

Arboricultural Impact Assessment

WC-572.1a

Wakefield Road Depot, Barnsley S71 1NT



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Executive Summary

Woodsage Consulting Ltd have been instructed by JANUS Architecture to prepare an Arboricultural Impact Assessment in relation to the proposed development of the land at Wakefield Road Bus Depot.

The development proposals are for the electrification of an existing diesel bus depot currently operated by Stagecoach.

According to information which is available on the Barnsley Metropolitan Borough Council website, there are no on-site trees which are subject to tree preservation orders.

The site survey identified a total of eight trees and three groups of trees with the potential to be impacted by the development proposals. These include:

- seven category B trees of moderate quality; and
- one category C tree and three groups of low quality.

The proposed development can be accommodated without requiring the removal of any existing trees.

Two category B trees and one category C tree will require facilitation pruning.

The retained trees are to be suitably protected throughout the development process by temporary tree protection barriers.

Providing the recommendations made within this report are followed, the development is considered achievable, with minimal impact in arboricultural terms to the site and surrounding area.



1. Introduction

1.1. Instruction and Scope of Report

- 1.1.1.** Woodsage Consulting Ltd have been instructed by JANUS Architecture to prepare an Arboricultural Impact Assessment in relation to the proposed development of the land at Wakefield Road Bus Depot.
- 1.1.2.** The purpose of this report is to allow the local planning authority (LPA) to assess information regarding trees at the site as part of the planning submission and to demonstrate to the LPA that appropriate consideration has been given to the subject of trees as part of the development.
- 1.1.3.** In accordance with BS 5837:2012 - Trees in Relation to Design, Demolition and Construction: Recommendations¹ this report will:
- provide details on the quality and value of the trees on and immediately adjacent to the site;
 - identify those trees to be retained and, where applicable, those proposed for removal;
 - prescribe the tree protection measures required to ensure the successful retention of the retained trees, with further details provided within an outline Arboricultural Method Statement (AMS); and,
 - where appropriate, provide preliminary recommendations for replacement tree planting.

1.2. Site Details

- 1.2.1.** Wakefield Road Bus Depot, hereafter referred to as 'the site' and shown in **Fig. 1.1**, below, is located approximately 1.33 miles to the north-east of Barnsley Town centre.



Figure 1.1: Aerial imagery showing the application site red line boundary².

- 1.2.2.** The site is centred on OS Grid Reference SE 34882 08590 and covers approximately 1.2 ha.
- 1.2.3.** The site comprises depot and office buildings, external yards, and car/bus parking facilities.

¹ British Standards (2012). *BS 5837:2012 - Trees in Relation to Design, Demolition and Construction: Recommendations*. British Standards Institute, London.

² Microsoft Corporation (2026). *Bing Maps* [online]. Available at: <https://www.bing.com/maps?cp=53.573304%7E-1.474123&lvl=17.1&style=h> (accessed 5th October 2026).



1.3. Site Topography and Elevation

- 1.3.1. The site lies at an approximate elevation ranging between 70-80 m above ordnance datum (AOD).
- 1.3.2. The topography of the site falls away from north to south.

1.4. Desk Based Study and Planning Context

- 1.4.1. According to Cranfield University³, the soils at the site predominantly consist of *Soilscape 17*. These are acidic, loamy, and clayey soils that are slowly permeable and seasonally wet. However, it is worth noting that a significant proportion of the site is covered by existing sealed surface, which is likely to have influenced the underlying soil characteristics. No further detailed soil analysis was carried out as part of the survey.
- 1.4.2. According to information which is available on the Barnsley Metropolitan Borough Council (BMBC) website⁴, there are no on-site trees which are subject to tree preservation orders (TPOs) and the site is not located within a conservation area.
- 1.4.3. According to information which is available on the website of the Multi-Agency Geographic Information for the Countryside (MAGIC)⁵, there are no ancient woodland, traditional orchard, or woodpasture and parkland priority habitats on or immediately adjacent to the site.

1.5. Development Proposals

- 1.5.1. The development proposals are for the electrification of an existing diesel bus depot currently operated by Stagecoach.

1.6. Local Planning Policy

- 1.6.1. In BMBC's Adopted Local Plan⁶, *Policies GD1, BIO1, and HE4* are the principal policies relating to trees in the context of development.
- 1.6.2. *Policy HE4* states that development must take account of and respect important landscape elements including trees that contribute to the significance of the area where harm might prejudice future restoration
- 1.6.3. *Policy BIO1* states that development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.
- 1.6.4. *Policy GD1* states that existing trees that are to remain on site should be considered in the layout in order to avoid overshadowing.

³ Cranfield University (2026). *Land Information System (LandIS) - Soilscape Viewer* [online]. Available at: <https://portal.landis.org.uk/datasets/b1ae8ea6315c4f43a8c2ae2f353e2664/explore?location=53.740058%2C-1.895656%2C18v> (accessed 5th October 2026).

⁴ BMBC (2026). *TPO Map* [online]. Available at: <https://www.barnsley.gov.uk/services/parks-and-open-spaces/tree-preservation-orders/> (accessed 5th October 2026).

⁵ MAGIC (2026). *Magic Map* [online]. Available at: <https://magic.defra.gov.uk/MagicMap.html> (accessed 5th October 2026).

⁶ BMBC (2026). *Barnsley Local Plan* [online]. Available at: <https://www.barnsley.gov.uk/media/17249/local-plan-adopted.pdf> (accessed 5th October 2026).



2. Methods

2.1. Survey Details

- 2.1.1. The site survey was carried out on the 29th of September 2026.
- 2.1.2. The weather at the time of the site survey was fine and dry; visibility of the trees was not impeded.

2.2. Survey Personnel

- 2.2.1. The survey was carried out by Jack Delaney, a Chartered Arboriculturalist and Member of the Institute of Chartered Foresters, with 20 years' experience in the arboricultural sector. Jack holds a Foundation Degree (FdSc) in Arboriculture with distinction, is a Professional Member of the Arboricultural Association, a LANTRA-qualified Professional Tree Inspector, and a trained and registered user of Quantified Tree Risk Assessment (QTRA).

2.3. Survey Methodology

- 2.3.1. Only substantial trees with a stem diameter of 75 mm or above were included as part of the survey, as is recommended in BS 5837:2012.
- 2.3.2. The trees were assessed from ground level. Although notable defects and features of the trees were recorded, the site survey did not constitute a full safety assessment. The risks posed by trees to people and property has not been evaluated. No specialist decay detection equipment was used as part of the survey.
- 2.3.3. In circumstances where trees form a cohesive feature, they have been recorded, assessed and plotted as groups, hedgerows, or woodlands. Whilst not every tree within a group, hedgerow, or woodland has been surveyed, a representative sample has been measured in order to calculate the crown spread and root protection area (RPA).
- 2.3.4. Tree information was recorded in accordance with Section 4.4 of BS 5837: 2012, and includes tree species, height, stem diameter at breast height (DBH), crown spread, crown clearance, life stage, condition (physiological and structural), and safe useful life expectancy (SULE).
- 2.3.5. Trees were allocated to one of four categories (U, A, B or C) as defined in **Tab. 2.1**, below, to reflect amenity value and suitability for retention, in consideration of the development proposals.

Table 2.1: BS 5837:2012 cascade chart¹.

BS 5837:2012 Category	Definition	Retention	Colour code
Category A	Trees of high quality with an estimated remaining life expectancy of at least 40 years; trees that are particularly good examples of their species, especially if rare or unusual.	Highly desirable	Light green
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years; trees lacking the special quality to merit category A designation.	Desirable	Dark blue
Category C	Trees of low quality with an estimated remaining contribution of at least 10 years, or trees with a stem diameter below 150 mm; unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Feasible, but may be removed if posing a constraint to development	Grey
Category U	Trees that have serious, irremediable, structural and/or physiological defects, including those that will become unviable after removal of other category U trees.	Potentially unfeasible	Red



2.3.6. Subcategories 1, 2 and 3 have also been applied to the trees, to reflect arboricultural (1) and landscape (2) qualities, and cultural values (3), respectively.

2.3.7. Tree dimensions were determined using the following methods⁷:

- Tree heights were measured from the base of the main stem to the top of the crown, using an electric clinometer
- Crown spreads were measured at each cardinal point, using a laser distometer
- Crown clearances were measured from the base of the main stem to the first significant branch, using an electric clinometer
- The DBH of trees was measured at 1.5 m above ground level using a diameter tape measure, employing the methods detailed in Annex C of BS 5837:2012

2.3.8. Where access to trees was obstructed or obscured, DBH, height, and crown spread measurements may have instead been estimated

2.3.9. DBHs were then used to calculate tree RPAs using the following equations:

1. For single stem trees, the RPA was calculated as a circle with a radius 12 times the DBH
2. For trees with 2-5 stems, the combined stem diameter was first calculated using the formula:

$$\sqrt{(\text{Stem 1 DBH})^2 + (\text{Stem 2 DBH})^2 + \dots (\text{Stem 5 DBH})^2}$$

3. For trees with 6 or more stems, the combined stem diameter was first calculated using the formula:

$$\sqrt{(\mu \text{ DBH})^2 \times \text{number of stems}}$$

2.3.10. The default RPA for individual trees has been plotted as a circle centred on the base of the main stem. Where pre-existing site conditions (e.g. roads, structures or underground services) are likely to have constrained root development, RPAs have been modified to a polygon of equivalent area to reflect probable asymmetric rooting patterns.

2.3.11. For tree groups, hedgerows, and woodlands, the calculated RPAs are based on an offset from the canopy edge. This offset is determined with reference to the trees with the largest stem diameters and crown spreads located at the edge of the group, hedgerow, or woodland feature.

2.3.12. For ancient and veteran trees (including those on the boundary of tree groups or woodlands), RPAs have been calculated in accordance with government standing advice⁸. This is based on a calculation of fifteen times the DBH or a minimum of five metres beyond the crown spread, whichever results in the greater area, with adjustments made where necessary to reflect pre-existing site conditions.

2.4. Constraints

2.4.1. The survey was constrained by the season in which it took place; certain tree pathogens and/or defects, for example, the fructifications of decay fungi are only visible at specific times of the year.

⁷ Height, crown spread and crown clearance have been recorded to the nearest half metre for dimensions up to 10 m, and the nearest whole metre for dimensions over 10 m.

⁸ Natural England (2026). *Ancient woodland, ancient trees, and veteran trees: Advice for making planning decisions* [online]. Available at: www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions (accessed 5th October 2026).



2.4.2. The locations of the trees shown in the ***Tree Constraints Plan*** in ***Appendix 4*** have been determined using a topographical plan of the site, which was issued by JANUS Architecture. Aerial imagery and GPS have also been utilised to plot tree group canopy spreads. Although these methods provide a good representation of the surveyed trees, it should be noted that the GPS used is not sub-metre accurate and aerial imagery may not reflect the exact current dimensions of the trees.

2.4.3. There are trees on and adjacent to the site which:

- are situated within dense areas of understorey vegetation; and/or,
- could not be viewed from all aspects due to land ownership boundaries and/or physical features.

Whilst these trees were surveyed insofar as was reasonably practicable, defects may be present which could not be observed in detail.

2.4.4. Trees are dynamic living organisms, and their condition can change over time. All visual observations and recommendations that have been made relate to the condition of the trees and surroundings at the time of the survey.

2.4.5. Any subsequent changes to the landform, ground conditions or site environment within the vicinity of the trees may adversely affect their health and structural stability and could invalidate the findings and recommendations contained within this report.

2.4.6. The contents of this report are concerned solely with arboricultural matters. Although reference may be made to other disciplines, such as engineering and ecology, specialist advice should be sought from appropriately qualified professionals in relation to these matters.



3. Survey Results

3.1. Arboricultural Observations

3.1.1. The site survey identified a total eight individual trees and three groups of trees with the potential to be impacted by the proposed development.

3.1.2. The surveyed trees comprise a total of 16 terminal taxa, 12 genera, and six families.

Table 3.1: Summary of on-site tree families, genera, and terminal taxa.

Family	No. of Terminal Taxa	No. of Genera
<i>Rosaceae</i>	8	6
<i>Sapindaceae</i>	3	1
<i>Betulaceae</i>	2	2
<i>Fagaceae</i>	1	1
<i>Oleaceae</i>	1	1
<i>Scrophulariaceae</i>	1	1

3.1.3. **Tab. 3.1**, above, indicates a moderate level of diversity in terms of the range of botanical families, genera, and species at the site.

3.1.4. Tree stock diversity is important for a range of ecological reasons and contributes to:

- increased resilience to pests and diseases;
- improved adaptability to climate change;
- enhanced biodiversity through the support of a wider range of invertebrates, birds, fungi, and mammals; and,
- greater structural continuity and long-term canopy stability.

3.1.5. The tree genera, species, and cultivars recorded at the site include field maple *Acer campestre*, purple Norway maple *Acer platanoides* 'Crimson King', sycamore *Acer pseudoplatanus*, silver birch *Betula pendula*, summer lilac *Buddleia davidii*, cotoneaster *Cotoneaster* sp., common hazel *Corylus avellana*, common hawthorn *Crataegus monogyna*, wild cherry *Prunus avium*, bird cherry *Prunus padus*, blackthorn *Prunus spinosa*, pyracantha *Pyracantha* sp., pedunculate oak *Quercus robur*, dogrose *Rosa canina*, rowan *Sorbus aucuparia*, and common lilac *Syrina vulgaris*.

3.1.6. The surveyed trees range from young to mature in age class; they are arranged around the perimeter of the site:

3.2. Tree Categorisation

3.2.1. The surveyed trees include:

- seven category B trees of moderate quality; and
- one category C tree and three groups of low quality.

3.2.2. There were no category A trees of high quality or category U trees with SULEs of less than 10 years identified at the site.

3.2.3. A summary of the BS 5837:2012 categories of trees at the site is given in **Tab. 3.2**, below.

Table 3.2: Summary of BS 5837:2012 tree categories.

BS 5837:2012 Category	Description	Tree/Group Ref.	Line Totals
A	High-quality trees, which should be retained throughout the proposed development.	-	-



BS 5837:2012 Category	Description	Tree/Group Ref.	Line Totals
B	Moderate-quality trees, which should where possible be retained throughout the proposed development.	T001, T002, T004, T005, T006, T007, T008	7 Trees
C	Low-quality trees, which, if removed to facilitate the development, can be readily mitigated.	T003 G001, G002, G003	1 Tree 3 Groups
U	Trees of such a condition that they cannot realistically be retained in the context of the current land use for longer than 10 years	-	-
Totals:			8 Trees 3 Groups

3.2.4. The full results of the survey can be viewed in the ***Tree Survey Schedule*** in ***Appendix 1***. Images of the trees can be viewed in ***Appendix 2***. Tree locations, and the above and below ground constraints posed by trees, can be viewed in the ***Tree Constraints Plans*** in ***Appendix 4***.



4. Impact Assessment

4.1. Tree Removals

- 4.1.1. The proposed development can be accommodated without requiring the removal of any existing trees.

4.2. Facilitation Pruning

- 4.2.1. Branches extending south from T001, T002, and T003, overhang the proposed locations of EV infrastructure features, including a feeder panel, a transformer, and a ring main unit (RMU). These EV infrastructure features will measure 2.5 m in height, whilst T001, T002, and T003 currently display crown clearances between 2-3 m from ground level.
- 4.2.2. To facilitate installation of the feeder panel, transformer, and RMU, it is recommended that the crowns of these trees are lifted to provide a minimum clearance of 4 m.

4.3. Tree Root Protection Areas (RPAs)

- 4.3.1. The RPAs of the following trees will be subject to encroachment by proposed EV infrastructure:
- T001 – 1 x Feeder Panel
 - T002 – 1 x Feeder Panel, 1 x Transformer, 1 x RMU
 - T003 – 1 x RMU
 - G001 – 16 x Heliox 250A Gound mounted Chargers, 6 x Power Units
 - G002 – 6 x Heliox 250A Gound mounted Chargers, 3 x Power Units
- 4.3.2. The proposed EV infrastructure located within the RPAs of T001, T002, T003, G001, and G002 will be floor-mounted on existing concrete, asphalt or paved surfaces. As no excavation or ground disturbance is anticipated in these areas, the potential for adverse impacts upon tree roots is considered to be negligible.
- 4.3.3. The temporary tree protection barriers, as detailed in **Section A3.5** of the **Outline AMS** in **Appendix 3** and illustrated on the **Tree Protection Plan** in **Appendix 5**, will provide an appropriate level of protection to the RPAs of retained trees, helping to safeguard them from potential damage arising from construction and other development activities.

4.4. Shade Analysis

- 4.4.1. The development proposals do not include residential use; therefore, detailed assessment of shading from the trees has not been carried out.

4.5. Underground Utilities

- 4.5.1. At the time of writing, the client had not provided detailed plans indicating the location of proposed utilities and/or service runs. However, it is understood that all EV infrastructure cabling will be routed above ground, and as such, will not impact the tree RPAs.
- 4.5.2. Details of all new utilities and drainage routes, along with the final site levels should be submitted to the Project Arboriculturalist to enable an assessment of their potential impact on the retained trees. These details should be incorporated into the final AMS and relevant subsequent plans used for design purposes and construction drawings issued for use on site.
- 4.5.3. Any installation of new utilities as part of the development should be carried out in accordance with the National Joint Utilities Group (NJUG) guidance, *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Volume 4)*.



5. Recommendations

5.1. Tree Works

- 5.1.1. Prior to development works commencing, branches overhanging onto the site from T001, T002, and T003 should be crown lifted to provide a minimum clearance of 4 m.

5.2. Legal Constraints

- 5.2.1. According to information which is available on the BMBC website⁴, T001, T002, and T003 are not subject to TPOs or conservation area status. However, as TPO designations may be updated or amended at any time, it is recommended that tree protection statuses are checked and verified with the BMBC by the applicant or appointed arboricultural contractor, prior to the commencement of works. It is an offence to carry out works to a protected tree without consent, and such actions may result in enforcement action and prosecution.
- 5.2.2. All tree works, including tree removals, should be carried out by a fully insured and suitably qualified arboricultural contractor who is able to comply with *BS 3998: 2010*⁹.
- 5.2.3. Trees and woodlands provide valuable habitat for wild birds, bats, and many other forms of wildlife. The potential impacts on wildlife should be suitably assessed before the recommendations within this report are implemented.
- 5.2.4. Under the Wildlife and Countryside Act 1981 (as amended), it is an offence to intentionally:
- kill, injure or take any wild bird;
 - take, damage or destroy the nest of any wild bird while it is in use or being built; or
 - take or destroy the eggs of any wild bird.
- 5.2.5. It is also an offence to intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or while it is in, on, or near a nest containing eggs or young, or to disturb the dependent young of such a bird.
- 5.2.6. Under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2017, it is an offence to deliberately capture, kill, injure, or disturb a bat, or to damage or destroy a bat roost (breeding site or resting place), even if the roost is not occupied at the time.

5.3. Tree Protection

- 5.3.1. Construction, and any other works involving excavations, can cause irreversible damage to trees, particularly those which have reached maturity, which are far less capable of adapting to alterations in their surrounding environment. Whilst above-ground injuries are usually obvious, root damage is often concealed, though can have equally devastating impacts on tree health.
- 5.3.2. Direct root damage includes root severance, which can be caused by digging of trenches and ditches, and the stripping of topsoil. Indirect damage may involve the raising of soil levels, alterations in drainage patterns, the laying of impervious surfaces, and soil compaction.

⁹ British Standards (2010). *BS 3998:2010 - Tree Works: Recommendations*. British Standards Institute: London.



- 5.3.3.** Compaction of soils is a common cause of death or damage to trees on development sites. Soil compaction reduces soil pore space, which in turn reduces soil air, the passage of water, and available nutrients. These anaerobic conditions prevent root growth and the proliferation of soil microbes essential to tree health. Symptoms in trees may include crown die-back, sparse and small foliage, and poor extension growth; however, these are usually not evident until well after the occurrence of compaction. Even one pass of a vehicle in wet conditions can cause irreparable soil compaction.
- 5.3.4.** To avoid both direct and indirect damage to the retained trees during the development, temporary tree protection barriers should be installed prior to development works commencing in the locations shown in the **Tree Protection Plan**. The default specification for the temporary tree protection barriers shall be in accordance with BS 5837:2012.
- 5.3.5.** It is recommended that development works follow the **Outline AMS** provided in **Appendix 3**. This includes the specifications for temporary tree protection barriers and other protective measures to be adhered to throughout the development.
- 5.3.6.** As aspects of the development may be subject to change, the **Outline AMS** should be reviewed by the Project Arboriculturalist prior to the commencement of development works.



Appendices

Appendix 1: Tree Survey Schedule

Table Key					
Tree/Group Ref: Reference numbers, as labelled in the <i>Tree Constraints Plan</i>			DBH: Diameter at breast height (1.5 m), in millimetres		
Height (Ht.): Overall height of tree, in metres			SULE: Safe useful estimated life expectancy of the tree, in years		
Crown Spread (CS): Radius of crown to N, E, S, and W aspects, in metres			Crown Clearance (CC): Clearance from ground level of lowest branch, in metres		
Structural Condition (SC): An assessment of structural condition. G = Good; F = Fair; D = Decaying; C = Collapsing; PD = Physical Defect			Physiological Condition (PC): An assessment of vitality and vigour F = Fair; P = Poor; D = Dead		
Species: Common (and <i>binomial name</i>)			Root Protection Area (RPA) Area/Radius: Area/Radius of the calculated BS 5837:2012 RPA, in metres		
			#: Denotes estimated value		
Age	Young (Y): Newly planted or self-seeded tree		Early-mature (EM): Trees in second third of life expectancy for species type		Post-mature (PM): Mature trees which have entered stages of natural decline
	Semi-mature (SM): Trees in within first third of life expectancy for species type		Mature (M): Trees in final third of life expectancy for species type		Veteran/Ancient (V/A): Trees of any age with veteran characteristics or which are remarkably old for the species type
BS 5837:2012 Categories	Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years, and that are particularly good examples of their species type			Category C: Unremarkable trees of low quality offering limited arboricultural merit and/or of such impaired condition that they do not warrant in higher categorisation	
	Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years, though lacking the necessary qualities to warrant Category A designation			Category U: Trees which display serious, irremediable, structural and/or physiological defects	

Individual Trees

Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	RPA Radius/Area	PC	SC	BS 5837:2012 Category	Recommendations
						N	E	S	W							
T001	Silver birch <i>Betula pendula</i>	EM	40-80	9.5	300#	5#	4.5	2#	4	2	Positioned within a fenced-off area, preventing access to the base of the main stem. Asymmetrical form due to proximity with adjacent trees.	R: 3.6 A: 41	G	F	B1	Crown lift branches overhanging the site to create 4 m clearance from ground level
T002	Silver birch <i>Betula pendula</i>	EM	40-80	14	300# 350#	4#	6	6#	5.5	3	Positioned within a fenced-off area, preventing access to the base of the main stem. Bifurcates at ground level into two co-dominant stems. Asymmetrical form due to proximity with adjacent trees.	R: 5.5 A: 95	G	F	B1	Crown lift branches overhanging the site to create 4 m clearance from ground level
T003	Bird cherry <i>Prunus padus</i>	SM	20-40	7.5	100# 100# 100# 80#	3#	3	3.5#	3.5	3	Positioned within a fenced-off area, preventing access to the base of the main stem. Multiple-stemmed tree, of limited arboricultural merit and lacking	R: 2.7 A: 23	F	F	C1	Crown lift branches overhanging the site to create 4 m clearance from ground level



Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	RPA Radius/ Area	PC	SC	BS 5837:2012 Category	Recommendations
						N	E	S	W							
					80# 80#						the necessary qualities for higher BS 5837 categorisation.					
T004	Wild cherry <i>Prunus avium</i>	SM	40-80	7	190	1.5	4	3.5	3	2	Asymmetrical form due to proximity with adjacent tree.	R: 2.3 A: 17	G	F	B1	No works recommended
T005	Wild cherry <i>Prunus avium</i>	SM	40-80	8	250	4.5	4.5	2.5	4	2	Asymmetrical form due to proximity with adjacent tree.	R: 3 A: 28	G	F	B1	No works recommended
T006	Wild cherry <i>Prunus avium</i>	SM	40-80	10	260	4	3	5	4.5	2	Asymmetrical form due to proximity with adjacent tree.	R: 3.1 A: 30	G	F	B1	No works recommended
T007	Wild cherry <i>Prunus avium</i>	SM	40-80	10#	250	4	4	4.5	2.5	2	Asymmetrical form due to proximity with adjacent tree.	R: 3 A: 28	G	F	B1	No works recommended
T008	Purple Norway maple <i>Acer platanoides</i> 'Crimson King'	EM	40-80	10	350#	4#	4#	5	4	2	No obvious significant defects.	R: 4.2 A: 55	G	G	B1	No works recommended

Groups of Trees

Group Ref:	Species Composition	Age	SULE	Mx. Ht.	Mx. DBH	CC	Comments	PC	SC	BS 5837:2012 Category	Recommendations
G001	Common hawthorn <i>Crataegus monogyna</i> Bird cherry <i>Prunus padus</i> Blackthorn <i>Prunus spinosa</i>	Y SM	40-80	6	140	0	Linear group of trees positioned along the northern boundary of the site. No obvious significant defects, though of limited arboricultural merit and lacks the necessary qualities for higher BS 5837 categorisation.	0	F	F	C1
G002	Field maple <i>Acer campestre</i> Sycamore <i>Acer pseudoplatanus</i> Summer lilac <i>Buddleia davidii</i> Cotoneaster <i>Cotoneaster</i> sp. Common hawthorn <i>Crataegus monogyna</i>	Y SM	20-40	9	200	2	Dense group of self-seeded trees and ornamental shrubs. No obvious significant defects, though of limited arboricultural merit and lacks the necessary qualities for higher BS 5837 categorisation.	0	F	F	C1



Group Ref:	Species Composition	Age	SULE	Mx. Ht.	Mx. DBH	CC	Comments	PC	SC	BS 5837:2012 Category	Recommendations
	Pyracantha <i>Pyracantha</i> sp. Common lilac <i>Syringa vulgaris</i>										
G003	Summer lilac <i>Buddleia davidii</i> Common hazel <i>Corylus avellana</i> Common hawthorn <i>Crataegus monogyna</i> Wild cherry <i>Prunus avium</i> Pedunculate oak <i>Quercus robur</i> Dogrose <i>Rosa canina</i> Rowan <i>Sorbus aucuparia</i>	Y SM	40-80	7	160	0	Several dense groups of trees positioned around site car park. No obvious significant defects, though of limited arboricultural merit and lacks the necessary qualities for higher BS 5837 categorisation.	0	F	F	C1



Appendix 2: Images of Trees



Plate 1: T001, T002, & T003 (left to right)



Plate 2: T004 (left) & T005 (right)



Plate 3: T006 (left) & T007 (right)



Plate 4: T008



Plate 5: G001



Plate 6: G001



Plate 7: G002



Plate 8: G003



Appendix 3: Outline Arboricultural Method Statement (AMS)

A3.1 Introduction

- A3.1.1** Woodsage Consulting Ltd have been instructed by JANUS Architecture to prepare an Outline AMS in relation to the proposed development of the land at Wakefield Road Bus Depot.
- A3.1.2** The development proposals are for the electrification of an existing diesel bus depot currently operated by Stagecoach.
- A3.1.3** This Outline AMS should be read in conjunction with the Arboricultural Impact Assessment (Ref: WC-572.1a).

A3.2 Timing of Works

- A3.2.1** It is not the Project Arboriculturist's role to determine the timing and implementation of works on site however, an input into the process can avoid issues once work is underway.
- A3.2.2** The phasing of works should be carried out in accordance with **Tab. A3.1**, below.

Table A3.1: Development Sequence and Tree Protection Measures.

Stage	Description
1	Site induction
2	Carry out the tree works which are detailed in Section A3.4 of this AMS .
3	Install the temporary tree protection barriers, to the specification detailed in Section A3.5 of this AMS in the locations shown in Tree Protection Plan .
4	Inspection of tree protection measures by the Project Arboriculturalist (with reporting back to the LPA Case Officer within five-working days).
5	Carry out development works: • Precautionary measures detailed in Section A3.6 of this AMS to be followed throughout the development
6	Remove the temporary tree protection barriers once development works are completed.
7	Final inspection by the Project Arboriculturalist (with reporting back to the LPA Case Officer within five-working days).

A3.3 Site Supervision

- A3.3.1** Prior to works commencing, it is the responsibility of the main contractor, or assigned agent, to ensure that details regarding tree protection are understood and adhered to by all site personnel.
- A3.3.2** During the site induction, the final AMS and a copy of the **Tree Protection Plan**, which can be viewed in **Appendix 5**, should be made available to all contractors attending the site.

A3.4 Tree Works

- A3.4.1** Prior to development works commencing, branches overhanging onto the site from T001, T002, and T003 should be crown lifted to provide a minimum clearance of 4 m.
- A3.4.2** According to information which is available on the BMBC website, T001, T002, and T003 are not subject to TPOs or conservation area status. However, as TPO designations may be updated or amended at any time, it is recommended that tree protection statuses are checked and verified with the BMBC by the applicant or appointed arboricultural contractor, prior to the commencement of works. It is an offence to carry out works to a protected tree without consent, and such actions may result in enforcement action and prosecution.
- A3.4.3** All tree works, including removals, should be carried out by a fully insured and suitably qualified arboricultural contractor, who is compliant with BS 3998: 2010 - *Tree Works: Recommendations*.



A3.4.4 Trees and woodlands provide valuable habitat for wild birds, bats, and many other forms of wildlife. The potential impacts on wildlife should be suitably assessed before the recommendations within this report are implemented.

A3.5 Temporary Tree Protection Barriers

A3.5.1 The temporary tree protection barriers shall be installed prior to the commencement of development works and should be fit for the purpose of excluding site personnel and machinery. The default specification should be in accordance with BS 5837:2012 - *Trees in Relation to Design, Demolition and Construction: Recommendations*.

A3.5.2 Specification: Barriers shall be a minimum 2 m high and should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated in **Fig. A3.1**, below, and in **Fig. A3.2**, on the next page.

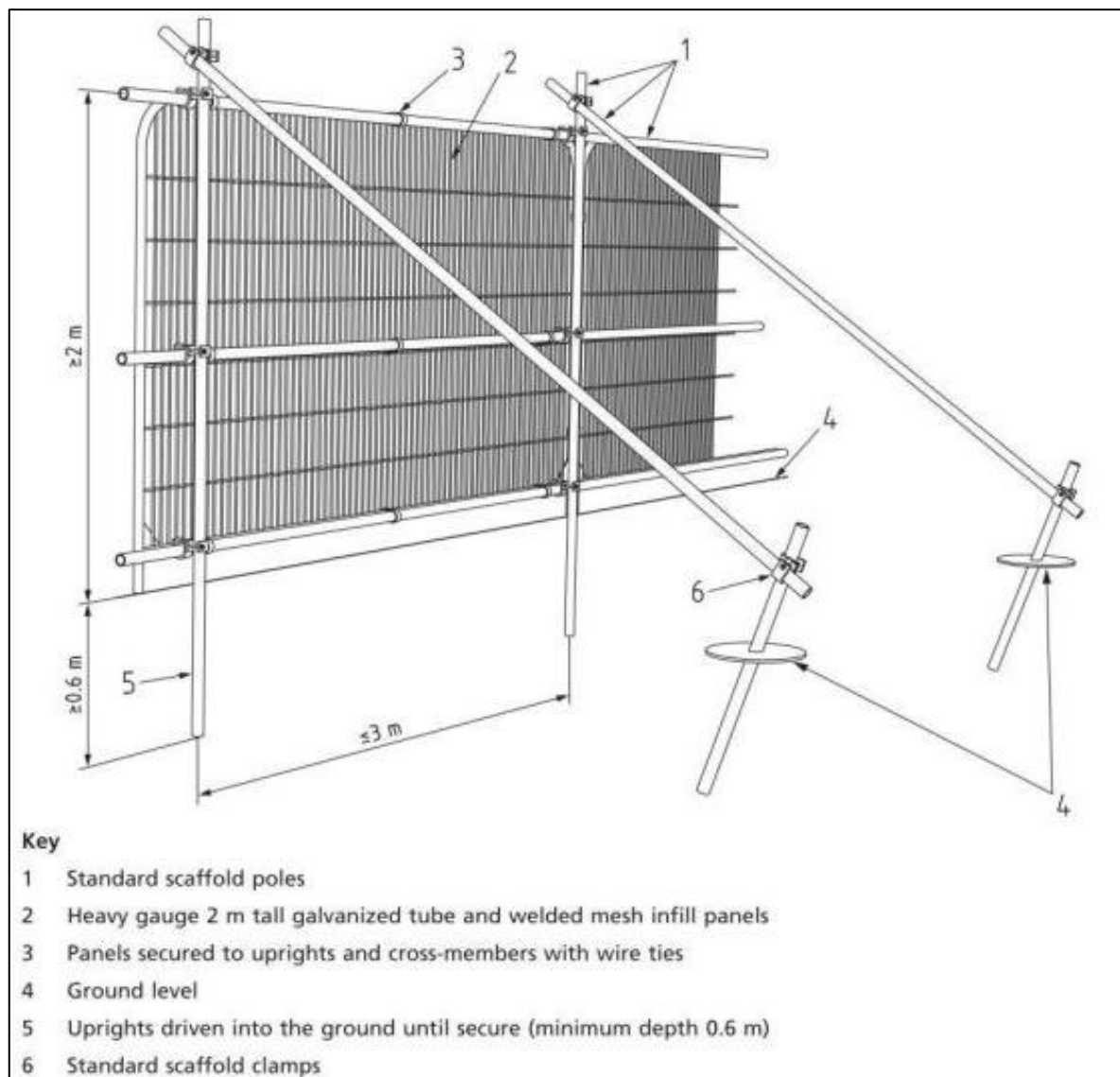


Figure A3.1: BS 5837:2012 default Specification for temporary tree protection barriers.

A3.5.3 The vertical tubes shall be spaced at a minimum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed.



Figure A3.2: Examples of scaffold framework temporary tree protection barriers.

- A3.5.4** All-weather notices shall be attached to the barriers at 9 m intervals with the words 'TREE PROTECTION ZONE - NO ACCESS' clearly visible.
- A3.5.5** The temporary tree protection barriers should be installed prior to development works commencing, in the locations shown in the **Tree Protection Plan**.
- A3.5.6** The protected areas should be regarded as sacrosanct, and once installed, tree protection fencing should not be removed or altered without first notifying the Project Arboriculturist.
- A3.5.7** If any breach in the tree protection barriers occurs, it is the Site Manager's responsibility to report this to the Project Arboriculturalist, so that appropriate measures may be taken. Any breach which results in death or damage to these trees could result in a criminal offence being committed.

A3.6 Precautionary Measures

- A3.6.1** No materials hazardous to tree health, such as oil, bitumen, or cement should be stored within the protective barriers. Where possible, such materials should be stored an additional 10 m away from the barriers.
- A3.6.2** Where there is a risk of polluted water runoff into root protection areas (RPAs), heavy duty plastic sheeting and sandbags must be used to contain any spillages and prevent contamination. No fires should be lit within 20 m of the protective fencing.
- A3.6.3** In favourable conditions, tree roots are typically concentrated within the top 600 mm of soil. Therefore, the existing soil levels within tree RPAs should be observed and maintained.
- A3.6.4** Any unavoidable excavations into the soil within tree RPAs must be undertaken using either compressed air soil displacement or hand tools, subject to prior approval from the Project Arboriculturalist and/or LPA Arboricultural Officer. If roots are encountered which occur in clumps or which are greater than 25 mm in diameter, these must not be severed without first consulting the Project Arboriculturalist.

A3.7 Responsibility and Site Management

- A3.7.1** It is the responsibility of the main contractor or assigned agent to ensure that details regarding tree protection are understood and followed by all site personnel.
- A3.7.2** Inspections by the Project Arboriculturalist are to be undertaken at the following stages of the development:



1. Once the temporary tree protection barriers have been installed in the locations shown in the **Tree Protection Plan** and prior to development works commencing.
2. Upon completion of the development works.

A3.7.3 Following each of the above inspections, evidence should be submitted by the Project Arboriculturalist to the LPA Case Officer (with LPA Arboricultural Officer copied in) within five-working days - with photos and writing - to confirm if the AMS has been followed correctly, and if trees have not been adversely affected by development works.

A3.8 Project Stakeholders

A3.8.1 **Tab. A3.3**, below, provides the contact details of key project personnel to ensure that appropriate lines of communication are established prior to the commencement of development works.

Table A3.3: Contact details for key project personnel.

Role	Name/s	Organisation/ Company	Contact Number	Contact Email
Site Manager	TBC	TBC	TBC	TBC
LPA Case Officer	TBC	Barnsley Metropolitan Borough Council	TBC	TBC
LPA Arboricultural Officer	TBC	Barnsley Metropolitan Borough Council	TBC	TBC
Project Architect	Andrew Burrell	JANUS Architecture	07891 035856	andrew@janusarchitecture.co. uk
Project Arboriculturalist	Jack Delaney	Woodsage Consulting Ltd	07962401997	jack@woodsage.co.uk
Project Applicant	TBC	Stagecoach	TBC	TBC

Appendix 4:
Tree Constraints Plan

Project:	Wakefield Road Bus Depot, Barnsley S71 1NT
Drawn by:	Jack Delaney
Date:	6th October 2026
Scale:	1:500 @ A1
Drawing Number:	WC-572.1a.4

Do not scale off this drawing - to be reproduced in colour only

Map Key:

Application site red line boundary

Category B trees of moderate quality

Root protection area (RPA)

Crown clearance

Tree stem

Tree canopy

Individual trees requiring facilitation pruning shown with dotted line

Category C trees/groups of low quality

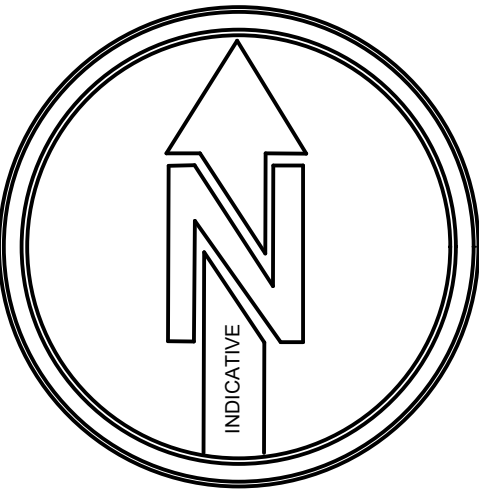
RPA

Crown clearance

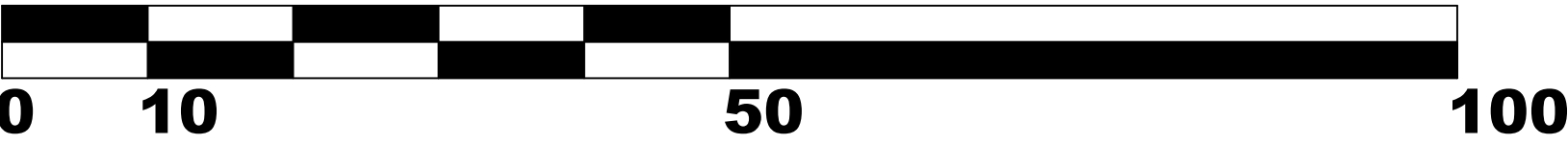
Tree stem

Tree canopy

Individual trees requiring facilitation pruning shown with dotted line



SCALE BAR 1:500



Appendix 5:
Tree Protection Plan

Project:	Wakefield Road Bus Depot, Barnsley S71 1NT
Drawn by:	Jack Delaney
Date:	6th October 2026
Scale:	1:500 @ A1
Drawing Number:	WC-572.1a.5

Do not scale off this drawing - to be reproduced in colour only

Map Key:

Category B trees of moderate quality

Root protection area (RPA)

Tree stem

Tree canopy

Category C trees/groups of low quality

RPA

Tree stem

Tree canopy

Temporary tree protection fencing, to BS 5837:2012 specification, as detailed in **Section A3.5** of the **Outline Arboricultural Method Statement (AMS)**

