surveying.
- 2.5 The tree survey was conducted with the aid of a topographical survey.
- 2.6 **Preliminary management recommendations:** The survey has identified preliminary management recommendations for the trees on or adjacent to this site. Details regarding these specified operations are given in this report (See Appendix 1 - Tree Survey Data). Where work priority is stated to be H – High due to safety reasons, these operations should be carried out as soon as possible. Where work priority is

said to be M/H – medium/high or higher, these operations should be undertaken before the commencement of any works on site.

- 2.7 **Limitations of the tree survey:** Whilst every effort is made to ensure an accurate assessment of the tree's condition during the survey, no responsibility can be taken for resultant damage or injury that occurred by a failing tree. The survey only gives a snapshot of what is visible and is not obscured on the day of the survey. The survey identifies trees of varying quality and their above-ground/below-ground constraints. This survey does not constitute a full tree condition survey/tree risk assessment of the site, and this report is only valid for 24 months from the date of the tree survey.

### 3.0 The Trees

- 3.1 The complete tree survey data can be found in Appendix 1A Tree Survey Data

- 3.2 Tree Survey Summary Table (See Appendix 3 for BS5837 category definitions).  
(A more detailed Tree Survey Data Summary can be found in Appendix 1B)

| BS5837:2012<br>Quality<br>Category                      | Total<br>Number of<br>Individual<br>Trees<br>Surveyed | Total<br>Number of<br>Tree Groups<br>Surveyed | Total<br>Number of<br>Tree Areas<br>Surveyed | Total<br>Number of<br>Woodland<br>Areas<br>Surveyed | Total<br>Number of<br>Hedgerows<br>Surveyed | Total    |
|---------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------|----------------------------------------------|-----------------------------------------------------|---------------------------------------------|----------|
| <b>A</b><br>(High - Most<br>desirable for<br>retention) | 0                                                     | 0                                             | 0                                            | 0                                                   | 0                                           | 0        |
| <b>B</b><br>(Moderate -<br>Desirable for<br>retention)  | 1                                                     | 1                                             | 0                                            | 0                                                   | 0                                           | 2        |
| <b>C</b><br>(Low - Optional<br>for retention)           | 2                                                     | 2                                             | 0                                            | 0                                                   | 0                                           | 4        |
| <b>U</b><br>(Poor -<br>Unsuitable for<br>retention)     | 0                                                     | 0                                             | 0                                            | 0                                                   | 0                                           | 0        |
| <b>Total<br/>A,B,C,U</b>                                | <b>3</b>                                              | <b>3</b>                                      | <b>0</b>                                     | <b>0</b>                                            | <b>0</b>                                    | <b>6</b> |

### 4.0 Tree Constraints Plan (TCP) Information

- 4.1 A Tree Constraints Plan (TCP) can be found in Appendix 2 of this report. An introduction to TCP can also be found at the start of this Appendix Section. For further information and details regarding TCP, please see the *British Standard 5837:2012, Trees in relation to design, demolition and construction – Recommendations*.

## 5.0 Arboricultural Impact Assessment (AIA)

- 5.1 The following Arboricultural Impact Assessment has been made for the proposed development design – Northern Site.
- 5.2 Tree Loss – AIA – N / A - No trees are required to be removed to facilitate the construction of the proposed development design. Two small low-quality trees are required to be removed to allow for the construction of the boundary fencing as per an alternative planning application.
- 5.3 Root Protection Area (RPA) – AIA – LOW - RPA potential damage can all be managed through the installation of tree protective fencing, as designed by an Arboriculturist will ensure no significant long-term adverse impact will occur to any of the retained trees.
- 5.4 Tree surgery work – AIA – LOW - Some minor branch reduction/branch lifting pruning work will be required to facilitate this proposed scheme, as detailed in the tree protection plan (Appendix 4). This work will be carried out to the *British Standard 3998:2010 tree work recommendations*. Adhering to this standard will ensure no adverse impact on these trees' long-term health or visual amenity.
- 5.5 Future Tree Pressures – AIA – LOW - Overall, the design has considered the size and value of the trees on this site to minimise any future pressures to heavily prune or fell the higher-value trees.
- 5.6.1 Conclusion – AIA – LOW - The site has several Arboricultural constraints that must be considered in the development design phase. No trees are required to be removed to facilitate the construction of the proposed development design. Two small low-quality trees are required to be removed to allow for the construction of the boundary fencing as per an alternative planning application.
- 5.6.2 The construction of the proposed development, whilst complying with the tree protection scheme as detailed in section 6, will ensure that no significant long-term adverse Arboricultural impact occurs on the health of any retained trees on or adjacent to this site or the long-term amenity of the area.

## 6.0 Arboricultural Method Statement

- 6.1 The Tree Protection Plan to facilitate the construction of the development design can be found in Appendix 4 of this report. The Tree Protection Plan must comply with all of the following:
- Be regarded as sacrosanct and follow the sequence of events as detailed in the table below
  - Be installed before commencement of any demolishing or construction works on site
  - Must not be removed or altered without prior approval of the local planning authority

- 6.2 The following table below provides a detailed sequence of events that must occur to protect the retained trees during all stages of the construction process. These methods must be communicated to the entire construction team before any work on site.

| Stage                                                                                                                         | Arboricultural Method Statement (In the sequence of events)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1.) Preconstruction</b><br>(Prior to any on-site construction work, including demolition work, site material storage etc.) | <b>1.1 – Design</b> areas for <b>construction site storage</b> by the site supervisor and the appointed Arboriculturist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                               | <b>1.2 – Design</b> position, form and construction methods of <b>all utility services</b> with Arboricultural consideration. All underground service designs <b>MUST</b> conform to the NJUG Volume 4 Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. The full document is available at <a href="http://www.njug.org.uk/">http://www.njug.org.uk/</a> and <b>BS5837:2012</b> . Local Planning Authority to be consulted on utility service design details and, if satisfied, to be approved in writing before installation during the construction phase.                                                                                                                                  |
|                                                                                                                               | <b>1.3– Tree surgery work</b> to be carried out is detailed in the Tree Protection Plan (Appendix 4) of this report and to the <i>British Standard:3998:2010: Recommendation for tree works</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                               | <b>1.4 – Site storage area containers</b> installed as designed and supervised by the site supervisor and the appointed Arboriculturist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                               | <b>1.5 – Appointed Arboriculturist to document</b> all tree protection methods in situ and photographs taken for reference purposes. Copy of document report sent to all parties.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>2.) Construction</b>                                                                                                       | <b>2.1 – The site supervisor is to be briefed</b> by the appointed Arboriculturist regarding the Tree Protection Plan/Methods, and a laminated copy of the plan/methods is to be secured onto the wall in the site supervisor's office. Contact details of the appointed Arboriculturist, Council's Tree Officer, to be included. Emphasis is to be made to the site supervisor on the importance of the Tree Protection Plan/Methods and possible planning enforcement action (Stop Notice), problems with discharging tree protection conditions and/or legal action for noncompliance with these tree protection methods.                                                                                                                      |
|                                                                                                                               | <b>2.2 – All contractors are to be briefed</b> by the site supervisor and/or the appointed Arboriculturist regarding the tree protection plan and methods before starting work on site. Emphasis made to contractors on the importance of the Tree Protection Plan/Methods and possible planning enforcement action (Stop Notice), problems with discharging tree protection conditions and/or legal action for noncompliance with these tree protection methods.                                                                                                                                                                                                                                                                                 |
|                                                                                                                               | <b>2.3 – The construction phase begins</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                               | <b>2.4 - Tree Safe Construction</b> (Throughout site) – areas outside of the construction exclusion zones, as shown on the tree protection plan, must adhere to the following: <ul style="list-style-type: none"> <li>• Building materials and fuels such as oil, bitumen or cement should not be stacked or discharged within 20 metres of the tree's stem.</li> <li>• Fires will not be lit beneath any tree or in a place where flames could extend to within 10 metres of the tree.</li> <li>• Trees to be retained and protected should not be used as anchorage for services or equipment.</li> <li>• The use of cranes and large machinery on site should be planned and care taken not to damage the trees during the process.</li> </ul> |
|                                                                                                                               | <b>2.5 – Unforeseen issues</b> which require the alteration of the Tree Protection Plan/Methods, required tree surgery work or immediate remedial work will be submitted to the Local Planning Authority for approval in writing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                                                                                                                           |                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.) Post Construction</b> ( <i>Once all construction work has been completed, this includes all utility services</i> ) | <b>3.1 – Hard and soft landscaping commence</b> - All landscape team members are to be briefed regarding tree protections by an Arboriculturist.                      |
|                                                                                                                           | <b>3.2 – Any required remedial tree action is taken</b> , such as Leaf Mulch Application, soil de-compaction methods, contamination clean up etc., to be carried out. |

## 7.0 Conclusion

- 7.1 Adhering to the tree protection details in this report, the proposed development can be constructed without any significant long-term adverse impact on the retained trees or the area's amenity.

## 8.0 Further Information & Qualifications

Stephen Lucocq has been involved in Arboriculture within South Wales for over twenty years. He has worked as an Arborist for many of these years and has an excellent working knowledge of the practical side of the profession. He has always taken an active interest in all areas of Arboriculture and kept up to date with current research and developments.

### Qualifications

- First Class BSc (Hons) Degree – Combined Studies - Biology and IT
- Arboricultural Association Technicians Certificate – Level 4 - (Merit)
- PTI - Professional Tree Inspection (Lantra Awards)
- 2D Computer-Aided Design (City and Guilds - Level 3)
- Quantified Tree Risk Assessment (QTRA) – Mike Ellison
- Visual Tree Assessment (VTA) – Mike Ellison
- Arboriculture and Bats (Lantra)
- Industrial Rope Access Trade Association (IRATA)
- Practical Arboriculture Qualifications (NPTC)

### Membership

- Arboricultural Association Professional Member (M.Arbor.A)

## 9.0 Web Information & Bibliography

### Web Information

- Arboricultural Association  
<http://www.trees.org.uk/>
- Cellular Confinement System  
**GeoWeb** - [GreenFix](#)  
**CellWeb** - [Geosynthetics](#) [Cellweb](#)
- Underground Utilises Installation  
<http://www.njug.org.uk/>

### Bibliography

- British Standards 3998 (2010) Recommendations for Tree Work UK; British Standards Intuition
- British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations UK; British Standards Intuition
- Coombes, A.J (1992) Trees London; Dorling Kindersley
- Lonsdale, D (1999) Principle of Tree Hazard Assessment and Management Edinburgh; Forestry Commission
- Mattheck, C (2007) Field Guide for Visual Tree Assessment Germany; Karlsruhe Research Centre
- Shigo, A.L (1991) Modern Arboriculture USA; Shigo and Trees, Association
- Sterry, P (2007) Collins Complete British Trees London; Collins
- Strouts, R.G (2000) Diagnosis of ill-health in trees Edinburgh; Forestry Commission
- Weber, K & Mattheck, C (2003) Manual of wood decay UK; Arboricultural Association

## **10.0 Appendix 1A -Tree Survey Data**

| Tree ID # | Tree Species                | Age | Stems | Stem Diam (mm) | Cat | Height + (Lower Branch Height) | Nrth | Est | Sth | Wst | Phys Cond | Struc Cond | Est. Remain Contrib | Comments                                                                                                                 | Preliminary Management Recommendations                                                                                                                                    | Work Priority | RPR (m) | RPA (m2) |
|-----------|-----------------------------|-----|-------|----------------|-----|--------------------------------|------|-----|-----|-----|-----------|------------|---------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------|----------|
| G1        | Salix caprea (Goat Willow)  | M   | 1     | 150            | C2  | 5(0)                           | 4    | 4   | 4   | 4   | F         | F          | 10+                 | Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated. | group of small sprawling scrub, mainly goat willow                                                                                                                        |               | 1.8     | 10.18    |
| G2        | Quercus robur (Common Oak)  | M   | 1     | 250            | C2  | 4(0)                           | 3    | 4   | 3   | 4   | G/F       | N/A        | 10+                 | Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated. | small group of small oak, heavy ivy cover                                                                                                                                 |               | 3       | 28.28    |
| G3        | Quercus robur (Common Oak)  | M   | 1     | 500            | B2  | 12(3)                          | 6.5  | 6.5 | 6.5 | 6.5 | G/F       | N/A        | 20+                 | Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated. | boundary group of mainly oak of fair to good form, some trees noted on opposite side of drainage channel, much areas very overgrown making access to tree group difficult |               | 6       | 113.1    |
| T1        | Quercus robur (Common Oak)  | M   | 1     | 450            | B2  | 13(3)                          | 6    | 5   | 5   | 7   | G/F       | N/A        | 20+                 | Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated. | mature oak of fair to good form, slightly suppressed in form from surrounding trees                                                                                       |               | 5.4     | 91.62    |
| T2        | Carpinus betulus (Hornbeam) | SM  | 1     | 100            | C2  | 3(1)                           | 2    | 2   | 2   | 2   | F         | N/A        | 10+                 | Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated. | small tree                                                                                                                                                                |               | 1.2     | 4.52     |
| T3        | Quercus robur (Common Oak)  | SM  | 1     | 100            | C2  | 3(1)                           | 3    | 2   | 3   | 3   | F         | N/A        | 10+                 | Surrounding vegetation prevented close inspection of the tree therefore all observations and measurements are estimated. | small tree                                                                                                                                                                |               | 1.2     | 4.52     |

## 10.0 Appendix 1B – Detailed Tree Survey Data Summary

(Please see Appendix 3 - Tree Survey Key)

|                             |       |            |
|-----------------------------|-------|------------|
| Field Usage Results.        |       |            |
| Total Records: 6            |       |            |
|                             |       |            |
|                             |       |            |
| Type                        | Count | % of Total |
| T                           | 3     | 50         |
| G                           | 3     | 50         |
|                             |       |            |
| Tree Species                | Count | % of Total |
| Salix caprea (Goat Willow)  | 1     | 16.7       |
| Quercus robur (Common Oak)  | 4     | 66.7       |
| Carpinus betulus (Hornbeam) | 1     | 16.7       |
|                             |       |            |
| Average Stem Diameter       | Count | % of Total |
| <150                        | 2     | 33.3       |
| <250                        | 1     | 16.7       |
| <500                        | 2     | 33.3       |
| <750                        | 1     | 16.7       |
|                             |       |            |
| Cat                         | Count | % of Total |
| B2                          | 2     | 33.3       |
| C2                          | 4     | 66.7       |
|                             |       |            |
| Age                         | Count | % of Total |
| SM                          | 2     | 33.3       |
| M                           | 4     | 66.7       |
|                             |       |            |
| Height                      | Count | % of Total |
| <5                          | 3     | 50         |
| <10                         | 1     | 16.7       |
| <15                         | 2     | 33.3       |
|                             |       |            |
| Phy Cond                    | Count | % of Total |
| G/F                         | 3     | 50         |
| F                           | 3     | 50         |
|                             |       |            |

| Stuc Cond           | Count | % of Total |
|---------------------|-------|------------|
| F                   | 1     | 16.7       |
| N/A                 | 5     | 83.3       |
|                     |       |            |
| Est. Remain Contrib | Count | % of Total |
| 10+                 | 4     | 66.7       |
| 20+                 | 2     | 33.3       |
|                     |       |            |
| RPR                 | Count | % of Total |
| <5                  | 4     | 66.7       |
| <10                 | 2     | 33.3       |
|                     |       |            |
| RPA                 | Count | % of Total |
| <5                  | 2     | 33.3       |
| <15                 | 1     | 16.7       |
| <30                 | 1     | 16.7       |
| other               | 2     | 33.3       |
|                     |       |            |

## 10.0 Appendix 2 - Tree Constraints Plan

### An introduction to the Tree Constraints Plan (TCP)

Trees identified to be retained should be treated as constraints to the design of future development. A Tree Constraints Plan has been drawn and can be found over leaf.

- **Tree Quality** - The TCP highlights the above and below-ground constraints each tree poses to design future development schemes. Further, the BS5837 tree quality category (A - High, B - Moderate, C - Low and U- Unsuitable for retention) are coloured coded as solid circles at the centre of the tree's position.
- **Root Protection Area** – The magenta circle on the TCP sets out the root protection area (RPA). No construction work in this area, ground-level alteration or site traffic (machinery or persons) should occur. This prevents damage to tree roots and soil compaction. (Where possible, an Arboriculturist can design suitable tree protection methods to facilitate construction work/site traffic within these areas).
- **Tree Canopy** - The green circle/oval on the TCP sets out the above-ground constraints of tree canopy spread. Within this area, no construction work or site traffic (machinery or persons) should occur if the tree is to be retained. This prevents damage to the tree branches and trunk. (Where possible, an Arboriculturist can design suitable tree protection methods to facilitate construction work/site traffic within these areas).
- **Tree Shading** – Shade from the retained trees should be considered in the development design. Depending on the tree's height and width, the shade cast will be from a North West to East pattern through the central part of the day.
- **Tree Future growth** - Within future development design, consideration should also be given to the ultimate height and extent of the canopy spread of all trees within site identified to be retained.



Tree Constraints Plan

Site - Seven Sister Avenue

Project Ref - 1906.4

Scale 1:400 @ A2

KEY BS5837:2012 Tree Quality (Colour Coded)

Category A (High)  
(\*Highly desirable for retention\*)

Category B (Moderate)  
(\*Desirable for retention\*)

Category C (Low)  
(\*Optional for retention\*)

Category U (Poor)  
(\*Unsuitable for retention\*)

Tree Key - Individual Trees

Branch Spread (measured on the North East, South and West side of tree)

Tree Species (Common Tree Name shown)

Tree ID# (1-Individual Tree)

Root Protection Area (RPA) (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)

Tree Key - Group/Area/Woodland/Hedgerow

Tree ID# (G-Tree Group, A-Tree Area, W-Woodland, H-Hedgerow)

Tree Species (Common Tree Name shown)

BS5837:2012 Tree Quality (Colour Coded as for individual trees)

Average Branch Spread

Shade Pattern - shade pattern not shown on plan (early morning shade starting North West through to evening shade to the East)

Definitions of BS5837:2012 Categories for Trees, Woodlands and Hedgerows (Colour coded):

A - Those of high quality with an estimated remaining life expectancy of at least 40 years. (\*Highly desirable for retention\*)

B - Those of moderate quality with an estimated remaining life expectancy of at least 20 years. (\*Desirable for retention\*)

C - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. (\*Optional for retention\*)

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. (\*Unsuitable for retention unless provides high conservation value\*)



### Tree Constraints Plan

Site - Seven Sister Avenue  
Project Ref - 1906.4

Scale 1:400 @ A2

KEY BS 5837:2012 Tree Quality (Colour Coded)

- Category A (High)  
(\*Highly desirable for retention\*)
- Category B (Moderate)  
(\*Desirable for retention\*)
- Category C (Low)  
(\*Optional for retention\*)
- Category U (Poor)  
(\*Unsuitable for retention\*)

Tree Key - Individual Trees

- Branch Spread (measured on the North-East, South-East and West side of tree)
- Tree Species (Common Tree Name Shown)
- Tree ID# (1-Individual Tree)

Root Protection Area (RPA) (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)

Tree Key - Group/Area/Woodland/Hedgerow

- Tree ID# (G-Tree Group, A-Tree Area, W-Woodland, H-Hedgerow)
- Tree Species (Common Tree Name Shown)
- Average Branch Spread

BS 5837:2012 Tree Quality (Colour Coded as for individual trees)

Shade Pattern - shade pattern not shown on plan (early morning shade starting North West through to evening shade to the East)

Definitions of BS5837:2012 Categories for Trees, Woodlands and Hedgerows (Colour Coded):

- A - Those of high quality with an estimated remaining life expectancy of at least 40 years. (\*Highly desirable for retention\*)
- B - Those of moderate quality with an estimated remaining life expectancy of at least 20 years. (\*Desirable for retention\*)
- C - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. (\*Optional for retention\*)
- 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. (\*Unsuitable for retention unless provides high conservation value\*)

## 10.0 Appendix 3 - Tree Survey Data Key

- **Tree ID #** - Identifies the location of individual trees (T-ID Number), Groups of trees (G-ID Number), Area of trees (A-ID Number), Hedgerow (H-ID Number), Woodland (W-ID Number), Row of trees (R-ID Number) and tree Stumps (S-ID Number) on the accompanying plan. *(Please note: A group of trees here refers to two or more standing trees that form a visual whole, whereas an area of trees refers to dispersed individual trees standing within the site)*

- **Tree Species** - Scientific names and common tree name in brackets are generally shown.

- **Age**

- o (Y) Young – Less than 1/3 of life completed
- o (SM) Middle Aged - 1/3 - 2/3 of life completed
- o (EM) Early Mature – Just entering Maturity
- o (M) Mature – more than 2/3 of life completed
- o (OM) Over Mature - more than 3/3 of life completed and declining
- o (V) Veteran - (v) Veteran – Veteran trees have no precise definition but are trees considered to be of biological aesthetic or ecological value because of their age

- **Stems** – Number of tree stems used to calculate the RPR/RPA

- **Stem Diam** (mm) - Diameter of tree stem measured in millimetres for single stem trees or average stem diameter calculated for multi-stemmed trees as detailed in section 4.6 & Annex C of the British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations. The height above ground level where the stem measurement was taken will be shown if not measured at 1.5 metres above ground level. *(Please note: that the stem diameter of certain trees will have to be estimated due to difficulties in taking measurements or for trees with a large number of stems)*

- **Cat** – Tree Quality Category - British Standard 5837:2012 A, B, C, U + 1, 2, 3

Based on BS5837:2012, categories A, B, C, and U provide the basis for prioritising trees for retention:

- o A – Those of high quality with an estimated remaining life expectancy of at least 40 years. (\*Most desirable for retention\*)
- o B - Those of moderate quality with an estimated remaining life expectancy of at least 20 years. (\*Desirable for retention\*)
- o C – Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. (\*Optional for retention\*)
- o 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. (\*Unsuitable for retention unless provides high conservation value\*)

Retention Criteria Subcategories: Used for identifying subcategories

E.g. A2 = A high-quality tree with high landscape qualities (further details can be found in British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations UK; British Standards Intuition)

- o 1 – Mainly Arboricultural qualities
  - o 2 – Mainly landscape qualities
  - o 3 – Mainly cultural values, including conservation
- **Height + (Lower Branch Height)** - Tree height in metres and in brackets height in metres of the crown (tree branches) clearance at its lowest point above adjacent ground levels.
- **Nrth, Est, Sth, Wst** - Crown Spread (Metres) -Tree branch spread in metres measured in four directions (North, East, South, West) from the trunk.
- **Phys Cond** - Physiological Condition Indicating the health of the tree -
  - o (G) Good
  - o (F) Fair
  - o (P) Poor
  - o (D) Dead
- **Struc Cond** – Structural Condition indicating the structural integrity of the tree -
  - o (G) Good – No, or remediable physical defects or decay
  - o (F) Fair - Physical non-remediable defects or decay present, not presenting imminent danger but should be monitored
  - o (P) Poor - physical non-remediable defects or decay present, tree liable to imminent collapse or loss of major limbs.
  - o (D) Dead
- **Est. Remain Contrib - (<10, 10+, 20+, 40+)**

The trees estimated remaining contribution in years, recorded as:

  - o <10 – less than 10 years
  - o 10+ – at least 10 years
  - o 20+ – at least 20 years
  - o 40+ – at least 40 years
- **Comments** – Additional Comments, if required
- **Preliminary Management Recommendations** – Work Recommendations, including further investigation of suspected defects that require more detailed assessment and pose potential for wildlife habitat.

- **Work Priority** - Work Priority -This gives a work priority rating of preliminary management for each tree.
  - o H - High – Urgent work to be carried out as soon as practicable due to safety reasons (Within 14 days).
  - o H/M – High - Medium – Work to be carried out within 6 months/or before the construction phase begins
  - o M - Medium – Work to be carried out in 12 months
  - o L - Low – After consideration/Re-inspect in 18-24 months
  - o Blank – No work required.
- **RPR – Root protection radius / RPA - Root Protection Area** - 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. RPR is a circular area measured as a radius in metres from the tree's centre, or RPA is an area in metres squared. This area may be changed in shape but not reduced in size, providing adequate protection for the tree's rooting system.

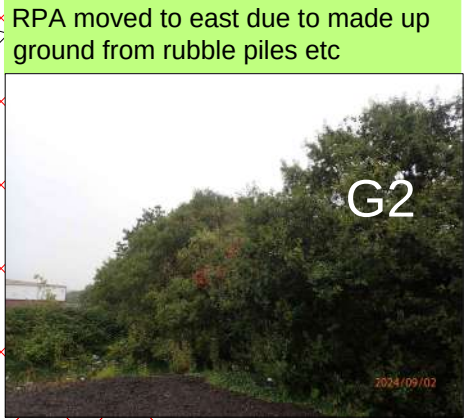
## **10.0 Appendix 4 – Tree Protection Plan**



Removal of two small young low quality trees (by installed boundary fence as per other planning application)



Woodland edge scrub



Pruning of lower western three branches to allow for the removal of rubble - works carried out as an exemption of the TPO (as agreed by NCC)



Offsite eastern boundary trees to be protected by installed boundary fence as per other planning application

Key : Tree Protection Methods

Construction Exclusion Zone  
(No access, storage of any building material or equipment at any time for the entire construction period)

Trees to be removed by installed boundary fence as per other planning application

Trees surgery operations required - to BS3998:2010  
Tree works Recommendations (See Section 5.4 for details)

Excavation work to remove rubble to be carried out under the supervision of an Arboriculturist

Please Note:  
Arboricultural Method Statement:  
MUST be followed in sequence, include site supervision by an Arboriculturist where specified and adhered to at all times. Details can be found in Section 6 of this report. Noncompliance with this method statement may result in planning enforcement action or prosecution.

Tree Protection Plan

Site - Seven Sister Avenue

Project Ref - 1906.6

Scale 1:400 @ A2

KEY BS 5837:2012 Tree Quality (Colour Coded)

- Category A (High) - (Highly desirable for retention)
- Category B (Moderate) - (Desirable for retention)
- Category C (Low) - (Optional for retention)
- Category U (Poor) - (Unsuitable for retention)

Tree Key - Individual Trees

- Branch Spread (measured on the North East, South West and West side of tree)
- Tree Species (Common Tree Name shown)
- Tree ID# (1-Individual Tree)

Tree Key - Group/Area/Woodland/Hedge/row

- Tree ID# (G-Tree Group, A-Tree Area, W-Woodland, H-Hedge/row)
- Tree Species (Common Tree Name shown)

BS 5837:2012 Tree Quality (Colour Coded as for individual trees)

- Average Branch Spread
- Shade Pattern - shade pattern not shown on plan (early morning shade starting with West through to evening shade to the East)

Definitions of BS5837:2012 Categories for Trees, Woodlands and Hedge/rows (Colour coded):

- A - Those of high quality with an estimated remaining life expectancy of at least 40 years. (Highly desirable for retention)
- B - Those of moderate quality with an estimated remaining life expectancy of at least 20 years. (Desirable for retention)
- C - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. (Optional for retention)
- 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. (Unsuitable for retention unless provides high conservation value)

## 10.0 Appendix 5 – Tree Photographs

Tree ID#G1



Tree ID#G2



Tree ID#T1



Tree ID#G3



