ARBORICULTURAL IMPACT ASSESSMENT, METHOD STATEMENT AND TREE PROTECTION PLAN

Unit 3
Redkiln Close
Horsham
RH13 5QL

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Sussex Office
Rocks Yard, Victoria Road
Herstmonceux, East Sussex.
BN27 4TQ.

PJC Consultancy Ltd
www.pjcconsultancy.com
contact@pjcconsultancy.com
01233 225365 - 01323 832120

Kent Office
The Watermill, The Mill
Business Park, Maidstone
Road, Ashford, Kent, TN26 1AE.

This report has been prepared by

PJC Consultancy Ltd

on behalf of

Bailey Total Building Envelope Ltd

Document author

Luke White FdSc Arboriculture M.Arbor.A

Luke is an arboriculturist with over twelve years' experience working within the arboricultural and forestry industry with the latter eight years working within consultancy. He has a foundation degree in arboriculture with distinction from the University of Brighton and is a professional member of the Arboricultural Association and an associate member of the Institute of Chartered Foresters.

Checked by

Peter Davies FdSc Arboriculture M.Arbor.A

Peter has a Foundation Degree in Arboriculture from the University of Brighton and is a professional member of the Arboricultural Association. He has over sixteen years' experience in the arboricultural industry, originally working as a groundsman and feller, and progressing into consultancy. He is a LANTRA accredited professional tree inspector.

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EXECUTIVE SUMMARY

PJC Consultancy has been instructed by Bailey Total Building Envelope Ltd to provide an arboricultural impact assessment and arboricultural method statement to support a full planning application at Unit 3 Redkiln Close, for demolition of the existing commercial building and replacement with a larger modern building.

The initial arboricultural survey was carried out on 7th February 2025. The tree constraints plan and tree survey schedule can be found at Appendix 1 and Appendix 2 respectively.

Unit 3 is located at the end of Redkiln Close, an industrial estate on the north-east periphery of Horsham Town in West Sussex. The site comprises of a commercial building with associated hard standing and car parking, with a narrow strip of rough hard standing and loose aggregate running adjacent the building to the south-east and south-west. Trees at the site are located adjacent/along the south-east and south-west boundaries only.

The key arboricultural features of the site are:

- Silver birch T2. Located close to the site's south-east boundary and within the adjacent property, T2 has a multi-stem form and crown structure typical for the species.
- English oak T3. Located close to the site's south-east boundary but within the adjacent property, T3 has a well-formed crown structure and appears healthy and vigorous with no visual evidence of defect observed at the time of inspection. T3 is covered by a group tree preservation order.

The proposed layout has been overlaid with the tree constraints plan in order to identify the impacts to the trees to inform this impact assessment and this information has formed the basis of the tree retention plan at Appendix 3 and the tree protection plan at Appendix 4.

Three individual trees (T1, T2 and T7) will require removal to facilitate the proposed re-development. These trees are not visually prominent landscape features due to being obscured from public viewpoints by existing buildings. Additionally, the crown of tree T3 and tree group G1 will require lateral pruning to provide sufficient clearance with the replacement commercial building. The level of pruning required is not considered excessive and should not adversely impact the trees long-term physiological condition or overall form, provided the works are undertaken to the specification stipulated in this report and in accordance with BS3998: 2010 Tree works – Recommendations.

A high-quality landscaping scheme to provide an attractive setting for the replacement building could readily be secured by appropriate planning condition. Where possible, the landscaping scheme should include replacement trees in the site's northern aspect to increase tree canopy that is visible from the public realm and to reduced long term management conflicts with buildings.

The replacement building will encroach the root protection area of Oak T3 by approximately 10% in the area hatched red on the tree protection plan. It is unlikely a fully above ground engineered foundation solution can be used to fully prevent/mitigate potential root harm, therefore this area should be considered as lost to development. The rooting medium in the encroachment area is not deemed 'favourable' due to past use and the presence of hard standing. However, root growth may still be present. Arboricultural supervision and root pruning as necessary shall be completed during all excavation that occurs in the encroachment area. The supervising arboriculturist shall also prescribe remedial works recommendations as needed to mitigate any root loss. Possible mitigation recommendations include root feeding and/or additional crown pruning.

Subject to the generic and specific tree protection measures recommended within the arboricultural method statement at section 4 of this report being adhered to, I consider that the proposals represent a minor impact on the amenity of the locality in so far as it is contributed to by trees. Furthermore, as proposed new tree planting establishes it will progressively make a positive contribution to the age and species diversity of trees in the area, the extent of local canopy cover and the amenity of the locality.

1 INTRODUCTION

1.1 Instruction

1.1.1 PJC Consultancy has been instructed by Bailey Total Building Envelope Ltd to provide an arboricultural impact assessment and arboricultural method statement to support a full planning application at Unit 3 Redkiln Close, for demolition of the existing commercial building and replacement with a larger modern building.

1.2 Objectives of report

1.2.1 This report has been undertaken with the following objectives:

- To survey all trees within and adjacent to the site with trunk diameters of 75mm or more at a height of 1.5m.
- To assess the quality and value of the existing tree stock in terms of arboricultural, landscape, historical/conservation, or public amenity value.
- To provide information relating to planning constraints that may restrict works to trees at the site.
- To identify the tree removals and pruning works that will be required as a result of the proposed development and to assess the impact of the tree works.
- To assess the potential impact the proposed construction works will have on retained trees and provide recommendations for mitigation measures to reduce the impact on the trees.
- To provide a protection methodology for retained trees throughout the demolition and construction period, including the above ground and below ground parts of the trees as well as their rooting medium.

1.3 Contents of report

1.3.1 This report includes:

- A tree constraints plan and tree survey schedule at Appendices 1 & 2 respectively.
- An arboricultural impact assessment at section 3 and a tree retention plan at Appendix 3.
- An arboricultural method statement at section 4 and a tree protection plan at Appendix 4.

1.4 Documents and information provided

1.4.1 The following documents were used to aid the preparation of this report:

- Lucion Survey Ltd's Topographical Survey reference 660758/01.
- Made Architect's Proposed Site Plan reference 2473-MAL-XX-00-DR-A.

1.5 Limitations of report

1.5.1 The following arboricultural impact assessment and method statement have been prepared for the proposal stated in section 1.1 and using the plans and information listed in section 1.4. The report should not be relied upon if the stated proposal or proposed design changes unless the author confirms the changes do not have a bearing on the arboricultural impacts or recommended mitigation measures.

1.5.2 This document is considered adequate for reviewing/assessing the proposed developments impacts upon arboricultural features at the site. It is recommended that a detailed arboricultural method statement and tree protection strategy be secured by suitably worded pre-commencement planning condition. Addressing tree protection methodology immediately prior to commencement of demolition/construction is considered the most robust option for a project of this scale. The final tree protection strategy should capture all aspects of demolition and construction site management and logistics, which is not available until such time the development proposal is fixed and finalised and a principal contractor is appointed.

1.5.3 The survey methodology was restricted to a visual tree assessment from ground level. No tree climbing or invasive ground investigation was carried out for this report. Where existing site constraints are present such as ivy covered trees, a very dense under-storey, or where trees are located on third party land to which access was not granted, tree dimensions were estimated by eye as accurately as possible.

1.5.4 The tree survey represents a preliminary overview of the condition and value of trees at the site. It is not a detailed assessment of any individual tree and although management recommendations are included, this report will not be sufficient to be used as a detailed condition and safety survey.

1.5.5 The information and measurements in this report are representative of the date of the site visit. The tree survey data will need to be updated to reflect tree growth and changes in the condition of the trees after prolonged periods.

2 INITIAL TREE SURVEY

2.1 Tree survey information

2.1.1 The following information was recorded in the tree survey schedule for each individual tree (average dimensions are recorded for groups):

- Tree reference number. (T=tree, G=group, H=hedgerow, W=woodland block). Tree numbers suffixed with PA on the tree constraints plan indicate that the tree position is approximate.
- Species (common and scientific name).
- Overall tree height (m).
- Stem diameter (mm) per stem or average diameter for multi-stemmed trees with six or more stems.
- Branch spread (m) measured to the four cardinal points.
- Existing height (m) above ground level of lowest significant branch and direction of growth (for individual trees only).
- Existing height (m) above ground level of canopy.
- Age class (young, semi mature, early mature, mature, over mature or veteran).
- Physiological condition (good, fair, poor).
- Structural condition (good, fair, poor).
- Comments (general description of tree(s) including any notable features).
- Tree categorisation (see below).
- Root protection area (m^2).
- Root protection radius (m).

2.2 Tree categorisation

2.2.1 The condition and value of each tree was evaluated based on the current land use. Each tree or tree group has been awarded either category A, B, C or U and a subcategory of either 1,2 or 3 or a combination of the subcategories.

2.2.2 Tree categorisation summary:

- A – Trees of good condition and high arboricultural, landscape or conservation value. Must have a potential life span in excess of forty years.
- B – Trees of moderate condition, with minor defects or sub-optimal form but are still of modest arboricultural, landscape or conservation value. Must have a potential life span in excess of twenty years.
- C – Unremarkable trees of poor condition or form with limited arboricultural, landscape or conservation value, or trees with a stem diameter under 150mm. Must have a potential life span in excess of ten years.
- U – Trees of such impaired condition that they cannot realistically be retained as living trees in the context of the current land use for more than ten years. These trees do not need to be removed if they are not dangerous and do not conflict with the proposed development, but should not be considered a constraint to development.

2.2.3 Tree sub categorisation summary:

- 1 – Trees have mainly arboricultural value, e.g. trees of good condition, form and vitality or rare tree species.
- 2 – Trees have mainly landscape value, e.g. trees of landscape prominence, that serve to screen unsightly views or that are required for privacy. Also trees present in groups that attain higher collective rating that they would as individuals.
- 3 – Trees with mainly cultural value including conservation, e.g. commemorative trees, trees of historical significance or veteran trees.

2.2.4 Each tree can only be categorised as A, B or C but may comply with more than one subcategory.

2.3 Root protection areas

2.3.1 A root protection area represents a calculation of the minimum volume of rooting medium required to support a tree. It is a standardised calculation based on the stem diameter(s) measured at 1.5m and is not necessarily representative of the actual root spread or total rooting area of a tree. The formulas used to calculate root protection areas are shown below:

Table 1: Root protection area formulas

Number of stems	Root protection area formula
Single stemmed trees	$\frac{(\text{stem diameter (mm)} \times 12)^2 \times \pi}{1000}$
Trees with two to five stems	$\sqrt{(\text{stem diameter 1})^2 + (\text{stem diameter 2})^2 \ldots + (\text{stem diameter 5})^2}$
Trees with more than five stems	$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$

2.3.2 The root protection areas are plotted onto the tree constraints plan in Appendix 1 and are recorded in the tree survey schedule in Appendix 2. These are represented as a circle on the plan (unless significant rooting constraints are present), and are colour coded depending on the category the tree has been awarded. Where existing site conditions/features are present that are deemed likely to have affected the root morphology, the root protection areas have been represented as a polygon of equivalent area.

2.3.3 The disturbance of a tree's root system can result in crown dieback and even death of the tree. Roots are used to support the tree structurally as well as the absorption of moisture and nutrients from the soil. They also act as storage and transport for water and nutrients. It is therefore important to protect roots and their ability to function during the construction period and post development.

2.3.4 The majority of root growth is usually found within the top 600mm of soil. As such, even a shallow disturbance within a root protection area can potentially have a significant impact on the tree.

2.4 Site visit

2.4.1 A site visit was carried out on 7th February 2025. The weather conditions at the time were overcast but dry and the visibility was adequate for visual tree inspection from ground level. Deciduous trees were not in leaf.

2.5 Site layout

2.5.1 Unit 3 is located at the end of Redkiln Close, an industrial estate on the north-east periphery of Horsham Town in West Sussex. The site comprises of a commercial building with associated hard standing and car parking, with a narrow strip of rough hard standing and loose aggregate running adjacent the building to the south-east and south-west. Trees at the site are located adjacent/along the south-east and south-west boundaries only.

Findings

2.5.2 A total of seven individual trees and one tree group was surveyed. Their locations are shown on the tree constraints plan at Appendix 1 and details and measurements are shown in the tree survey schedule at Appendix 2.

2.5.3 A summary of their British Standard categorisation is shown at Table 2 below.

Table 2: Tree categorisation summary

Tree category	Individual tree	Tree group
A	1	-
B	1	-
C	5	1
U	-	-
Total	7	1

2.5.4 The key arboricultural features of the site are:

- Silver birch T2. Located close to the site's south-east boundary and within the adjacent property, T2 has a multi-stem form and crown structure typical for the species.
- English oak T3. Located close to the site's south-east boundary but within the adjacent property, T3 has a well-formed crown structure and appears healthy and vigorous with no visual evidence of defect observed at the time of inspection.

2.6 Statutory tree protection

2.6.1 Horsham District Council's online mapping tool was used on the date of this report to check whether there are any tree preservation orders (TPOs) within the site. TPO reference TPO/0084 covers Oak T3. Therefore, any persons proposing to undertake tree works should gain the necessary consent from the local planning authority prior to undertaking any tree works, unless already included as part of an approved planning application. Failure to adhere to the TPO legislation could lead to prosecution and if convicted a fine and criminal record. The crown of a tree and its roots are protected. The person carrying out the works, the person instructing the works and the Directors of that company are potentially liable.

2.6.2 The site is not in a Conservation Area.

3 ARBORICULTURAL IMPACT ASSESSMENT

3.1 The proposals

3.1.1 The proposed layout has been overlaid with the tree constraints plan in order to identify the impacts to the trees to inform this impact assessment and this information has formed the basis of the tree retention plan at Appendix 3 and the tree protection plan at Appendix 4.

3.2 Tree removals

3.2.1 Trees to be removed for the proposed development are shown with red dashed outlines on the tree retention plan at Appendix 3 and are shaded to indicate their BS5837 tree category. A summary is listed at Table 1 below.

Table 1: Tree removals summary

Tree number	Species	Category	Reason for tree removal
T1	Silver birch	C1	The replacement building excessively encroaches the root protection aera of T1 and retention is not considered feasible.
T2	Silver birch	B1	The replacement building excessively encroaches the root protection aera of T2 and retention is not considered feasible.
T7	Ash	C1+2	The replacement building excessively encroaches the root protection aera of T7 and retention is not considered feasible.

3.3 Mitigation planting

3.3.1 A high-quality landscaping scheme to provide an attractive setting for the replacement building could readily be secured by appropriate planning condition. Where possible, the landscaping scheme should include replacement trees in the site's northern aspect to increase tree canopy that is visible from the public realm and to reduced long term management conflicts with buildings.

3.4 Access facilitation pruning

3.4.1 A summary of the proposed pruning required to enable the proposals is shown at Table 2 below.

Table 2: Summary of access facilitation pruning

Tree number	Species	Works required	Reason for works
T3	Oak	Laterally reduce the north-west crown of T3 by 1m back to suitable growth points. Shape crown as required (as shown with red hatching on the tree retention plan).	To provide sufficient clearance with the replacement building.
G1	Hazel, Alder, Field maple	Laterally reduce the north-east crown by 1m (as shown with red hatching on the tree retention plan).	To provide sufficient clearance with the replacement building.

3.4.1 All works are to be carried out in accordance with BS3998: 2010 Tree works – Recommendations.

3.4.2 Based on the information currently available, it is anticipated that the crowns of all remaining retained trees will be located a sufficient distance from proposed construction activities and expected construction access routes so as not to require pruning.

3.4.3 Any additional requirements for pruning that cannot be predicted at this stage in the design process (e.g. for contractor compound or movement of large or specialist plant machinery) shall be discussed at the pre-commencement meeting with the project arboriculturist and agreed with the local authority arboricultural officer. No works may be carried out on protected trees without prior permission from the local authority.

3.5 Building footings in proximity to trees

3.5.1 The replacement building will encroach the root protection area of Oak T3 by approximately 10% in the area hatched red on the tree protection plan. It is unlikely a fully above ground engineered foundation solution can be used to fully prevent/mitigate potential root harm, therefore this area should be considered as lost to development. The rooting medium in the encroachment area is not deemed 'favourable' due to past use and the presence of hard standing. However, root growth may still be present. Arboricultural supervision and root pruning as necessary shall be completed during all excavation that occurs in the encroachment area. The supervising arboriculturist shall also prescribe remedial works recommendations as needed to mitigate any root loss. Possible mitigation recommendations include root feeding and/or additional crown pruning.

3.6 Hard standing in proximity to trees

3.6.1 No new hard standing will be constructed within the root protection areas of retained trees, however existing hard standing will be removed from within the root protection areas of T3, T4, T5, T6 and G1. To minimise impacts to root growth, these works must be undertaken carefully as described in the arboricultural method statement.

3.7 Services

3.7.1 Details of the routing of services for the proposed development are not currently available. All underground services should be located outside the root protection areas of retained trees and above ground services should be located outside the anticipated mature crown spreads. Sympathetic methodology to enable the installation of services within root protection areas (in certain instances) is available, however there will always be a potential arboricultural impact and arboricultural advice must be sought regarding the suitability of these methods before they are relied upon. If it is achievable, root protection areas should always be completely avoided.

3.7.2 Once details of the routing of new services become available, prior to commencement, these shall be reviewed by the project arboriculturist. The arboriculturist shall then confirm either that no works will be carried out within root protection areas or provide details of the methodology required to ensure the works are carried out in accordance with NJUG4 'Guidelines for the planning, installation and maintenance of utilities in proximity to trees' and BS5837: 2012.

3.8 Landscaping in proximity to trees

3.8.1 New permanent fencing may be installed within the root protection areas of retained trees throughout the site. The fencing specification is to be confirmed on the date of this report. Within root protection areas a fencing type that requires only postholes (no trenching) must be used. The level of the fences must also follow existing ground levels as there may be no re-grading of levels within root protection areas.

3.8.2 The detailed specification for soft landscaping is to be confirmed on the date of this report, however it is anticipated that tree/shrub planting and turfing will occur within the root protection areas of retained trees. In order to protect both tree roots and the condition of the rooting medium, these works must occur sensitively as described in the arboricultural method statement.

3.9 Conclusions

3.9.1 Trees requiring removal to facilitate the proposed development comprise one category 'B' tree and two category 'C' trees. All remaining arboricultural features will be retained and incorporated into the proposed site layout. The loss of trees can be mitigated by including a minimum of three new trees in the proposed landscaping scheme. These trees should be located within the site's northern aspect where they mature without conflicting with buildings.

3.9.2 The crown of one tree and one tree group will require lateral pruning to provide sufficient clearance with the replacement building. Required pruning is not considered excessive and should not impact the trees physiological condition and/or form and amenity value.

3.9.3 The proposed site layout involves excavation within the root protection area of T3. Arboricultural supervision and root pruning as necessary shall be completed during all excavation that occurs in the encroachment area. The supervising arboriculturist shall also prescribe remedial works recommendations as needed to mitigate any root loss.

3.9.4 No new hard standing will be constructed within the root protection areas of retained trees, however existing hard standing will be removed from within the root protection areas of T3, T4, T5, T6 and G1. To minimise impacts to root growth, these works must be undertaken carefully as described in the arboricultural method statement.

3.9.5 All remaining areas of construction will be located outside the root protection areas of retained trees. Provided the exclusion zones and methodologies described in the arboricultural method statement and tree protection plan are followed, trees proposed for retention should not be adversely affected by the construction works.

3.9.6 Based on the above assessment, trees recommended for retention in this report can be protected during the construction period and successfully integrated into the site post development.

4 ARBORICULTURAL METHOD STATEMENT

4.1 General requirements

4.1.1 The arboricultural method statement and tree protection plan shall remain on site for the duration of demolition, construction and landscaping works and be available to site operatives at all times. All operatives at the site shall be briefed about tree related factors as part of their site induction.

4.1.2 Any variation from the methodology described in this method statement shall be discussed with the supervising arboriculturist and agreed with the local authority arboricultural officer.

4.2 Phasing of works

4.2.1 To ensure trees are protected throughout the development, the proposed development shall occur in the following order:

Table 1: Phasing of works

Works Order	Operation	Notes
1	Initial tree works.	The tree works contractor shall undertake the tree removals and access facilitation pruning specified in the arboricultural impact assessment. Completion of these works will be required to enable the installation of tree protection barriers.
2	Installation of tree protection barriers.	Tree protection fencing and temporary ground protection shall be installed in the locations shown on the tree protection plan and to the specification described in this method statement.
3	Pre-commencement meeting.	The project arboriculturist shall attend a site meeting with the site manager. The local authority arboricultural officer shall be notified so they may also attend. The above pre-start arboricultural works shall be signed off by the project arboriculturist during the meeting. The meeting shall occur before any plant activity, ground works or demolition/construction activities begin.
4	Demolition phase.	The tree protection barriers shall be maintained, and the construction exclusion zones observed throughout the demolition phase. Existing hard standing shall be removed sensitively from the root protection areas of retained trees as described in this method statement.
5	Construction phase.	The tree protection barriers shall be maintained, and the construction exclusion zones observed throughout the construction phase. Arboricultural supervision shall be undertaken during all excavation that occurs within the root protection area of T3 as described in this method statement.
6	Soft landscaping phase.	The tree protection barriers shall be dismantled when external construction and hard landscape operations have been completed, and plant machinery or excess construction materials have been removed from site. Soft landscape operations shall occur sensitively as described in this method statement.

4.3 Initial tree works

4.3.1 The tree removals and access facilitation pruning specified in the arboricultural impact assessment shall be carried out as the first stage of development. Any requirements for

access facilitation pruning which have not been anticipated on the date of this report shall be discussed at the pre-commencement meeting with the project arboriculturist and be communicated to the local authority arboricultural officer.

4.3.2 Tree stumps and vegetation located within the root protection areas of retained trees shall be cleared with controlled hand tools (e.g. stump grinder/brush cutter). Plant machinery shall not be used to scrape vegetation, 'grub out' stumps within root protection areas, or access the site until the tree protection barriers have been installed.

4.3.3 If bonfires are lit to dispose of arisings from the vegetation or tree clearance works, an assessment of wind direction and strength shall be made to ensure flames cannot extend within 5m of any part of a retained tree. No bonfires shall be lit within a root protection area.

4.3.4 Trees should be checked for protected species before works are undertaken. It is against the law to disturb bats or their roosts under the Conservation of Habitat and Species Regulations. Nesting birds are protected by the Wildlife and Countryside Act. If protected species are discovered, Natural England should be contacted for advice.

4.3.5 The tree works contractors should carry out all tree works to BS3998: 2010 Tree works – recommendations as modified by research that is more recent. They should also carry relevant, adequate and up to date insurance.

4.3.6 It is suggested that an Arboricultural Association approved contractor carry out all tree works. Approved contractors are expected to work to industry best standards. The Arboricultural Association website (www.trees.org.uk) contains contact details and information on engaging a suitable contractor.

4.4 Tree protection barriers

4.4.1 The root protection areas of retained trees must be left free from disturbance and protected from contamination or compaction during the proposed works. Protection shall comprise a combination of tree protection fencing and temporary ground protection.

4.4.2 The tree protection fencing shall be installed and signed off by the project arboriculturist before any plant activity, ground works or demolition/construction activities commence at the site. They shall be maintained in situ until the soft landscaping phase of development when all other construction activities in the vicinity have been completed, and excess construction materials and plant machinery have been removed from site. Any damage that occurs to the tree protection barriers during the construction period must be rectified immediately, prior to other construction activities recommencing in the vicinity.

4.4.3 Tree protection fencing shall be installed in the locations shown on the tree protection plan. The specification for tree protection fencing shall be heavy gauge, 2m tall, galvanized tube and welded mesh panels, secured to standard scaffold pole uprights and cross-members with wire ties. The uprights shall be driven into the ground until secure (minimum of 0.6m) and supported by scaffold support bars that are clamped to further scaffold uprights (refer to Appendix 5). Any variation from this specification for tree protection fencing shall be discussed with the project arboriculturist and agreed in writing with the local authority arboricultural officer.

4.4.4 Signs shall be affixed to the fencing as shown in Appendix 6 to explain its purpose. The signs shall be affixed at a reasonable size and frequency to ensure they are easily visible to operatives at the site.

4.4.5 If necessary to provide additional usable workspace between tree T3 and the replacement building, temporary ground protection can be installed within a construction exclusion zone and the tree protection barriers moved. The specification for ground protection shall be interlocking proprietary ground protection boards (e.g. IsoTrack L Ground Protection

Mat or equivalent product signed off by the project arboriculturist) on a compressible layer (150mm woodchip from the initial tree works or sharp sand), spread across a geotextile membrane. This specification is designed to support loads of up to 2 tons only. If larger loads need to be supported, a more robust ground protection specification shall be agreed with the project arboriculturist.

4.4.6 The areas protected by tree protection fencing (highlighted yellow on the tree protection plan) or temporary ground protection shall be referred to as the construction exclusion zones. The following restrictions shall apply within the construction exclusion zones:

- No vehicular access shall be permitted unless on adequate temporary ground protection measures that have been agreed with the project arboriculturist.
- Regular pedestrian access shall be restricted unless on suitable ground protection measures agreed with the project arboriculturist.
- No storage of construction materials shall occur.
- No storage of building spoil or construction debris (including short-term temporary stockpiling) shall occur.
- No harmful chemicals shall be stored or handled.
- No fires shall be permitted.
- No mechanical excavation including regrading of levels shall occur.
- There shall be no change in ground level unless undertaken under the supervision of the project arboriculturist.
- No construction activities including installation of new permanent hard standing shall be undertaken unless otherwise specified in this method statement.

4.5 Storage and handling of harmful chemicals

4.5.1 Provision must be taken to prevent the storage and handling of harmful chemicals within the root protection areas of retained trees. Harmful chemicals include fuels, oils, bitumen, builder's sand (which has a high salt content) and cement. Provision shall also be made to prevent the storage and handling of harmful chemicals in areas proposed for further planting if the existing soil is intended to be retained.

4.5.2 Cement mixing shall always occur outside the construction exclusion zones. If cement mixing is to occur close to the construction exclusion zones, or there is the potential for cement washings to leech into a root protection area, adequate, bunded ground protection measures must be used. This could comprise impermeable plastic sheeting under wooden boards (to prevent tears) surrounded by a raised lip.

4.5.3 All other chemicals that are harmful to trees must be stowed in suitable containers and stored away from the construction exclusion zones unless adequate, bunded ground protection measures are implemented to prevent spillages leeching into root protection areas.

4.6 Contractor facilities

4.6.1 A suitable location for site cabins, contractor parking and site facilities for operatives shall be agreed with the project arboriculturist during the pre-commencement meeting. These facilities must be located outside the root protection areas of all retained trees unless on adequate ground protection measures that have been signed off with the project arboriculturist (potentially including existing hard standing). Provision must be taken to prevent exhaust fumes or hot air from generators or kitchen facilities from damaging foliage within the crowns of retained trees.

4.7 Demolition of existing building adjacent to trees

4.7.1 Demolition of the above ground parts of the building adjacent to retained trees must occur carefully to avoid accidental contact with the trees. Where possible the building shall be dismantled by hand, however if plant machinery is used, a banksman must always be present to spot overhanging branches that are not visible to the machine operator. The machine must be of a reasonable size so it can be controlled safely in proximity to the trees and must always be operated from outside the construction exclusion zones. Debris from the demolition works must also be stockpiled outside the construction exclusion zones.

4.7.2 Within the root protection area of T3 any existing foundation slabs shall be broken up using controlled hand tools (e.g. pneumatic breaker) and removed from the root protection area by hand. Debris must not be stockpiled within the root protection areas. If due to the scale of the works it is deemed impractical or unsafe to remove the foundation using hand tools only, plant machinery may be used under the supervision of the project arboriculturist. If plant machinery is used, it must be of a suitable size that it can operate beneath the crown of T3 without contacting any branches. It must also be operated from outside the root protection areas at all times and be fitted with a grading bucket (without teeth). Extreme care must be taken to ensure no excavation of the underlying soil or damage to tree roots occurs.

4.8 Excavating building footings within root protection areas

4.8.1 The new building encroaches the root protection area of T3 and G1 in the area hatched red on the tree protection plan. Excavation required for new building foundations that occurs within areas of existing hard standing shall be undertaken carefully to ensure the minimum encroachment into the root protection areas is achieved. The excavation line shall be marked out on site with marker paint and signed off by the project arboriculturist prior to commencement. The existing hard standing shall be cut with a disc cutter to provide a clean line and prevent large sections of the existing hard standing from being accidentally removed/disturbed. Sections of hard standing that do not conflict with the new foundation and that fall within the root protection areas of trees T3 and G1 shall be retained.

4.8.2 The excavation beyond the existing hard standing in this area shall occur by hand to a depth of 600mm (unless significant roots are revealed near the base of the excavation) and under arboricultural supervision. Roots revealed shall be cleanly pruned using secateurs to leave the smallest feasible wound. Small clean pruning wounds require less energy from the tree to heal and reduce the chance of infection by tree pathogens.

4.8.3 The project arboriculturist shall assess impacts to T3 and G1 and prescribe remedial works as necessary to mitigate any loss of roots. Remedial works could include a programme of root feeding or additional crown reduction work.

4.9 Removing existing hard standing from root protection areas

4.9.1 Removal of existing hard standing within the root protection area of retained trees shall be undertaken as a final phase of construction prior to commencement of soft landscaping. The existing wearing course shall be broken up using controlled hand tools (e.g. pneumatic breaker) and removed from the root protection area by hand. If it is deemed impractical or unsafe to achieve this using hand tools only, plant machinery operated under the supervision of the project arboriculturist may be used instead. The machine must be fitted with a grading bucket (without teeth) and be operated from outside the root protection areas unless on a retained area of hard standing. If roots are revealed during this operation, use of the machine must immediately cease and the operation shall be continued by hand. If roots are exposed, they shall be covered with a layer of topsoil to prevent desiccation or frost damage.

4.9.2 To minimise the chance of encountering tree roots, as much of the sub-base shall be retained below ground level as is feasible, with a layer of topsoil imported to enable soft landscaping. If it is deemed necessary to remove the sub-base to allow sufficient soil volume to be imported for the proposed soft landscaping, the sub-base shall be removed carefully in shallow increments following the same methodology required for removing the wearing course.

4.10 Replacing existing surfacing within root protection areas

4.10.1 The retained sections of existing hard standing within the root protection areas of T3 and G1 may require replacing to form the new. Vehicular access across the root protection areas shall be prohibited between the time the existing surface is removed, and the new surface is installed.

4.10.2 The existing wearing course shall be broken up using controlled hand tools (e.g. pneumatic breaker) and removed from the root protection areas by hand. If it is deemed impractical or unsafe to achieve this using hand tools only, plant machinery operated under the supervision of the project arboriculturist may be used instead. The machine must be fitted with a grading bucket (without teeth) and be operated from outside the root protection areas unless on a retained area of hard standing. If roots are revealed during this operation, use of the machine must immediately cease and the operation shall be continued by hand.

4.10.3 The existing sub-base shall be reused (augmented as necessary) for the new surface. If it is deemed necessary to remove any of the sub-base to enable the correct levels for the finished surface (these must first be signed off by the project arboriculturist), removal of the sub-base must occur carefully in shallow increments following the same methodology required for removing the wearing course. The near wearing course shall be installed directly onto the retained sub-base.

4.10.4 Where the existing surface is removed from within the root protection area and replaced with soft landscaping, as much of the sub-base shall be retained below ground level as is feasible with a layer of topsoil imported.

4.11 Services

4.11.1 The routing of new services for the development is not available on the date of this report. These must be signed off by the project arboriculturist before implementation. Wherever possible, the services must completely avoid the root protection areas of retained trees. Where this is not feasible, the arboriculturist shall provide an arboricultural method statement (to be signed off by the local authority arboricultural officer before implementation) detailing any sympathetic methodologies that are required to minimise damage to tree roots (as described in NJUG4 'Guidelines for the planning, installation and maintenance of utilities in proximity to trees' and BS5837: 2012).

4.12 Installing new permanent fencing within root protection areas

4.12.1 Installation of permanent fencing within root protection areas will require access into the construction exclusion zones. Only pedestrian access will be permitted into the construction exclusion zones and scaffold board pathways shall be used in wet conditions. Ideally these works shall occur during the soft landscaping phase of development when it is safe to dismantle the tree protection fencing.

4.12.2 The fencing specification is to be confirmed on the date of this report. Within root protection areas a fencing type that requires only postholes (no trenching) shall be used. The level of the fences must follow existing ground levels as there should be no re-grading of levels within root protection areas.

4.12.3 The postholes shall be hand excavated with care taken to avoid damaging or severing roots with a diameter greater than 25mm. Ideally the postholes shall be pre-dug to ensure significant roots can be avoided. The postholes shall be sleeved with impermeable sheeting before any concrete is added to prevent alkaline burn to retained roots. Cement mixing shall occur outside the construction exclusion zones.

4.13 Soft landscaping within root protection areas

4.13.1 Soft landscaping within the root protection areas of retained trees shall occur as the final phase of development, when all other construction activities in the vicinity have been completed and it is safe to dismantle the tree protection barriers. The detailed specification for soft landscaping is to be confirmed but will potentially include turfing and tree/shrub planting within root protection areas.

4.13.2 All planting stock, topsoil and other soft landscaping materials shall be stockpiled outside the root protection areas of retained trees. When the tree protection barriers have been dismantled, the extents of the root protection areas shall be made clear to operatives at the site by other means (e.g. ground marker paint or similar). The standard restrictions to works within the construction exclusion zones will still apply during the soft landscaping phase of development.

4.13.3 Where new turf or grass seed is to be laid within the root protection areas of retained trees, topsoil will likely need to be imported. The existing soil may be lightly tilled by hand but use of rotavators or plant machinery will be prohibited. A maximum increase of 100mm of topsoil may be introduced to a root protection area to avoid suffocating existing root growth. Care must be taken to prevent soil being piled against tree buttresses or buttress roots.

4.13.4 When soil or other materials are transported across a root protection area in wet conditions, scaffold board pathways must be used to prevent compaction of the rooting medium. It should be noted that even pedestrian traffic can compact the soil in wet conditions.

4.13.5 All planting pits within root protection areas shall be individually hand excavated (no trench planting). Care must be taken to avoid severing or damaging roots with a diameter greater than 25mm.

4.14 Pre-commencement arboricultural consultancy input

4.14.1 Prior to the commencement of works, arboricultural input will be required for the following aspects of development:

1. The construction management/logistics plan.
2. The routing of utility services.
3. The routing of drainage services.
4. Final levels based on the detailed design.

4.14.2 If these aspects of the project have a material impact on the guidance in this method statement, the arboricultural method statement shall be updated and the revised information submitted to the local authority tree officer for approval.

4.15 Pre-commencement meeting

4.15.1 A pre-commencement meeting shall be held between the contractors and the project arboriculturist. The local authority arboricultural officer shall be given reasonable notice of the pre-commencement meeting so they may also attend. The purpose of the pre-commencement meeting shall be:

1. To clarify the tree protection methodology with the site manager.
2. To explain the implications of working near trees with a tree preservation order.
3. To discuss the chronology and phasing of the project with the site manager.
4. To sign off that the pre-commencement tree works have been completed as specified in the arboricultural impact assessment, and to discuss any requirements for any further pruning which had not been anticipated prior to the meeting.
5. To sign off that the tree protection fencing and ground protection have been installed in the correct locations and to the agreed specification. To agree revised locations subject to the phasing of the development.
6. To sign off the marked out foundation footprint of new building within the root protection areas of T3 and G1.
7. To agree with the local authority arboricultural officer the type and timings of arboricultural monitoring necessary.

4.15.2 Following this meeting, if the local authority arboricultural officer has not been able to attend, an email outlining the actions discussed will be sent to the tree officer for approval. If necessary, a revised tree protection plan and method statement will be issued for approval.

4.16 Arboricultural supervision

4.16.1 The project arboriculturist shall supervise:

- All excavation within the root protection area of T3 as shown with red hatching on the tree protection plan.

4.17 Arboricultural monitoring

4.17.1 The site manager shall provide a monthly update to the project arboriculturist including photographic evidence that the tree protection barriers are intact and that the construction exclusion zones have been observed.

4.17.2 In addition to the above, a system and programme of onsite monitoring by the appointed arboricultural consultant shall be agreed with the Local Authority Arboricultural Officer. The form and frequency of site monitoring shall be agreed at the pre-commencement meeting.

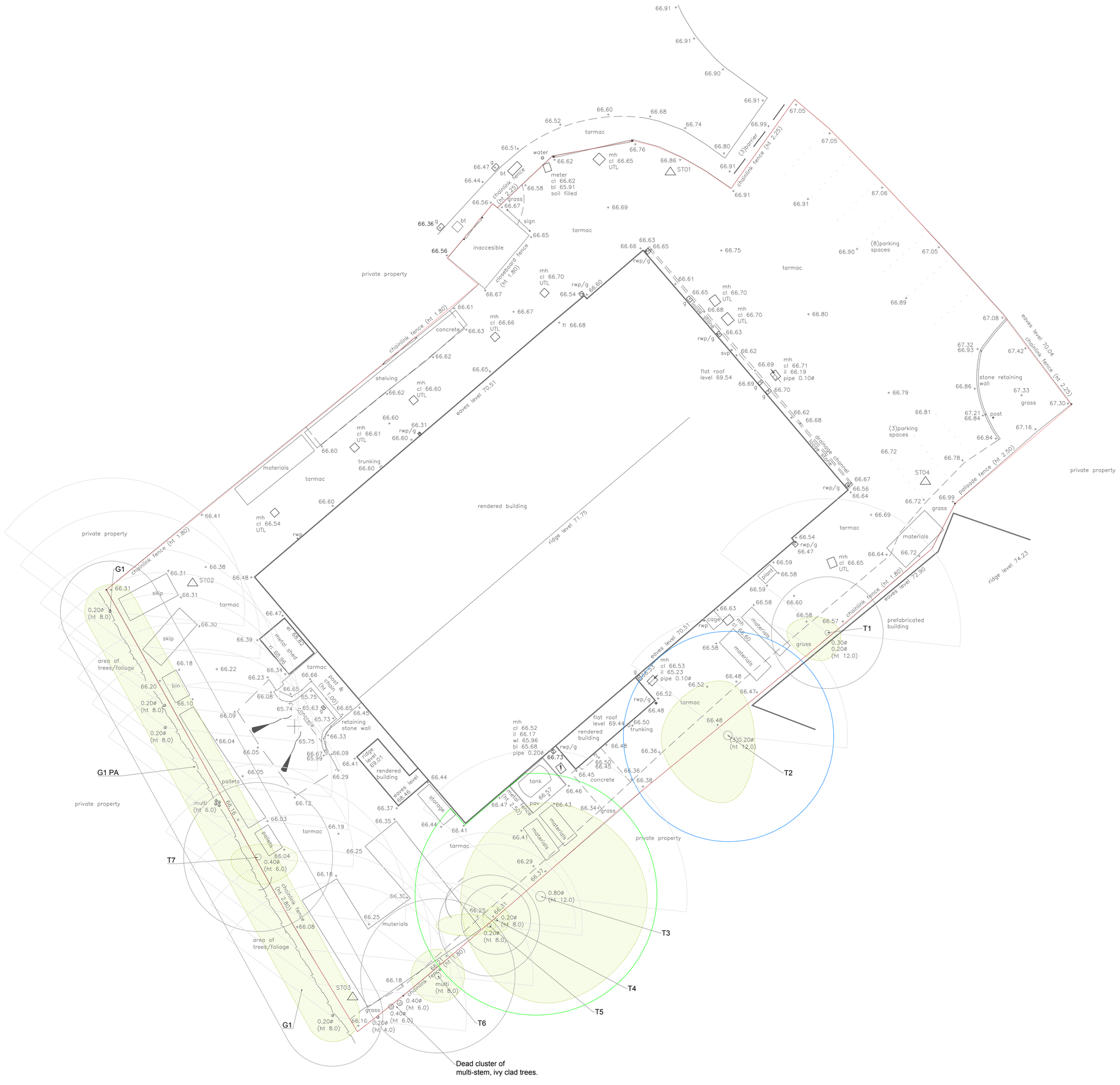
4.18 Process if an unforeseen issue relating to trees arises

4.18.1 If significant root growth is disturbed during construction activities that are not within the scope of this report, the work shall cease until the project arboriculturist has been consulted. Roots greater than 25mm in diameter or dense/matted fibrous roots shall be considered significant root growth. It should be remembered that whilst root protection areas are part of industry best practice, tree root growth is influenced by a number of factors and may not conform to expected ideals.

4.18.2 If at any time during the construction process, damage is inadvertently caused to a tree, the project arboriculturist shall be notified to assess the likely implications and to prescribe potential remedial measures to be implemented. Damage can be in the form of chemical or fuel spillage, mechanical damage to either the above ground parts of the tree or the roots, fire or any other unforeseen circumstance.

4.18.3 The supervising arboriculturist shall be appointed by the contractor. It will be necessary for the arboriculturist to report to the local planning authority on the outcome of the site visits as well as any unforeseen tree related issues.

Appendix 1: Tree Constraints Plan



Key:

- Root protection area for category A* tree
- Root protection area for category B* tree
- Root protection area for category C* tree
- Root protection area for category U* tree
- Tree canopy
- Approximate extent of tree shade
- Topographical survey feature
- Survey boundary

* Tree categorised in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction - Recommendations*'.

Tree survey schedule contained within the arboricultural report ref. PJC/6768/25/01 contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

Tree shadows plotted using guidance set out in BS5837: 2012 - Trees in relation to design, demolition and construction - Recommendations. The trees existing height is used to calculate the radius of the shadow segment, plotted from north west to east as an arc.

Please note the plotted shadows represent shadow cast throughout the typical day, and not the total shadow cast at a given moment. Groups with an average height of less than 5m has not been provided a shade arc.

This drawing has been used in conjunction with Lucion Survey Ltd Topographical Survey reference. 660758/01.

Scale (m)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Drawing no: PJC/6768/25/A **Rev:** - **Sheet number:** 1 of 1

Client and site:
Bailey Total Building Envelope Ltd
Redkiln Close
Horsham
West Sussex
RH13 5QL

Drawing title: Tree Constraints Plan

Date drawn: 10/02/2025

Scale: 1:100 at A0

Drawn by: CD **Checked by:** LW

PJC Consultancy
Rocks Yard, Victoria Road,
Herstmonceux, Hailsham, East
Sussex, BN27 4TQ.

t: 01323 832120
e: contact@pjcconsultancy.com
w: www.pjcconsultancy.com

Appendix 2: Tree Survey Schedule

Site: Redkiln Close, Horsham, W Sussex.RH13 5QL.

Tree Survey Schedule

Survey date: 7th February 2025

Document ref: PJC/6768/25/01

Surveyor: Clayton Dickerson

Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m^2)	Root Protection Radius (m)
T1	Silver birch *(Betula pendula)*	10	348	N: 1 E: 1 S: 2 W: 3	Crown: 3 north Branch: 3 north	Mature	Fair	Fair	Co-dominant stems arising from base; bark inclusion observed; ivy clad; growing within fence line.	Consider severance of ivy to allow unhindered future inspections.	C1	54.8	4.2
T2	Silver birch *(Betula pendula)*	9	658	N: 4 E: 2 S: 5 W: 5	Crown: 2 west Branch: 2 west	Mature	Good	Good	Multi-stem from base; ivy clad; located within adjacent property.	No remedial works required at time of survey.	B1	195.9	7.9
T3	English oak *(Quercus robur)*	11	750	N: 7 E: 8 S: 8 W: 6	Crown: 4 average Branch: 4 west	Mature	Good	Good	Comprised of a single stem with an open growth habit; considered of good form; located in adjacent property.	No remedial works required at time of survey.	A1+2	254.5	9.0
T4	Silver birch (Betula pendula)	6	220	N: 1 E: 1 S: 1 W: 1	Crown: 4 average Branch: 4 average	Semi-mature	Fair	Fair	Comprised of a single stem with an upright growth habit; suppressed by T4; ivy clad; growing within fence line; located in adjacent property.	No remedial works required at time of survey.	C1	21.9	2.6
T5	Silver birch (Betula pendula)	7	320	N: .5 E: .5 S: .5 W: 4	Crown: 4 west Branch: 4 west	Semi-mature	Fair	Fair	Heavy stem and crown bias to west; ivy clad; growing within fence line; located within adjacent property.	No remedial works required at time of survey.	C1	46.3	3.8
T6	Leyland cypress *(Cupressus × leylandii)*	7	480	N: 2 E: 2 S: 2 W: 2	Crown: 2 west Branch: 2 west	Mature	Fair	Fair	Heavily reduced crown; provides screening; located in adjacent property.	No remedial works required at time of survey.	C1	104.2	5.8

Site: Redkiln Close, Horsham, W Sussex.RH13 5QL.

Tree Survey Schedule

Survey date: 7th February 2025

Document ref: PJC/6768/25/01

Surveyor: Clayton Dickerson

Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Preliminary management recommendation	Category grading	Root Protection Area (m^2)	Root Protection Radius (m)
T7	Ash *(Fraxinus excelsior)*	7	465	N: 1 E: 3 S: 2 W: 2	Crown: 2 east Branch: 2 east	Mature	Poor	Poor	Multi-stem; growing within fence line; proliferation of advantageous shoots throughout crown; sign of Ash die back *(Hymenoscyphus fraxineus)* present.	Monitor tree in the summer months to determine extent of folia dieback.	C1+2	97.8	5.6
G1	Hazel *(Corylus avellana);* Alder *(Alnus glutinosa);* Field maple *(Acer campestre).*	10	320	N: 2 E: 2 S: 2 W: 2	Crown: 4 average Branch: 4 average	Mature	Fair	Fair	Linear group of trees; provides screening to neighbouring dwellings; located in adjacent property.	No remedial works required at time of survey.	B1+2	46.3	3.8

Appendix 3: Tree Retention Plan

Key:

- Root protection area for retained category A* tree
- Root protection area for retained category C* tree
- Retained tree canopy
- Topographical survey feature
- Survey boundary
- Proposed development layout
- Location of category B* tree to be removed
- Location of category C* tree to be removed
- Section of retained tree crown to be pruned

* Tree categorised in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction - Recommendations*'.

Tree survey schedule contained within the arboricultural report ref. PJC/6768/25/01 contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

This drawing has been used in conjunction with Lucion Survey Ltd Topographical Survey reference 660758/01. & Made Architects Proposed Site Plan reference 2473-MAL-XX-00-DR-A.

Scale (m)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Drawing no: PJC/6768/25/B **Rev:** - **Sheet number:** 1 of 1

Client and site:
Bailey Total Building Envelope Ltd
Redkiln Close
Horsham
West Sussex
RH13 5QL

Drawing title: Tree Retention Plan

Date drawn: 09/05/2025

Scale: 1:100 at A0

Drawn by: LW **Checked by:** CD

PJC Consultancy
Rocks Yard, Victoria Road, Herstmonceux, Hailsham, East Sussex, BN27 4TQ.

t: 01323 832120
e: contact@pjcconsultancy.com
w: www.pjcconsultancy.com

Appendix 4: Tree Protection Plan

Key:

- Root protection area for retained category A* tree
- Root protection area for retained category C* tree
- Retained tree canopy
- Topographical survey feature
- Survey boundary
- Proposed development layout
- Tree protection fencing
- Construction exclusion zone
- Section of root protection area lost to construction

* Tree categorised in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction - Recommendations*'.

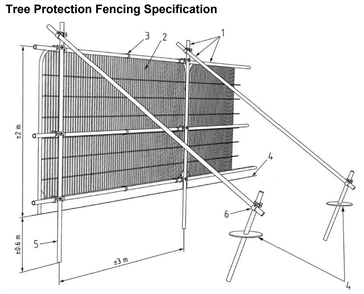
Tree survey schedule contained within the arboricultural report ref. PJC/6768/25/01 contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

This drawing has been used in conjunction with Lucion Survey Ltd Topographical Survey reference 660758/01. & Made Architects Proposed Site Plan reference 2473-MAL-XX-00-DR-A.

Tree Protection Fencing Specification



Key

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

Tree Protection Warning Sign

Scale (m)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Drawing no: PJC/6768/25/C **Rev:** 01 **Sheet number:** 1 of 1

Client and site:
Bailey Total Building Envelope Ltd
Redkiln Close
Horsham
West Sussex
RH13 5QL

Drawing title: Tree Protection Plan

Date drawn: 11/09/2025

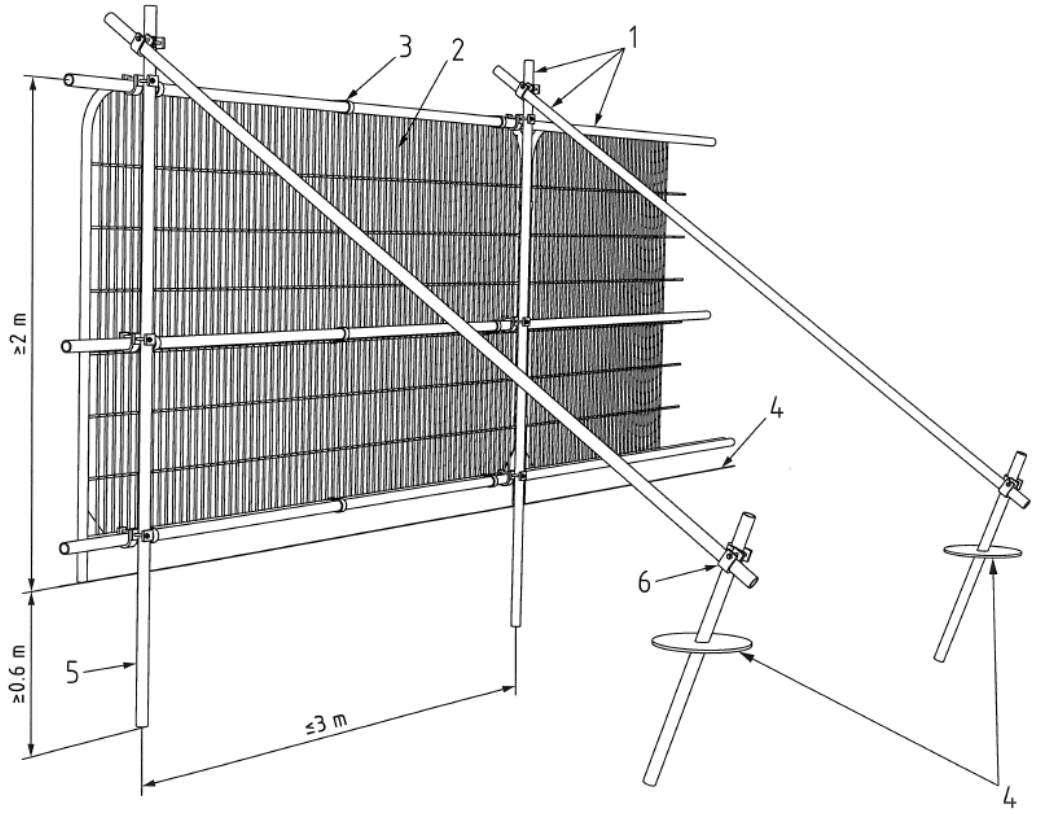
Scale: 1:100 at A0

Drawn by: LW **Checked by:** CD

PJC Consultancy
Rocks Yard, Victoria Road,
Herstmonceux, Hailsham, East
Sussex, BN27 4TQ.

t: 01323 832120
e: contact@pjcconsultancy.com
w: www.pjcconsultancy.com

Appendix 5: Tree Protection Fencing Specification



Key

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

Appendix 6: Example Protective Fencing Sign

CONTACT DETAILS

Sussex Office:

Rocks Yard

Victoria Road

Herstmonceux

Hailsham

East Sussex

BN27 4TQ

Tel: 01323 832120

Kent Office:

The Watermill

The Mill Business Park

Maidstone Road

Ashford

Kent

TN26 1AE

Tel: 01233 225365

Author: Luke White

Date: 11th September 2025

E-mail: luke@pjcconsultancy.com