

Arboricultural Impact Assessment

WC-474.1a

Land off Albany Drive, Blackburn BB1 9EH



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Executive Summary

Woodsage Consulting Ltd have been instructed by Pringle Homes to prepare an Arboricultural Impact Assessment for the land off Albany Drive, Blackburn BB1 9EH, in relation to the proposed development of the site.

The proposals are for residential development at the site, and will include 26 detached and semi-detached dwellings.

Ribble Valley Borough Council was contacted via email on the 25th of February 2026 and asked to confirm whether any of the trees at the site are subject to tree preservation orders or if the site is located within a conservation area. At the time of writing, a formal response had not been received.

The site survey identified a total of 23 individual trees and four groups of trees with the potential to be impacted by the development proposals. These include:

- two category A trees of high quality;
- 13 category B trees of moderate quality;
- seven category C trees and four groups of low quality; and,
- one category U tree which displays serious, irremediable defects.

One category B tree, one category C tree, and one category U tree will necessitate removal to facilitate the development proposals. One category C group will also require partial removal.

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

Proposed permanent hardstanding, which will be installed onto existing uncovered ground within the RPAs of two category B trees and two category C trees, will be constructed upon a permeable 'no-dig' geo-cellular confinement system.

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

Although the removal of predominantly low-quality trees is anticipated to have a negligible impact upon the local amenity, on-site replacement tree/hedge planting will be carried out upon completion of the development, which will help to enhance the amenity of the site in the long-term.

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. Scope of Report

- 1.1.1.** Woodsage Consulting Ltd have been instructed by Pringle Homes to prepare an Arboricultural Impact Assessment for the land off Albany Drive, Blackburn BB1 9EH, in relation to the proposed development of the site.
- 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*¹ this report sets out to:
- assess the quality and value of the trees on and immediately adjacent to the site;
 - identify trees for removal and/or retention, in consideration of the development proposals (where feasible, removals will be restricted to the less significant specimens on site);
 - prescribe tree protection measures where necessary, which will ensure the successful retention of the retained trees at the site - in accordance with *BS 5837: 2012*, these measures will be further detailed in an outline Arboricultural Method Statement (AMS); and,
 - where necessary, provide preliminary recommendations for mitigation tree planting.
- 1.1.4.** The contents of this report are concerned with arboricultural issues alone; although other disciplines such as engineering and ecology may be referenced, it is important to gain advice from an appropriate expert on these matters.

1.2. Site Details

- 1.2.1.** The application site - hereafter referred to as 'the site' and shown in **Fig. 1.1**, below - is located approximately 3.3 miles to the north of Blackburn town centre.



Figure 1.1: Aerial imagery showing the approximate site boundaries, outlined in red².

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

² Microsoft Corporation (2026). *Bing Maps* [online]. Available at: > <https://www.bing.com/maps?cp=53.796753%7E-2.496276&lvl=17.3&style=h> < [accessed 25th February 2026].



1.2.2. The site is centred on OS Grid Reference SD 67372 33519, and comprises approximately 1.16 ha of agricultural grassland.

1.2.3. The site is bound by residential properties to the north, and by agricultural grassland to the east, south, and west.

1.3. Site Topography and Elevation

1.3.1. The site lies at an elevation ranging between 92-103 m above ordnance datum (AOD).

1.3.2. The topography of the site falls away gradually the south-east to north-west.

1.4. Desk Based Study and Planning Context

1.4.1. Cranfield University³ states that the soils in the surrounding area consist of a combination of *Soilscape 6* and *Soilscape 17*:

- *Soilscape 6* are slightly acidic and loamy soils, that freely draining
- *Soilscape 17* are acidic, loamy, and clayey soils, that slowly permeable and seasonally wet

No further detailed soil analysis was carried out as part of the survey.

1.4.2. Ribble Valley Borough Council (RVBC) was contacted via email on the 25th of February 2026 and asked to confirm whether any of the trees at the site are subject to tree preservation orders (TPOs) or if the site is located within a conservation area. At the time of writing, a formal response had not been received.

1.5. Development Proposals

1.5.1. The proposals are for residential development at the site, and will include 25 detached and semi-detached dwellings.

³ Cranfield University (2026). *Soilscales* [online]. Available at: > www.landis.org.uk/soilscales < [accessed 25th February 2026].



2. Methods

2.1. Survey Details

- 2.1.1. The site survey was carried out on the 1st of December 2025.
- 2.1.2. The weather conditions over the duration of the survey were 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. Jack is a Chartered Arboriculturalist (Member of the Institute of Chartered Foresters), and has worked in the arboricultural sector for over 15 years. Jack holds an FdSc in Arboriculture with distinction, and is a Professional Member of the Arboricultural Association. Jack is also a LANTRA qualified Professional Tree Inspector, and is 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 inspected from ground level, using the Visual Tree Assessment (VTA)⁴. Although notable defects of trees were recorded, the site survey did not constitute a full tree safety assessment. No specialist decay detection equipment was used as part of the survey, though sounding and probing tools were used where necessary.
- 2.3.3. Tree information was recorded in accordance with *Section 4.4 of BS 5837: 2012*, and includes tree species, height, stem diameter (DBH), crown spread, crown clearance, life stage, condition (physiological and structural), vitality, and safe useful life expectancy (SULE).
- 2.3.4. 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 chart*⁴.

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.	Unfeasible	Red

⁴ Mattheck, C., Breloer, H. (1994). *The Body Language of Trees, a Handbook for Failure Analysis*. Her Majesty's Stationary, London.



2.3.5. Subcategories 1, 2 and 3 were also given to trees, and reflect arboricultural and landscape qualities, and cultural values, respectively.

2.3.6. Tree dimensions were determined using the following methods⁵:

- 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

2.3.7. 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*. DBHs were then used to calculate tree root protection areas (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:

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

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

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.

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 (Drawing No: S25-0840), which was carried out by JLP Surveying.

2.4.3. There are trees on the site which:

- are situated within hedgerows or other dense areas of vegetation;
- are positioned on neighbouring property; and/or,
- have epiphytic plants established upon them.

Whilst such trees were surveyed insofar as was reasonably practicable, the accuracy of such data cannot be guaranteed.

⁵ 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.



3. Survey Results

3.1. Arboricultural Observations

3.1.1. The site survey identified a total of 23 individual trees and four groups of trees with the potential to be impacted by the proposed development.

3.1.2. The surveyed trees comprise a total of 12 species, 12 genera, and nine families.

Table 3.1: Botanical families by species and genera richness.

Family	No. of Species	No. of Genera
<i>Rosaceae</i>	3	3
<i>Betulaceae</i>	2	2
<i>Fagaceae</i>	1	1
<i>Salicaceae</i>	1	1
<i>Aquifoliaceae</i>	1	1
<i>Adoxaceae</i>	1	1
<i>Oleaceae</i>	1	1
<i>Cupressaceae</i>	1	1
<i>Sapindaceae</i>	1	1

3.1.3. **Tab. 3.1**, above, indicates that there is a moderate level of diversity in the range of botanical families at the site. However, seven of these families are represented by only a single species/genus.

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 prevalent tree species at the site are sycamore *Acer pseudoplatanus*, common ash *Fraxinus excelsior*, and pedunculate oak *Quercus robur*, which together account for approximately 82% of the individually recorded trees. The remaining 18% of the individually recorded trees is comprised of hornbeam *Carpinus betulus*, common hawthorn *Crataegus monogyna*, and Leyland cypress *Cupressus x leylandii*.

3.1.6. Additional tree species which were recorded in groups include common hazel *Corylus avellana*, common holly *Ilex aquifolium*, blackthorn *Prunus spinosa*, goat willow *Salix caprea*, elder *Sambucus nigra*, and whitebeam *Sorbus aria*.

3.1.7. The surveyed trees range from young to mature in age class; they are predominantly located around the perimeter of the site.

3.2. Tree Categorisation

3.2.1. The surveyed trees include:

- two category A trees of high quality;
- 13 category B trees of moderate quality;
- seven category C trees and four groups of low quality; and,
- one category U tree with a SULE of less than 10 years.



3.2.2. 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.

Category	Description	Tree/Group Ref.	Line Totals
A	High-quality trees, which should be retained throughout the proposed development.	T003, T011	2 Trees
B	Moderate-quality trees, which should where possible be retained throughout the proposed development.	T005, T007, T009, T010, T012, T014, T015, T016, T017, T018, T020, T021, T022	13 Trees
C	Low-quality trees, which, if removed to facilitate the development, can be readily mitigated.	T001, T002, T004, T006, T008, T013, T023 G001, G002, G003, G004	7 Trees 4 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	T019	1 Tree
Totals:			23 Trees 4 Groups

3.2.3. 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 development proposals will necessitate the removal of T001, T012, and T019. G003 will also require partial removal.
- 4.1.2. T001 is located within the footprint of a proposed footpath; therefore, the proposals would not be feasible if this tree was to be retained.
- 4.1.3. T012 is in proximity to Plot 12 and would require extensive pruning to facilitate construction of the dwelling. If T012 were to be retained, there would also be ongoing issues associated with branch encroachment, leaf and fruit drop, and shading, which would all impact the dwelling.
- 4.1.4. T019 is a category U tree which displays serious, irremediable defects. Although T019 is not directly impacted by the development, the proposals will bring people/property within the vicinity of a potentially dangerous tree. T019 will therefore necessitate removal to maintain a duty of care.
- 4.1.5. A proposed highway passes through G003; consequently, a 12 m linear section of this group will require removal to facilitate the development.
- 4.1.6. T001, T019, and G003 are comprised of category U and category C trees of low or impaired quality. The removal of these trees will not have a significant impact upon the amenity of the site.
- 4.1.7. Although the removal of T012, a category B tree of moderate quality, is regrettable, the proposed development includes provision for on-site replacement tree and hedge planting. This will present an opportunity to introduce new species to the site, thereby in the long-term enhancing overall diversity.

4.2. Facilitation Pruning

- 4.2.1. The crowns of T004 and T005 overhang onto the footprint of Plot 25. To create sufficient clearance for construction activities, and to reduce nuisances relating to branch encroachment, leaf and fruit drop, and shading, it is recommended that branches extending west from T004 and T005 are reduced by approximately 2-3 m.
- 4.2.2. The crown of T018 overhangs onto the footprint of Plot 8. To create sufficient clearance for construction activities, and to reduce nuisances relating to branch encroachment, leaf and fruit drop, and shading, it is recommended that branches extending east from T018 are reduced by approximately 2-3 m.
- 4.2.3. G002 is a lapsed hedgerow which is located within the proposed gardens of Plots 20 and 21. To enable creation of functional garden spaces for these dwellings, it is recommended that G001 is reinstated as a 2-3 m high hedgerow.
- 4.2.4. G004 is a lapsed hedgerow which overhangs onto the footprint of a proposed swale. To facilitate formation of the swale, it is recommended that G004 is pruned backwards by approximately 1-2 m.

4.3. Tree Root Protection Areas (RPAs)

- 4.3.1. The RPAs of T002, T004, T005, and T007 will all be encroached onto by proposed areas of new permanent hardstanding, which will be laid onto existing uncovered ground.
- 4.3.2. A summary of the tree RPAs which will be impacted by new areas of permanent hardstanding is provided in **Tab. 4.1**, on the following page.



Table 4.1: Summary of tree RPAs which will be impacted by proposed permanent hardstanding.

Tree Ref:	Total RPA (m ²)	Total hardstanding proposed on existing uncovered ground within RPA (m ²)	Total Impacted RPA (%)
T002	72.4	29.5	41
T004	353	7.7	2
T005	353	1.8	< 1
T007	91.6	3.9	4

4.3.3. The proposals for permanent hardstanding within tree RPAs is considered feasible, providing that the following mitigation measures are implemented to minimise the impacts on tree roots:

- The proposed permanent hardstanding within the tree RPAs should be constructed upon a ‘no-dig’ geo-cellular confinement system, that is positioned on top of the existing soil levels.
- The geo-cellular confinement system and final surfacing dressing should be permeable in nature, which will help to maintain infiltration of water and free gaseous exchange between tree roots and the atmosphere.
- If excavations within tree RPAs during installation of the geo-cellular confinement system are found to be unavoidable, then these should be carried out using compressed air soil displacement or hand-operated tools, and only upon approval of the Project Arboriculturalist.
- If roots are encountered during installation of the geo-cellular confinement system which occur in clumps, or that are greater than 25 mm diameter, then these should not be severed without first consulting with the Project Arboriculturalist. If roots under this diameter are present, then these can be pruned using an appropriate sharp pruning tool, such as pruning saw or secateurs.
- Any tree roots which are temporarily exposed during installation of the geo-cellular confinement system should be covered with sharp sand or dampened hessian sacks, to prevent desiccation.
- The excavations required during installation of conventional kerbs and edgings usually involve strip trenching, which can cause extensive damage to tree roots. Within tree RPAs, this should be avoided either by using alternative ‘trenchless’ methods of edge support or by not using supports at all.

4.3.4. A 300-500 mm deep swale is proposed to the north-west of the site, and will encroach into the RPAs of T018 and T020. A summary of the tree RPAs which will be impacted by the proposed swale is provided in **Tab. 4.2**, below.

Table 4.2: Summary of tree RPAs which will be impacted by the proposed swale.

Tree Ref:	Total RPA (m ²)	Total Impacted RPA (m ²)	Total Impacted RPA (%)
T018	145.3	29.7	20
T020	277.6	82.7	30

4.3.5. Although excavations to a depth of 300-500 mm would normally not be permitted within tree RPAs, formation of the swale within the RPAs of T018 and T019 may be feasible, since a significant proportion of the excavations within the RPAs will be beneath an existing access track. Tree root morphology and disposition beneath the track will have been impacted by soil compaction, and tree roots are therefore likely to be much deeper than they would in an uncompacted soil. The location of the proposed swale and T018 and T020 are also separated by an existing culvert, which again is also likely to have impacted tree root growth towards the location of the swale.



4.3.6. Formation of the proposed swale may be feasible, proving that the following mitigation measures are implemented:

- All excavations and grading of soil within the RPA of T018 and T020 should be carried out under the supervision of the Project Arboriculturist, using compressed air soil displacement or hand-operated tools only. Under no circumstances are vehicles or heavy plant/machinery to enter the RPAs.
- If roots are encountered during formation of the swale which occur in clumps, or that are greater than 25 mm diameter, then these should not be severed without first consulting with the Project Arboriculturalist. If roots under this diameter are present, then these can be pruned using an appropriate sharp pruning tool, such as pruning saw or secateurs.
- Any tree roots which are temporarily exposed during formation of the swale should be covered with sharp sand or dampened hessian sacks, to prevent desiccation.

4.3.7. The temporary tree protection fencing - which is detailed in **Sections A3.5** of the **Outline AMS in Appendix 3**, and which is shown in the **Tree Protection Plans in Appendices 6 and 7** – will help to ensure that the RPAs of the retained trees are suitably protected from development activities.

4.4. Shade Analysis

4.4.1. The north-west portion of Plot 8 will endure afternoon shading from T018. To reduce the impacts of shading on the dwelling, the internal layout should be designed to take advantage of the unobstructed southern elevation. Non-habitable rooms (e.g. kitchens, utility rooms etc.) should be positioned to the north-west of the dwelling, whilst habitable rooms (e.g. bedrooms, living rooms etc.) should be positioned to the south.

4.4.2. The gardens of Plots 12, 13, 14, and 15 will endure afternoon shading from T014, T015, and T016. The gardens of Plots 24, 25, and 26, will endure morning shading by T003, T004, T005, T006, T007, T021, and T022. In arboricultural and planning contexts, shading in gardens by trees can contribute positively to environmental quality, climate resilience, and usability:

- Garden shading by trees can help to reduce peak summer temperatures and provide comfortable outdoor seating areas (which in the context of climate change is becoming increasingly important)
- Garden shading by deciduous trees like T003, T004, T005, T006, T007, T014, T015, T016, T021, and T022 can also offer seasonal balance, with shading typically denser during summer (when it is most beneficial), whilst being reduced in winter and allowing for greater light penetration

4.4.3. A **Shade Analysis Plan**, which shows the predicted shade patterns of the trees at the site, can be viewed in **Appendix 5**.

4.5. Underground Utilities

4.5.1. At the time of writing, detailed drawings showing the routing of proposed underground utilities had not been issued by the client. However, it is understood that foul drainage will connect into an existing sewer network on Albany Drive. Since the trees are predominantly located along the east and west boundaries of the site, it is anticipated that conflicts with tree RPAs can be avoided.

4.5.2. Surface water will be discharged into nearby watercourses, to meet the requirements of the National Planning Policy Framework (PPS 1 (22) and PPS 25 (F8)) and part H3 of the Building Regulations.

4.5.3. If there are any aspects of the proposed utilities and drainage which conflict with tree RPAs, these should first be reported to the Project Arboriculturalist, so that appropriate measures may be taken.



5. Recommendations

5.1. Tree Works

5.1.1. Prior to development works commencing:

- T001, T012, and T019 should be removed;
- Approximately 12 m of G003 should be removed;
- branches extending west from T004 and T005 should be reduced by approximately 2-3 m;
- branches extending east from T018 should be reduced by approximately 2-3 m;
- G002 should be reinstated as a 2-3 m hedgerow; and,
- G004 should be pruned backwards by approximately 1-2 m.

5.2. Legal Constraints

5.2.1. RVBC are yet to confirm if any of the trees at the site are subject to TPOs or conservation area status. The proposed tree works should therefore only be carried out once planning permission has been granted, or following formal response from RVBC⁶ on the matter of statutory tree protection. Killing or damaging a protected tree is a criminal offence and can result in an unlimited fine.

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*⁷.

5.2.3. Trees provide valuable habitat for wild birds, bats, and many other forms of wildlife. The risks posed to these should be suitably assessed before the recommendations within this report are completed.

5.2.4. Under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Wildlife and Countryside Act 1981:

- it is an offence to intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or destroy a nest containing eggs or young; and,
- it is an offence to intentionally or recklessly damage or destroy a bat roost site, 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 to 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.

5.3.3. Compaction of soils is a common cause of death or damage to retained 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

⁶ If there are trees at the site which are subject to TPOs, then a Works to Protected Trees Application Form may need to be submitted to RVBC prior to the completion of the proposed tree works.

⁷ British Standards (2010). *BS 3998:2010 - Tree Works: Recommendations*. British Standards Institute: London.



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 roots of the retained trees, temporary tree protection fencing should be installed in the following phases:
- Prior to the development commencing, tree protection fencing should be installed in the locations shown in **Tree Protection Plan (1)**, which can be viewed in **Appendix 6**.
 - Once major construction works are completed (e.g. buildings, highways, pedestrian walkways etc.), the tree protection fencing can then be realigned to facilitate the proposed soft-landscaping, as directed in **Tree Protection Plan (2)** which can be viewed in **Appendix 7**.
- 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 fencing, geo-cellular confinement, 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.

5.4. Replacement Tree Planting

- 5.4.1.** The development proposals will necessitate the removal of one category B tree, one category C tree, and one category U tree. One category C group will also require partial removal.
- 5.4.2.** Replacement tree replanting should therefore be carried out upon completion of the development, at the ratios provided in **Tab. 5.1**, below.

Table 5.1: Tree replacement requirements by BS 5837:2012 category.

BS 5837:2012 Category	No. of Trees to be Felled	No. of Replacement Trees Required
B	1	5
C	1	3
U	1	3

- 5.4.3.** **Tab. 5.2**, below, presents a selection of species that are appropriate for planting at the site, together with their ultimate mature sizes. The species which are listed in **Tab. 5.2** will thrive on soils at the site, and will also help to improve species diversity whilst enhancing the resilience of the tree stock to pests/diseases and climate change.

Table 5.2: List of suitable tree species for replanting at the site.

Tree Species	Ultimate Height	Ultimate Spread
Field Maple <i>Acer campestre</i>	10-15 m	4-8 m
Hornbeam <i>Carpinus betulus</i>	15-25 m	8-12 m
Sweet chestnut <i>Castanea sativa</i>	20-30 m	16-20 m
Silver birch <i>Betula pendula</i>	15-20 m	8-10 m
Bird cherry <i>Prunus padus</i>	10-15 m	4-8 m
Rowan <i>Sorbus aucuparia</i>	10-12 m	4-6 m



Tree Species	Ultimate Height	Ultimate Spread
Common yew <i>Taxus baccata</i>	8-12 m	8-10 m
Common alder <i>Alnus glutinosa</i>	15-20 m	8-12 m
Sweetgum <i>Liquidambar styraciflua</i>	20-25 m	12-16 m
Downey serviceberry <i>Amelanchier arborea</i>	8-12 m	4-8 m

5.4.4. The specifications, locations, and maintenance requirements of any proposed tree planting should be further detailed in a tree planting plan, which should adhere to *BS 8545: 2014*⁸.

5.5. Additional Information

5.5.1. All visual observations and recommendations specified within this document relate to the condition of the trees and surroundings at the time of the survey. As such, any subsequent changes to landform in the proximity of the trees could invalidate the advice given.

5.5.2. Trees are dynamic living organisms, and their condition can change rapidly; the information given in this report is therefore valid for a period of 12 months. This period may be reduced if significant changes occur to the trees, or the ground conditions, which surround them.

⁸ British Standards (2010). *BS 8545:2014 - Trees from nursery to independence in the landscape: Recommendations*. British Standards Institute, London.



Appendices

Appendix 1: Tree Survey Schedule

Table Key	
Tree/Group Ref:	Reference numbers, as illustrated in the Tree Constraints Plan in Appendix 4
Height (Ht.):	Overall height of tree, measured to the nearest metre
Crown Spread (CS):	Radius of crown, measured at each cardinal point, to the nearest metre
Structural Condition (SC):	An assessment of structural condition. G = Good; F = Fair; D = Decaying; C = Collapsing; PD = Physical Defect
Species:	Common (and <i>binomial name</i>)
Age	<p>Young (Y): Newly planted or self-seeded tree</p> <p>Early-mature (EM): Trees in second-third of life expectancy for species type</p> <p>Mature (M): Trees in final-third of life expectancy for species type</p> <p>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</p> <p>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</p>
BS 5837: 2012 Categories	<p>Over-mature (OM): Mature trees which have entered stages of natural decline</p> <p>Veteran/Ancient (V/A): Trees of any age with veteran characteristics or which are remarkably old for the species type</p> <p>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</p> <p>Category U: Trees which display serious, irremediable, structural and/or physiological defects</p>

Individual Trees

Tree Ref:	Species	Age	SULE	Ht.	DBH	CS					CC	Comments	PC	SC	BS 5837: 2012 Category	Recommendations
						N	E	S	W							
T001	Common hawthorn <i>Crataegus monogyna</i>	SM	20-40	4.5	150# 150# 100#	2	2	2	2	0		Multiple-stemmed tree. Unable to access base of main stems. No obvious significant defects, though of limited arboricultural merit, and lacks the necessary qualities for higher BS 5837 categorisation.	G	G	C1	Remove tree
T002	Leyland cypress <i>Cupressus x leylandii</i>	EM	20-40	8.5	400#	3.5#	3.5	3.5	3.5	1.5		Positioned on neighbouring property and unable to access base of main stems. No obvious significant defects, though of limited arboricultural merit, and lacks the necessary qualities for higher BS 5837 categorisation.	G	G	C1	No works recommended



Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	PC	SC	BS 5837: 2012 Category	Recommendations
						N	E	S	W						
T003	Common ash <i>Fraxinus excelsior</i>	M	40-80	17	720	8	8#	9	9	1.5	Ivy <i>Hedera helix</i> established on main stem up to 6 m, which obscures tree features and potential defects. Minor deadwood < 100 mm in diameter scattered throughout the crown.	F	G	A1	No works recommended
T004	Common ash <i>Fraxinus excelsior</i>	M	5-10	16	880	7	8#	7	7.5	4	Displays symptoms of Chalara ash dieback <i>Hymenoscyphus fraxineus</i> , with extensive deadwood < 100 mm in diameter accumulating around the extremities of the crown.	P	F	C1	Reduce branches extending west by approx. 2-3 m
T005	Sycamore <i>Acer pseudoplatanus</i>	M	40-80	16	880	4.5	8#	9	8	3	Asymmetrical form due to proximity with adjacent trees. Historic browsing damage to lower main stem caused by livestock. Ivy <i>Hedera helix</i> established on main stem and first order branches up to 13 m, which obscures tree features and potential defects.	F	F	B1	Reduce branches extending west by approx. 2-3 m
T006	Common ash <i>Fraxinus excelsior</i>	SM	5-10	7.5	180	1.5	1.5	1.5	1.5	2	Displays symptoms of Chalara ash dieback <i>Hymenoscyphus fraxineus</i> , with extensive deadwood < 100 mm in diameter accumulating around the extremities of the crown.	P	F	C1	No works recommended
T007	Common ash <i>Fraxinus excelsior</i>	EM	40-80	13	130 290 320	4.5	4	4	4.5	2.5	Bifurcates at 0.5 m into three co-dominant stems. Minor deadwood < 100 mm in diameter scattered throughout the crown	F	F	B1	No works recommended
T008	Common ash <i>Fraxinus excelsior</i>	EM	5-10	10	410	2	4#	4	4	3.5	Asymmetrical form due to proximity with adjacent trees. Ivy <i>Hedera helix</i> established on main stem and first order branches up to 5 m, which obscures tree features and potential defects. Displays symptoms of Chalara ash dieback <i>Hymenoscyphus fraxineus</i> , with extensive deadwood < 100 mm in diameter accumulating around the extremities of the crown.	P	F	C1	No works recommended



Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	PC	SC	BS 5837: 2012 Category	Recommendations
						N	E	S	W						
T009	Sycamore <i>Acer pseudoplatanus</i>	EM	40-80	11	500#	5	6#	6	6	3.5	Unable to access base of tree due to dense holly understorey. Minor deadwood < 100 mm in diameter scattered throughout the crown.	F	F	B1	No works recommended
T010	Pedunculate oak <i>Quercus robur</i>	M	40-80	11	740	7.5	8#	8	7	2	Branch tear-out wound at 2 m on south aspect of main stem, with the detached branch now lying beneath the tree in-situ. Minor deadwood < 100 mm in diameter scattered throughout the crown.	F	PD	B1	No works recommended
T011	Pedunculate oak <i>Quercus robur</i>	M	40-80	10	760	6	8#	8	7	3	Minor deadwood < 100 mm in diameter scattered throughout the crown.	F	G	A1	No works recommended
T012	Sycamore <i>Acer pseudoplatanus</i>	SM	40-80	9	240	2.5	2.5	3.5	3.5	2.5	No obvious significant defects, though lacks the necessary qualities for higher BS 5837 categorisation.	G	G	B1	Remove tree
T013	Pedunculate oak <i>Quercus robur</i>	Y	10-20	6.5	220	3	3	2.5	2.5	2	Bifurcates at 1 m into two co-dominant stems; the angle of this branch union is < 20°, and therefore, it is likely to contain included bark.	G	F	C1	No works recommended
T014	Pedunculate oak <i>Quercus robur</i>	M	40-80	15	600#	6	5.5	6	7#	5	Positioned in culvert on land to the west of the site. Unable to access base of tree due to dense understorey vegetation. Ivy <i>Hedera helix</i> established on main stem and first order branches up to 11 m, which obscures tree features and potential defects. Minor deadwood < 100 mm in diameter scattered throughout the crown.	F	F	B1	No works recommended
T015	Pedunculate oak <i>Quercus robur</i>	M	20-40	14	720	3	7.5	7	7#	3	Positioned in culvert on land to the west of the site. Asymmetrical form due to proximity with adjacent trees. Ivy <i>Hedera helix</i> established on main stem and first order branches up to 9 m, which obscures tree features and potential defects. Minor deadwood < 100 mm in diameter scattered throughout the crown. Cavities at base	F	PD	B1	No works recommended



Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	PC	SC	BS 5837: 2012 Category	Recommendations
						N	E	S	W						
T016	Pedunculate oak <i>Quercus robur</i>	M	40-80	15	880	7.5	7	5	7#	5	of main stem and at 2 m on west aspect of the main stem, which appear to coalesce as decay column. Positioned in culvert on land to the west of the site. Asymmetrical form due to proximity with adjacent trees. Bifurcates at 2 m into two co-dominant stems; the angle of this branch union is < 25°, and therefore, it potentially may contain included bark. Minor deadwood < 100 mm in diameter scattered throughout the crown.	F	F	B1	No works recommended
T017	Sycamore <i>Acer pseudoplatanus</i>	EM	40-80	13	420	4	5	5	5#	4	Positioned in culvert on land to the west of the site. Minor deadwood < 100 mm in diameter scattered throughout the crown.	F	G	B1	No works recommended
T018	Common ash <i>Fraxinus excelsior</i>	EM	40-80	13	570	6	8	7.5	6#	6	Positioned in culvert on land to the west of the site. Ivy <i>Hedera helix</i> established on main stem and first order branches up to 6 m, which obscures tree features and potential defects. Minor deadwood < 100 mm in diameter scattered throughout the crown.	F	G	B1	Reduce branches extending east by approx. 2-3 m
T019	Common ash <i>Fraxinus excelsior</i>	EM	< 5	12	370 260	3	4	5	4#	4	Displays advanced symptoms of Chalara ash dieback <i>Hymenoscyphus fraxineus</i> ; with extensive deadwood > 100 mm in diameter accumulating around the extremities of the crown.	P	PD	U	Remove tree
T020	Hornbeam <i>Carpinus betulus</i>	M	40-80	16	620 480	8	9	8	8#	4.5	Positioned in culvert on land to the west of the site. Bifurcates at ground level into two co-dominant stems; the angle of this branch union is < 25°, and therefore, it potentially may contain included bark. Minor deadwood < 100 mm in diameter scattered throughout the crown	F	F	B1	No works recommended



Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	PC	SC	BS 5837: 2012 Category	Recommendations
						N	E	S	W						
T021	Pedunculate oak <i>Quercus robur</i>	SM	40-80	9	300#	3.5	4#	3	3.5	6	Unable to access base of tree due to dense holly understorey. Asymmetrical form due to proximity with adjacent trees.	G	F	B1	No works recommended
T022	Sycamore <i>Acer pseudoplatanus</i>	SM	40-80	12	250#	3	3#	3	3	5	Unable to access base of tree due to dense holly understorey. No obvious significant defects, though lacks the necessary qualities for higher BS 5837 categorisation.	G	G	B1	No works recommended
T023	Common hawthorn <i>Crataegus monogyna</i>	SM	20-40	6.5	300#	3.5	2#	1	3.5	2	Positioned on neighbouring property and unable to access base of main stems. Asymmetrical form due to proximity with adjacent trees.	G	F	C1	No works recommended

Groups of Trees

Group Ref:	Species Composition	Age	SULE	Mix. Ht.	Mix. DBH	Approx. No. of Stems	CC	Comments	PC	SC	BS 5837:2012 Category	Recommendations
G001	Sycamore <i>Acer pseudoplatanus</i> Common hawthorn <i>Crataegus monogyna</i> Common ash <i>Fraxinus excelsior</i> Blackthorn <i>Prunus spinosa</i> Whitebeam <i>Sorbus aria</i>	Y SM	40-80	7	200	100#	0	Linear group of trees which form a hedgerow on eastern boundary of the site. Good ecological value, though of limited arboricultural merit, and lacks the necessary qualities for higher BS 5837 categorisation.	F	F	C1	No works recommended
G002	Common holly <i>Ilex aquifolium</i>	SM	20-40	7	150	20#	0	Dense group of trees growing in culvert on eastern boundary of the site. No obvious significant defects, though of limited arboricultural merit, and lacks the necessary qualities for higher BS 5837 categorisation.	G	F	C1	Reinstate as 2-3 m hedgerow



Group Ref:	Species Composition	Age	SULE	Mx. Ht.	Mx. DBH	Approx. No. of Stems	CC	Comments	PC	SC	BS 5837:2012 Category	Recommendations
G003	Common hawthorn <i>Crataegus monogyna</i> Common holly <i>Ilex aquifolium</i> Common ash <i>Fraxinus excelsior</i>	Y SM	20-40	7	200	100#	0	Linear group of trees which form a hedgerow between field boundaries. Good ecological value, though of limited arboricultural merit, and lacks the necessary qualities for higher BS 5837 categorisation.	F	F	C1	Partial removal (approx. 12 m linear)
G004	Sycamore <i>Acer pseudoplatanus</i> Hazel <i>Corylus avellana</i> Common hawthorn <i>Crataegus monogyna</i> Common ash <i>Fraxinus excelsior</i> Common holly <i>Ilex aquifolium</i> Pedunculate oak <i>Quercus robur</i> Goat willow <i>Salix caprea</i> Elder <i>Sambucus nigra</i>	Y SM	40-80	8	200	200#	0	Linear group of trees which form a hedgerow on western boundary of the site. Good ecological value, though of limited arboricultural merit, and lacks the necessary qualities for higher BS 5837 categorisation.	F	F	C1	Reduce branches extending east back by approx. 1-2 m



Appendix 2: Images of Trees



Plate 1: T001 (right) & T002 (left)



Plate 2: T003



Plate 3: T022, T021, T003, T004, & T005, (left to right)



Plate 4: T004 (left) & T005 (right)



Plate 5: T008



Plate 6: T009 & G002



Plate 7: T010



Plate 8: T011

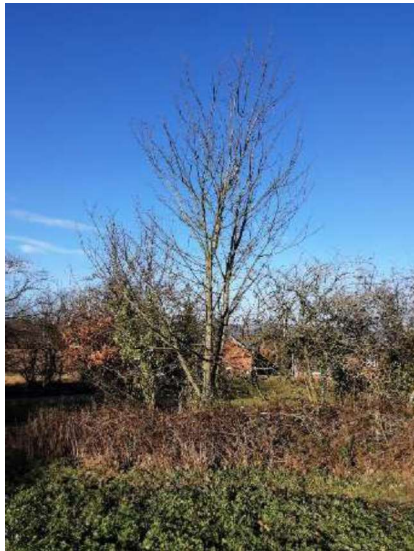


Plate 9: T012

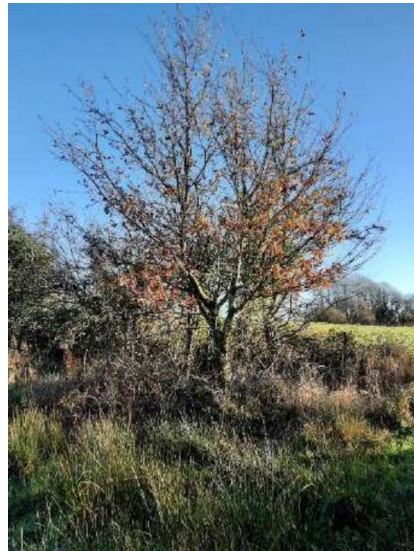


Plate 10: T013

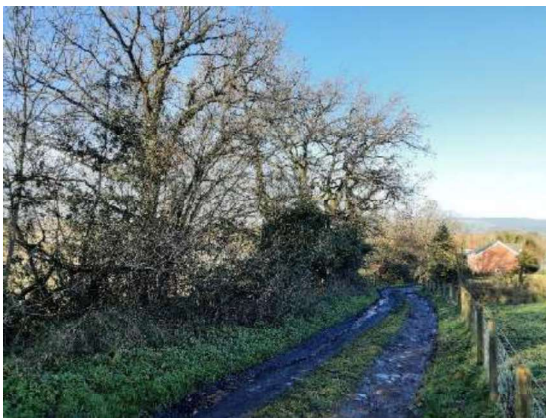


Plate 11: Group containing T014, T015, & T016



Plate 12: T017



Plate 13: T017, T018, T019, & T020 (left to right)

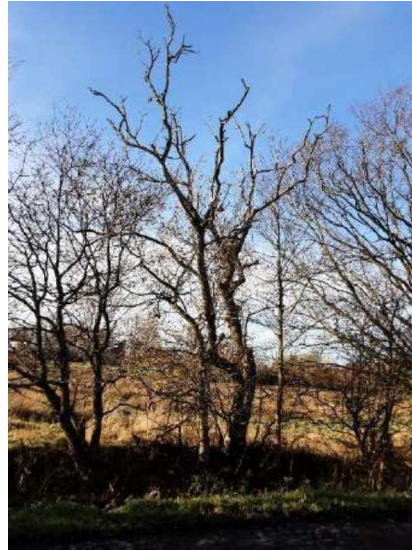


Plate 14: T019



Plate 15: T020



Plate 16: T021 (right) & T022 (left)



Plate 17: T023



Plate 18: G001



Plate 19: G003



Plate 20: G004



Appendix 3: Outline Arboricultural Method Statement (AMS)

A3.1 Introduction

- A3.1.1** Woodsage Consulting Ltd have been instructed by Pringle Homes to prepare an Outline AMS in relation to the proposed development of the land off Albany Drive, Blackburn BB1 9EH.
- A3.1.2** The proposals are for residential development at the site, and will include 26 detached and semi-detached dwellings.
- A3.1.3** This Outline AMS should be read in conjunction with the Arboricultural Impact Assessment (Ref: WC-474.1a).

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 timeline.

Stage	Description
1	Site induction
2	Carry out the tree works which are specified in Section A3.4 of this AMS .
3	Install the temporary tree protection fencing, to the specification detailed in Section A3.5 of this AMS , in the locations shown in Tree Protection Plan (1) .
4	Inspection of tree protection measures by the Project Arboriculturist.
5	Carry out development works: <ul style="list-style-type: none">• Precautionary measures detailed in Section A3.6 of this AMS to be followed throughout the development• Geo-cellular confinement to be installed at an early stage of the development, in the locations shown in Tree Protection Plan (1), following the guidance provided in Section A3.7 of this AMS
6	Once major construction works are completed (e.g. buildings, highways, pedestrian walkways etc.), the tree protection fencing can then be realigned to facilitate the proposed soft-landscaping, to the locations shown in Tree Protection Plan (2) .
7	Carry out tree/hedge planting and soft-landscaping: <ul style="list-style-type: none">• Formation of the proposed swale to follow the guidance provided in Section A3.8 of this AMS• Installation of permanent fencing within tree RPAs to follow the guidelines provided in Section A3.9 of this AMS.
8	Remove the temporary tree protection fencing once development works are completed.
9	Final inspection by the Project Arboriculturist.

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 Plans** - which can be viewed in **Appendices 6** and **7** - should be made available to all contractors attending the site.

A3.4 Tree Works

- A3.4.1** Prior to development works commencing:
- T001, T012, and T019 should be removed;
 - approximately 12 m of G003 should be removed;
 - branches extending west from T004 and T005 should be reduced by approximately 2-3 m;
 - branches extending east from T018 should be reduced by approximately 2-3 m;



- G002 should be reinstated as a 2-3 m hedgerow; and,
- G004 should be pruned backwards by approx. 1-2 m.

A3.4.2 RVBC are yet to confirm if any of the trees at the site are subject to TPOs or conservation area status. The proposed tree works should therefore only be carried out once planning permission has been granted, or following formal response from RVBC on the matter of statutory tree protection. Killing or damaging a protected tree is a criminal offence and can result in an unlimited fine.

A3.4.3 All tree works, including removals, should be carried out by a fully insured and suitably qualified arboricultural contractor, who is able to comply with *BS 3998: 2010 - Tree Works: Recommendations*.

A3.4.4 Trees provide valuable habitat for wild birds, bats, and many other forms of wildlife. The risks posed to these should therefore be suitably assessed before the recommendations within this AMS are completed.

A3.5 Temporary Tree Protection Fencing

A3.5.1 The temporary tree protection fencing 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 **Fig. A3.2**, on the next page.



Figure A3.1: Examples of scaffold framework temporary tree protection fencing.

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.

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 Location: The temporary tree protection fencing should be installed in the following phases:

- Prior to the development commencing, temporary tree protection fencing should be installed in the locations shown in **Tree Protection Plan (1)**.



- Once major construction works are completed (e.g. buildings, highways, pedestrian walkways etc.), the tree protection fencing can then be realigned to facilitate the proposed soft-landscaping, as directed in **Tree Protection Plan (2)**.

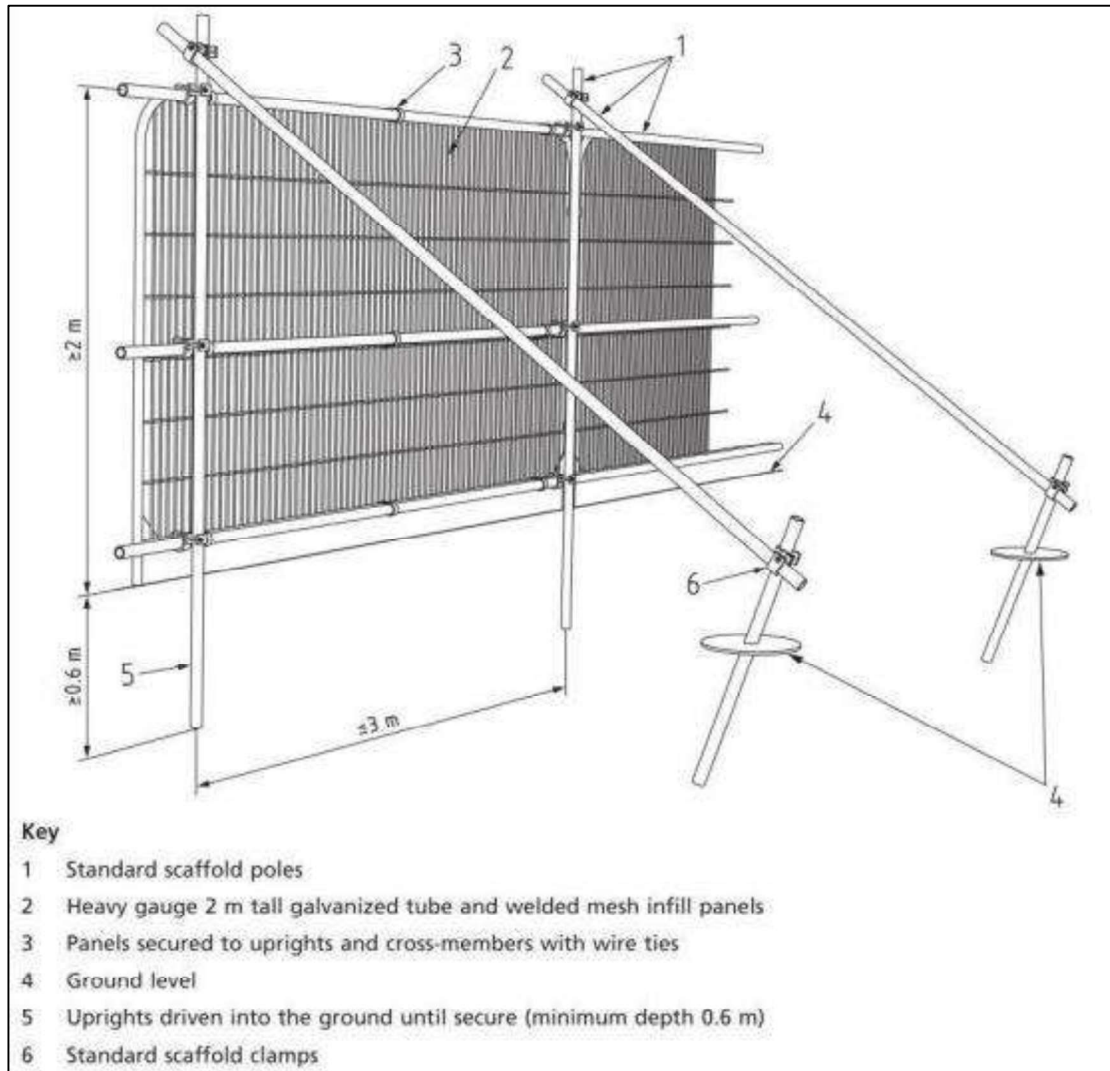


Figure A3.2: Specifications for temporary tree protection fencing.

A3.5.6 The protected areas should be regarded as sacrosanct, and once installed, tree protection fencing should not be removed or altered without prior consultation with the Project Arboriculturist.

A3.5.7 If any breach in the tree protection fencing occurs, it is the Site Manager's responsibility to report this to the Project Arboriculturist, so that appropriate measures may be taken. Any breach which results in death or damage to the 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 temporary protective fencing. Where possible, this area should be extended to 10 m away from the fencing.



- 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, the majority of tree roots are typically found within the top 60 cm of soil; therefore, the existing levels within tree RPAs should be observed and maintained.
- A3.6.4** Any unavoidable excavations into the soil within tree RPAs should be carried out using compressed air soil displacement or hand-operated tools, and only under prior approval of the Project Arboriculturalist. If roots are encountered which occur in clumps or which are greater than 25 mm in diameter, these should not be severed without first consulting the Project Arboriculturalist.

A3.7 Permanent Hardstanding within Tree RPAs

- A3.7.1** The proposed permanent hardstanding within the RPAs of T002, T004, T005, and T007 shall be constructed upon a geo-cellular confinement system (recommended products include Cellweb® and Terram Geocell®).
- A3.7.2** A cross-sectional diagram illustrating the components of a Cellweb® geo-cellular confinement⁹ system can be viewed in **Fig. A3.3**, below.

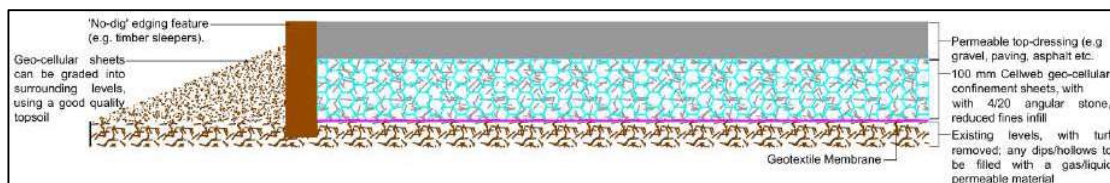


Figure A3.3: Cross-sectional diagram of a Cellweb® confinement system.

- A3.7.3** Installation of the geo-cellular confinement system should be carried out using 'no-dig' methods, and should adhere to the following guidelines:
1. Clear existing vegetation¹⁰ and any other protruding objects from the surface using hand-operated tools only. The geo-cellular confinement system does not require any further excavation into the existing levels.
 2. Fill any major hollows with a granular material that will remain gas- and water-permeable throughout its design life.
 3. Cover surface with a non-woven, geotextile separation filtration layer, with a minimum thickness of 300g/m² and a CBR puncture resistance of 4000 N. Geotextiles made from recycled products are becoming increasingly available and can be used in the geo-cellular confinement system providing that there is sufficient tensile strength and puncture resistance.
 4. Apply 100 mm Cellweb® geo-cellular confinement sheets and infill with 4/20 aggregate (**Fig. A3.4**). The infill material should be washed or graded, so that it contains no fine material. The amount of infill that will be required can be estimated using the following equation:
Quantity of 4/20 stone infill required = m² of coverage x depth of geocells (m) x 2 tonnes

⁹ Technical recommendations on Cellweb® geo-cellular confinement systems (including details on load testing, soil properties, fill material, traffic design, and long-term performance) can be obtained from Geosynthetics Ltd.

¹⁰ If herbicides are used then these should be appropriate for the type of vegetation to be killed, and all instructions, warnings and other relevant information from the manufacturers should be strictly observed and followed. Care should be taken to avoid any damaging effects upon the retained trees and other sensitive habitats.



Figure A3.4: Cellweb® geo-cellular confinement sheets being installed.

5. Install pressure treated board or timber sleeper edging directly on top of existing grade levels. The sleepers/edging boards shall be held in place with wooden stakes placed at 1 m intervals. The sleepers/edging boards can then be concealed by grading into the adjoining ground levels, using good quality topsoil.
 6. Install permeable top dressing (e.g. gravel, permeable resin bound gravel, permeable asphalt etc.)
- A3.7.4** In favourable conditions, the majority of tree roots are typically found within the top 60 cm of soil; therefore, the existing levels within tree RPAs must be observed and maintained during installation of the geo-cellular confinement system.
- A3.7.5** If roots are encountered during the installation of the geo-cellular confinement system that are less than 25 mm in diameter, these may be pruned back, by making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps, or which are greater than 25 mm in diameter, should be severed only following consultation with the Project Arboriculturalist.
- A3.8 Excavations within Tree RPAs (Swale)**
- A3.8.1** Excavations within the RPAs of T018 and T020 will be carried out according to the following guidelines:
- All excavations and grading of soil within the RPAs of T018 and T020 should be carried out under the supervision of the Project Arboriculturist, using compressed air soil displacement or hand-operated tools only. Under no circumstances are vehicles or heavy plant/machinery to enter the RPAs.
 - If roots are encountered during formation of the swale which occur in clumps, or that are greater than 25 mm diameter, then these should not be severed without first consulting with the Project Arboriculturalist. If roots under this diameter are present, then these can be pruned using an appropriate sharp pruning tool, such as pruning saw or secateurs.



- Any tree roots which are temporarily exposed during formation of the swale should be covered with sharp sand or dampened hessian sacks, to prevent desiccation.

A3.9 Installation Method Statement for Permanent Fencing within Tree RPAs

A3.9.1 Permanent timber fencing is proposed between the gardens of plots across the site. Installation of permanent fencing within tree RPAs should adhere to the following guidelines:

1. No part of any fencing is to be attached to the adjacent trees.
2. The post dimensions are to be a maximum of 100 mm x 100 mm; holes are to be hand-dug to a depth of 600 mm.
3. If tree roots which are greater than 25 mm in diameter are encountered, the posts will be repositioned. If roots under this diameter are present, they may be pruned using an appropriate sharp pruning tool, such as pruning saw or secateurs.
4. Any tree roots which are temporarily exposed to the atmosphere shall be covered with sharp sand or dampened hessian sacks to prevent desiccation.
5. Posts will be set in concrete and holes lined with polythene to minimise leaching.
6. Concrete will be mixed outside of tree RPAs and transported to site.

A3.10 Responsibility and Site Management

A3.10.1 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.

A3.10.2 Inspections by the Project Arboriculturalist are to be undertaken at the following stages of the development:

1. Once the temporary tree protection fencing has been installed - in the locations shown in the ***Tree Protection Plan*** - and prior to development works commencing.
2. During installation of the proposed geo-cellular confinement system within the RPAs of T002, T004, T005, and T007.
3. Whilst excavations for the proposed swale are being carried out within the RPAs of T018 and T019
4. Upon completion of the development works.

A3.10.3 After each inspection, a letter should be submitted by the Project Arboriculturalist to the LPA Arboricultural Officer, to confirm if the method statement has been followed correctly, and if trees have not been adversely affected by development works.

A3.11 Project Arboriculturalist Contact Details

Mr Jack Delaney MICFor
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Email: jack@woodsage.co.uk

Appendix 4: Tree Constraints Plan

Project: Land off Albany Drive, Blackburn B81 9EH
Drawn by: Jack Delaney
Date: 27th February 2026
Scale: 1:250 @ A1
Drawing Number: WC-474.1a.4

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

Map Key:

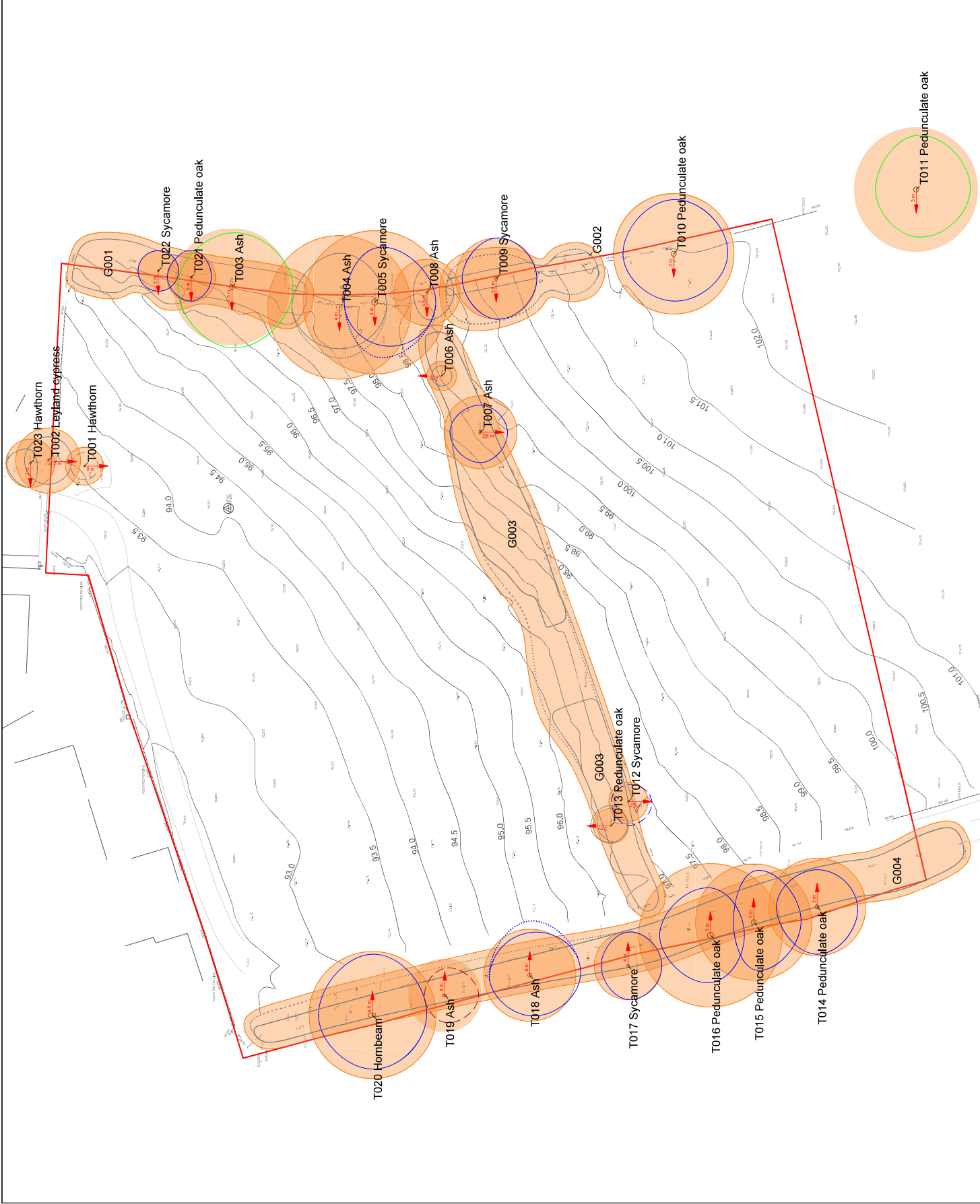
Application site red line boundary

Category A trees of high quality
 Root protection area (RPA)
 Crown clearance
 Tree size
 Tree strategy

Category B trees of moderate quality
 RPA
 Crown clearance
 Tree size
 Tree strategy

Category C trees/groups of low quality
 RPA
 Crown clearance
 Tree size
 Tree strategy

Category U trees with serious, irremediable defects
 RPA
 Crown clearance
 Tree size
 Tree strategy



Appendix 5: Shade Analysis Plan

Project:	Land off Albany Drive, Blackburn BB1 9EH
Drawn by:	Jack Delaney
Date:	27th February 2026
Scale:	1:500 @ A1
Drawing Number:	WC-474.1a.5

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

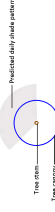
Key:

Application site red line boundary

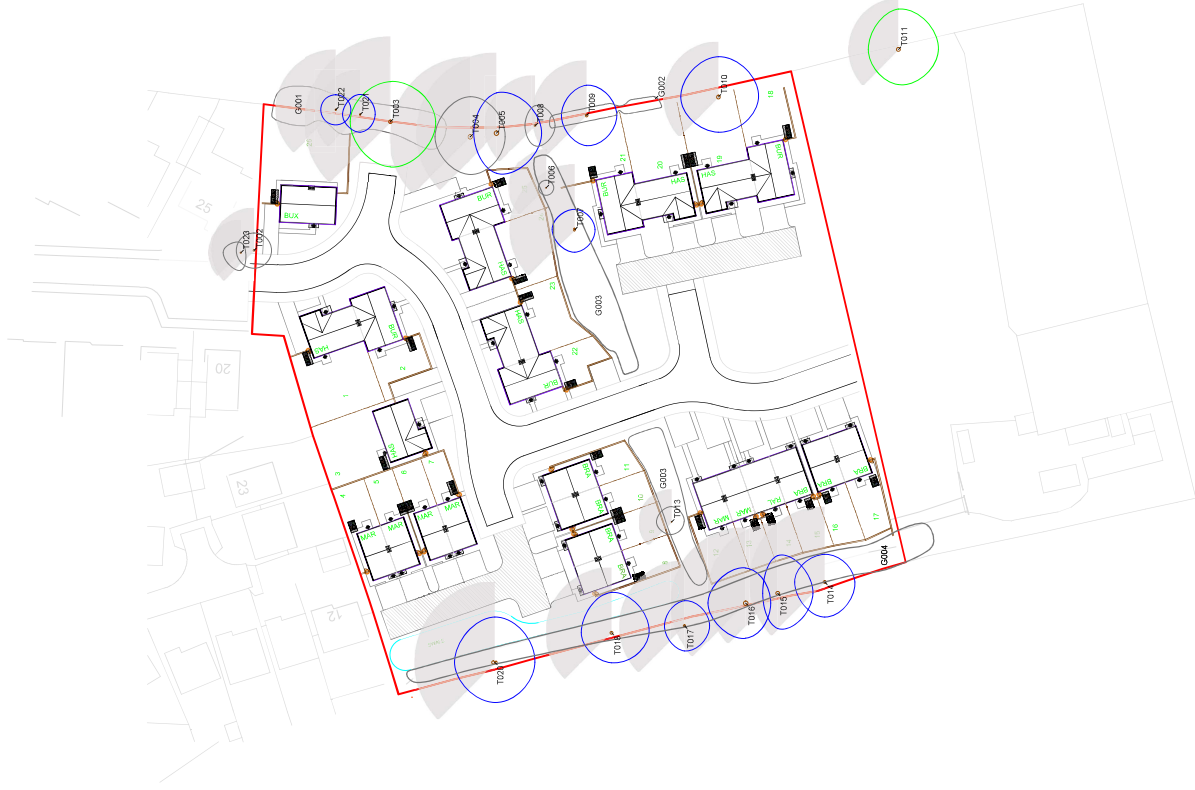
Category A trees of high quality



Category B trees of moderate quality



Category C trees/groups of low quality



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Appendix 6: Tree Protection Plan (1)

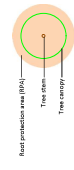
Project: Land off Albany Drive, Blackburn BB1 9EH
Drawn by: Jack Delaney
Date: 27th February 2026
Scale: 1:250 @ A1
Drawing Number: WC-474.1a.6

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

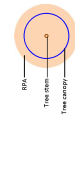
Map Key:

Application site red line boundary

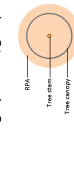
Category A trees of high quality



Category B trees of moderate quality



Category C trees/groups of low quality



Permissible tree preservation boundaries (TPB) as per BS5837:2012 specification, as detailed in Section A3.5 of this Outline Arboricultural Method Statement (AMS).
 Permissible surface-dressing on top of tree-dig geo-cellular confinement sheets, as detailed in Section A3.7 of the Outline-AMS



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Appendix 7: Tree Protection Plan (2)

Project: Land off Albany Drive, Blackburn BB1 9EH
Drawn by: Jack Delaney
Date: 27th February 2026
Scale: 1:250 @ A1
Drawing Number: WC-474.1a.7

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

Map Key:

Application site red line boundary

Category A trees of high quality

Category B trees of moderate quality

Category C trees/groups of low quality

Excavations within tree RPAs to be carried out under the supervision of the Project Arboriculturalist, following the guidance provided in Section A3.5 of the Outline AMS.



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