



Arboricultural Impact Assessment

in Relation to Proposed Construction
of Detached Residential Dwelling at



**Land off Tanners Street,
Ramsbottom, Lancashire, BL0 9EG**

Prepared by:

Bowland 
Tree Consultancy Ltd

March 2021

**ARBORICULTURAL IMPACT ASSESSMENT
LAND OFF TANNERS STREET, RAMSBOTTOM**

Control sheet

Project No.: BTC2118

Site: Land off Tanners Street, Ramsbottom, Lancashire, BL0 9EG

Client: Blakeman Design and Build Ltd

Council: Bury Metropolitan Borough Council

Survey Date: 19 November 2019

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DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or located in areas of restrictive ground vegetation, cannot therefore be expected. Detailed tree safety appraisals are only carried out under specific written instructions. Comments upon evident tree safety relate to the condition of said tree at the time of the survey only. Unless otherwise stated all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development works, etc. Changes in land use or site conditions (e.g. development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations with regard to tree structural integrity, and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks. For these reasons the tree assessment advice only remains valid for one year from the date that the trees were last inspected.

Where trees are located wholly or partially on neighbouring private third-party land then said land is not accessed and our inspection is therefore restricted to what can reasonably be seen from within the site. Stem diameters and other measurements of trees located on such land are estimated. Any subsequent comments and judgments made in respect of such trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potential risk to persons and/or property has been identified during our survey or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects of third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will inform the relevant Council of the matter. Where a more detailed assessment is considered necessary then appropriate recommendations are set out in the Tree Survey Schedule.

Where tree stem locations are not included on the plan(s) provided then they are plotted by the arboriculturist at the time of the survey using, where appropriate and/or practicable, a combination of measurement triangulation and GPS co-ordination. Where this is not possible then locations are estimated. Restrictions in these respects are detailed in the report.

This document is intended as a guide to identify key tree related constraints to site development only, and the potential influence of trees upon existing or proposed buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The tree survey information in its current form should not therefore be considered sufficient to determine appropriate foundation depths for new buildings. Accordingly, an updated survey, with reference to the current NHBC Standards Chapter 4.2 - Building Near Trees, must therefore be prepared for the specific purpose of informing suitable foundation depths subsequent to planning approval being granted. The advice of a structural engineer must also be sought with regard to appropriate foundation depths for new buildings.

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**ARBORICULTURAL IMPACT ASSESSMENT
LAND OFF TANNERS STREET, RAMSBOTTOM**

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1.0 INTRODUCTION

Terms of Reference

- 1.1 Bowland Tree Consultancy Ltd were instructed to:
- a) Survey, as individuals or by group, all trees having reasonable potential to affect or to be adversely affected by the proposed development of the site under consideration;
 - b) Annotate the existing and proposed site plans to produce a Tree Constraints Plan and a Tree Impact Plan, identifying tree retention categories, crown spreads, Root Protection Areas, projected tree related impacts, trees proposed for retention, etc.;
 - c) Prepare a tabulated Tree Survey Schedule based on guidance specified BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations;
 - d) Evaluate the potential tree related impacts and design conflicts of the proposals, based on the supplied development proposal plan(s);
 - e) Advise on removal, retention and management options for the trees in the current context and in the context of the proposed development;
 - f) Advise on suitable retained tree protection measures required during development; and
 - g) Produce an Arboricultural Impact Assessment report outlining the main tree related issues and reasonably foreseeable tree impacts in relation to the proposals and commenting on suitable compensation and mitigation provisions and retained tree protection measures.

Scope and Purpose of Report

- 1.2 By detailing foreseeable tree related issues this report is intended to assist the Local Planning Authority (LPA), in this case Bury Metropolitan Borough Council (Bury MBC), in their review of the proposed development and, as such, should be supplied to them in support of the planning application to which it pertains. Essentially, it provides an initial analysis of the impacts that the proposed development is projected to have on trees located within the site and, where practicable, on land immediately adjacent to its boundaries. It also offers guidance on suitable retained tree management and compensation for projected losses, along with advice on appropriate tree protection measures in accordance with current guidance in the context of the proposals.

Site Visit, Data Collection and Tree Plans

- 1.3 Further to the instruction it is confirmed that a tree survey was carried out on 19 November 2019, in accordance with the preceding disclaimer, and all tree data collected on site is set out in the attached tabulated Tree Survey Schedule (TSS) at Appendix One which, for ease of interpretation, should be read alongside the appended BS5837:2012 Table 1.
- 1.4 The survey identified six individual trees (prefixed 'T') and seven groups of trees (prefixed 'G'), which have been numbered accordingly on the Tree Constraints Plan (TCP) and the Tree Impact Plan (TIP), as appended. The plans, which together detail the existing and readily definable tree constraints along with an overlay of the development proposals and the projected impacts, are based on the existing topographical survey plan and the proposed site plan, which were provided in electronic format by the agent. In turn, for the purpose of this report, it is presumed that the provided plans' details are accurate and up to date.
- 1.5 In this respect the TCP details the existing site with the readily definable tree constraints, whilst the purpose of the TIP is to give an initial indication of the impacts that the proposed development is projected to have on trees. This should subsequently be used by the LPA's tree specialist to preliminarily assess if the proposed development can potentially be constructed in accordance with BS5837:2012 and, along with the information provided in this report, as a basis for the LPA to request further details regarding specific matters relating to trees at suitable stages in the planning process.

2.0 STATUTORY PROTECTION IN RESPECT OF TREES AND ASSOCIATED WILDLIFE

Tree Preservation Orders and Conservation Area Designations

- 2.1 The Town and Country Planning Act (1990) (the Act) and associated Regulations empower Local Planning Authorities (LPAs) to protect trees in the interests of amenity by making Tree Preservation Orders (TPOs). The Act also affords protection for trees of over 75 mm diameter that stand within the curtilage of a Conservation Area (CA). Subject to certain exemptions, an application must be made to the LPA in question to carry out works upon or to remove trees that are subject to a TPO, whilst six weeks' notice of intention must be given to carry out works upon or to remove trees within a CA that are not protected by a TPO.
- 2.2 According to the Bury MBC planning department website, the site stands within the Ramsbottom Conservation Area and tree T1, as well as the trees within groups G1 and G2, are protected by TPO number 91. As such, relevant notice of intention should be given to, or consent gained from, the LPA prior to scheduling or carrying out any tree works that are not directly related to the implementation of a detailed (i.e. full) planning permission.

Protected Species

- 2.3 Nesting birds are afforded statutory protection under the Wildlife & Countryside Act (1981) (as amended) and their potential presence should therefore be considered when clipping hedges, removing climbing plants and pruning and removing trees. The breeding period for woodlands runs from March to August inclusive. Hedges provide valuable nesting sites for many birds and clipping should therefore be avoided during March to July. Trees, hedges and ivy should be inspected for nests prior to pruning or removal and any work likely to destroy or disturb active nests should be avoided until the young have fledged.
- 2.4 All bat species and their roosts are protected under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and under Schedule 2 of the Conservation of Habitats & Species Regulations 2010 (as amended). In this respect it should be noted that it is possible that unidentified bat habitat features may be located high up in tree crowns and all personnel carrying out tree works at the site should therefore be vigilant and mindful of the possibility that roosting bats may be present in trees with such features. If any bat roosts are subsequently identified then it is essential that works are halted immediately and that a suitably qualified and experienced ecologist investigates and advises on appropriate actions prior to works continuing.
- 2.5 In turn, any subsequent works carried out in relation to any protected species must be carried out under guidance from a suitably qualified and experienced ecologist and in strict accordance with the guidance provided in BS42020:2013 - Biodiversity – Code of Practice for Planning and Development and, with regard to bats, in strict accordance with BS8596:2015 - Surveying for Bats in Trees and Woodlands.

Felling Licences

- 2.6 Subject to certain exemptions the Forestry Act (1967) requires that a 'Felling Licence' be obtained to remove growing trees amounting to more than five cubic metres of timber in a calendar quarter. Felling Licences are administered by the Forestry Commission and contravention of the associated controls can incur substantial penalties. A felling licence is, however, not required for the felling of trees immediately required for the purpose of carrying out development authorised by a full planning permission granted under the Town and Country Planning Act 1990.

3.0 THE SITE AND THE SURROUNDINGS

- 3.1 The site under consideration, which is a disused residential garden, is located in an area of residential character approximately 0.5 kilometres to the west of Ramsbottom town centre. The garden is currently unmanaged and, as such, consists of dense largely self-set ground vegetation along with several groups of trees and shrubs.
- 3.2 The site itself is bordered to the north by residential properties and their associated private gardens and driveways, to the east by Tanners Street, to the south by a shared access footpath to Prospect House, beyond which is a neighbouring private residential garden, and to the west by the private garden area of the neighbouring residential property. In this respect it is noted that there is a linear 'avenue' of mature trees, consisting of groups G1 and G2, running along the footpath that forms the southern boundary of the site, with the northern half of the avenue (i.e. G1) standing within the site boundaries and the southern half (i.e. G2) standing within the neighbouring garden to the south (see TCP).
- 3.3 As indicated on the TCP the topographical survey plan provided shows that the site stands on a steep north-east facing slope, with ground levels subsequently varying by approximately 15 metres between the highest point to the south-west and the lowest point to the north-east. In this respect it is noted that the site is bordered to the east along Tanners Street by a stone retaining wall of approximately 1.3 metres in height.

4.0 THE TREE POPULATION

- 4.1 As noted previously, a total of six individual trees and seven groups of trees were surveyed for the purpose of this appraisal. They range from young to mature in age, with heights up to approximately 26 metres, maximum diametrical crown spreads up to approximately 13 metres, and stem diameters up to approximately 580 millimetres. Detailed tree dimensions and other pertinent information, such as structural defects and physiological deficiencies, are included in the Tree Survey Schedule (TSS) at Appendix One.
- 4.2 In respect of the survey it should be noted that tree quality is categorised within the existing context without taking any development proposals into account. However, recommendations for works included in the TSS take both current site usage and the proposed development into consideration where there are definable issues with regard to specific trees.
- 4.3 Under the UK's planning system trees are a material consideration in the planning and development process. Nonetheless, only trees of a suitable quality and value should be considered a material constraint to development. In this respect the TSS includes a column ('Cat. Grade') listing the trees' respective retention values, where they are rated either 'A', 'B', 'C' or 'U', as per BS5837:2012 Table 1 (Appendix One). 'A' category trees are those considered to be of 'high quality' and, accordingly, the most suitable for retention, whilst 'B' category trees are those considered to be of 'moderate quality', and 'C' category trees are those considered to be of 'low quality' with a correlated low retention value. In turn, 'U' category trees are those that are considered to be 'unsuitable for retention'.
- 4.4 As detailed in Table A, overleaf, one tree and two groups of trees were categorised as moderate quality (i.e. 'B' category), three trees and four groups of trees were categorised as low quality (i.e. 'C' category), and two trees and one group were classed as unsuitable for long term retention (i.e. 'U' category) regardless of the development proposals.

Table A: BS5837-2012 Retention Categories of the Surveyed Trees

	Ret. Cats.	Tree/Group Numbers	Totals
Those of a moderate or high quality that should be afforded appropriate consideration in the context of development	'A'	-	-
	'B'	T1* G1, G2*	1 Tree 2 Groups
Those of a low quality that should not be considered a material constraint to development	'C'	T2, T3, T6 G3, G4*, G6*, G7	3Trees 4 Groups
Those that should be removed for sound management reasons regardless of site proposals	'U'	T4, T5	2 Trees
		G5	1 Group
			= 6 Trees & 7 Groups in Total

*Note: Trees denoted with an asterisk are located on, or potentially partly located on, neighbouring third-party owned land

5.0 THE DEVELOPMENT PROPOSAL AND ITS PROJECTED ARBORICULTURAL IMPACTS

The Development Proposal

- 5.1 As indicated on the proposed site plan, as provided by the project architects RGP, and the appended TIP, the proposal is for the construction of a four-storey detached residential dwelling to be built into the north-east facing slope of the site. As detailed on the TIP the proposals also include associated landscaping and a vehicular access point from Tanners Street to the site's north-east, subsequently leading to a parking and turning area to the east of the east of property and a garage below it (see TIP).
- 5.2 Consequently, as a component of the access a 25 metre visibility splay is proposed along Tanners Street, which is to include the repositioning and rebuilding of the existing stone retaining wall slightly further west within the site, with a minor encroachment into the generic calculated RPA of the eastern tree in group G1.
- 5.3 In this respect, it is noted that, from information provided by the agent for the client, Richard Gee of Roman Summer, a site meeting took place between the principal engineer and the tree officer from Bury MBC in order to discuss the above proposals, and that it was subsequently preliminarily agreed between the respective parties that the proposed works to the retaining wall would be unlikely to have any detrimental effects on the applicable tree's physiological and/or structural condition.
- 5.4 In light of the above proposals it should, however, be noted that, other than the proposed visibility splay, no other ground level changes or excavations are proposed to the south of the site within and in the area immediately adjacent to the RPAs of retained moderate quality tree T1 and retained groups G1 and G2.

Projected Arboricultural Losses Relating to the Proposal

Table B: Projected Arboricultural Impacts of Proposed Development & Other Tree Removal Proposals

	Ret. Cats.	Removals necessary to implement development	Removals recommended regardless of development	Total no. of removals
Those of a high quality that should be afforded appropriate consideration in the context of development	'A'	-	-	-
Those of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	-	-	-
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	T2, T3, G3, G4*, G7	-	2 Trees 3 Groups
Those that should be removed for sound management reasons regardless of plans	'U'	-	T4, T5, G5*	2 Trees 1 Group
Totals		2 Trees 3 Groups	2 Trees 1 Group	= 4 Trees & 4 Groups in Total

*Note: Trees denoted with an asterisk are located on, or potentially partly located on, neighbouring third-party owned land

- 5.5 In turn, as detailed in Table B (previous page), it is projected that construction of the development as proposed will require the removal of two low quality (i.e. category 'C') trees and three low quality groups (see TIP). Additionally, as also detailed in Table B, two trees and one group are considered unsuitable for retention, both in the context of the existing site and the proposed development.
- 5.6 Nonetheless, in regard to the above it should be noted that, whilst the redline boundary indicates the plotted position of groups G4 and G5 to be within the site ownership, the stem locations were not plotted on the topographical survey provided and the subsequent stem positions and associated ownership of the groups should subsequently be clarified by the client prior to any works to these trees.

Compensation for Projected Arboricultural Losses as Part of the Scheme's Landscaping

- 5.7 As indicated on the TIP, there is space within the proposed private garden of the property for new tree and shrub planting. In this respect a landscape proposal plan has been produced (see appended) by Square Yard with proposals for 13 new specimen trees as well as a variety of further trees and shrubs throughout the site, including areas of new native woodland fringe species. Consequently, the new tree and shrub planting that is proposed is projected to adequately compensate for the necessary low quality tree losses required to construct the development as proposed.
- 5.8 In turn, the provision of new tree, shrub and hedge planting as a component of the site landscaping, and in agreement with the LPA, can be assured through the imposition of a suitably worded condition attached to a planning approval.

Special Design, Materials and Working Methods for Construction within RPAs

- 5.9 The appraisal identified that the construction of a footpath is proposed within and in close proximity to the RPAs and canopies of retained groups G1 and G2 and a section of the proposed visibility splay encroaches within the RPA of group G1, as detailed on the TIP and at Table C, below. Nonetheless, it should be noted that such works are permissible under current government guidance (i.e. BS5837:2012) providing that they are planned and implemented whilst affording a suitable level of protection to the tree in question, such as through the use of appropriate hand-held tools, retaining existing ground levels within the trees' RPAs, and using designs that avoid localised ground compaction and root damage.
- 5.10 As such, it will subsequently be necessary to ensure that the groups of trees under consideration are suitably protected in strict accordance with current government guidance through the use of special working, construction and protection measures, specific details of which are given in Table C, overleaf.
- 5.11 In addition to the above it is also recommended that, in order to avoid above ground tree damage during construction works, all on site operations involving plant with booms, jibs and counterweights are to be planned in advance under arboricultural direction, with all such operations to be carried out in close proximity to trees to be conducted under the supervision of a banksman.
- 5.12 Consequently, in order to ensure adequate protection of retained trees, then special materials and working methods for proposed construction within RPAs, including the construction of the footpath and visibility splay as aforementioned, should be included in a suitably detailed site and development specific Arboricultural Method Statement and Tree Protection Plan, the provision of which and adherence to can be conditioned to a planning permission (see paragraphs 6.6 and 6.7 for further details regarding Arboricultural Method Statements and Tree Protection Plans).

Table C: Elements of Proposal with Potential to Impact Upon Trees and Subsequent Specialist Working Methods

Element of Proposal with Potential to Impact Upon Retained Trees	Applicable Trees	Proposed Specialist Working and Construction Methods	Relevant BS5837 Section(s) to be Adhered to	Information Required and Relevant Specialist
Construction of pedestrian footpath linking third floor of proposed property to existing footpath to south	G1, G2	- Proposed pedestrian footpath within RPAs to be constructed using a 'no dig' 3-dimensional cellular confinement system with wooden edge supports, to be installed on existing ground levels following removal of surface debris, in order to avoid ground excavation and/or compaction and subsequent root loss and damage. - Works to install path to be carried out using hand working methods and hand tools only. - Wearing course to be finished with a semi-porous bound gravel.	7.4	Supplier or experienced installer of 3-d cellular confinement system to provide details of proposed finished levels in comparison to existing levels and method statement for installation
Construction of proposed visibility splay along Tanners Street and rebuilding and repositioning of existing stone retaining wall further west within site.	G1	- Works to be carried out from existing carriageway to east of site, with vehicles and machinery positioned on existing hard surfaced carriageway. - Any necessary root pruning to be implemented cleanly using a sharp handsaw or secateurs, on advice from arboriculturist - Roots, whilst exposed, shall immediately be wrapped or covered with wet hessian to prevent desiccation and protect them from rapid temperature changes. - Easternmost tree within group G1 to be re-inspected at 12 and 24 month intervals following completion of works in order to appraise canopy condition.	S7.2, 7.3	Building/walling Contractor to provide details of construction of wall, dimensions and method statement for construction of section within RPA

6.0 RECOMMENDATIONS FOR SUCCESSFUL TREE RETENTION IN THE CONTEXT OF DEVELOPMENT

Root Protection Areas and Construction Exclusion Zones

- 6.1 Adequate protection of the Root Protection Areas (RPAs) of retained trees during construction is essential if their long-term viability is to be assured. RPAs, which are calculated through a method provided in BS5837:2012, are ground areas that should be protected by temporary protective fencing as Construction Exclusion Zones (CEZs) throughout the development process, thereby keeping the trees' root zones free from disturbance. Consequently, the RPA distances, as detailed in the TSS (see 6.2) and on the TIP, give an idea of the on-site below-ground constraints in respect of tree roots and assist in planning for appropriate tree retention in relation to feasible development.
- 6.2 The TSS includes two columns listing the RPAs of the individually surveyed trees and, where applicable, the largest of the trees in any surveyed groups as overall areas in square metres and as radial distances. The radial RPAs are indicated as magenta coloured circles on the TIP.
- 6.3 With regard to CEZs the design, materials and construction of the fencing should be appropriate for the intensity and type of site construction works, should conform to at least section 6.2 of BS5837:2012, and should be secured by the imposition of a suitably worded planning condition. A default Temporary Protective Fencing Specification is included at Appendix Two.

Underground Utilities and Drainage

- 6.4 The installation of underground utilities in close proximity to trees can cause serious damage to their roots. As such, it is essential that utilities be routed outside RPAs unless there is no other available option. Where RPAs cannot be avoided then guidelines set out in the National Joint Utilities Group publication 'Volume 4: NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2) – Operatives Handbook' should be followed (e.g. trenches of a very limited width to be hand dug or the use of directional drilling).
- 6.5 To date, no service plan showing proposed service and/or drainage runs has been provided in respect of the development under consideration. Nonetheless, the proposed site plan provided indicates that, if correctly planned, there should be sufficient space to run the services and drainage outside the RPAs of the trees proposed for retention. In turn, in order to ensure that this advice is adhered to, the provision of a service plan, with all service runs and drainage routed outside retained tree RPAs, can be conditioned to a planning approval.

Arboricultural Method Statement and Tree Protection Plan

- 6.6 Government guidance recommends that, where considered expedient by the LPA, an Arboricultural Method Statement (AMS) and a Tree Protection Plan (TPP) be prepared detailing special mitigation construction issues in relation to the development under consideration, inclusive of those detailed at Table C. Essentially, the AMS and TPP describe and detail the procedures, working methods and protective measures to be used in relation to retained trees in order to ensure that they are adequately protected during the construction process.
- 6.7 In order to ensure that any such special working methods are followed, and that the retained trees are adequately protected throughout the development process, the production of and adherence to an AMS and TPP can be conditioned to a planning approval.

7.0 OTHER RECOMMENDATIONS

Non-Development Related Tree Works and Recommendations

- 7.1 Any general management pruning works for retained trees that are stated to be non-development related, as detailed in the TSS, are recommended in accordance with prudent arboricultural management and should therefore be carried out regardless of any site development proposals and potential changes in land usage. All tree works should be carried out in accordance with BS3998:2010 - Tree Work – Recommendations.

Tree Work Related Consents

- 7.2 No tree pruning or removal works should commence on site until necessary consents have been obtained from the LPA as part of a planning approval or in respect of any statutory tree protection (e.g. CA and/or TPO protection).

Arboricultural Contractors

- 7.3 All tree works should be carried out by suitably qualified and experienced arboricultural contractors carrying appropriate public liability insurance cover and be implemented to the minimum current CE and UK industry standards and in accordance with industry codes of practice. Only certificated personnel should, in accordance with The Control of Pesticides Regulations, apply any pesticides.

Contractors and Subsequently Identified Tree Defects

- 7.4 Tree contractors should be made aware that, should any significant tree defects become apparent during operations that would not have been immediately obvious to the surveyor, then such defects should be notified immediately to the client and subsequently confirmed to the consultant within five working days.

New Tree Planting

- 7.5 All tree planting at the site should be carried out in accordance with BS8545:2014 Trees: from nursery to independence in the landscape – Recommendations, and in accordance with the guidance detailed in section 5.6 and Table A.1 of BS5837:2012.

Landscaping Within and Close to Retained Trees' RPAs

- 7.6 Any landscaping carried out within and close to retained trees' RPAs should be carried out in strict accordance with the guidance detailed in section 8 of BS5837:2012. As is the case with 7.5, above, a requirement for these works to conform with the current guidance detailed in BS5837:2012 can be conditioned to a planning approval.

Retained Tree Management

- 7.7 Any tree risk management appraisals and subsequent recommendations made in this report were based on observations and site circumstances at the time of the survey. Trees are dynamic living organisms whose structure is constantly changing and even those evidently in good condition can succumb to damage and/or stress.
- 7.8 In this respect, it should be noted that, under the Occupiers' Liability Act (1957 & 1984), site occupants have a duty of care to take reasonable steps to prevent or minimise the risk of personal injury and/or damage to property from any tree located within the curtilage of the land they occupy. In turn, it is accepted that these steps should normally include commissioning a qualified and experienced arboriculturist to survey their trees in order to identify any risk of harm to persons or damage to property that they may present and, where unacceptable risks are identified, taking suitable remedial action to negate those risks.

8.0 SUMMARY AND CONCLUSIONS

- 8.1 Six individual trees and seven groups of trees were surveyed in respect of a proposal to construct a detached residential property with an associated vehicular access, visibility splay, car parking provision and landscaping at the site under consideration.
- 8.2 One tree and two groups of trees were categorised as moderate quality, three trees and four groups of trees were categorised as low quality and two trees and one group were classed as unsuitable for long term retention regardless of the development proposals.
- 8.3 An appraisal of the proposal documentation provided identified that construction of the dwelling as proposed will require the removal of two trees and three groups categorised as low quality.
- 8.4 Nonetheless, it is noted that a landscape proposal plan has been produced which includes proposals for 13 new specimen trees and a variety of further trees and shrubs throughout the site which, in turn, is projected to adequately compensate for the identified necessary low quality tree losses.
- 8.5 Consequently, any new tree planting or other landscaping works subsequently carried out

within and close to retained trees' RPAs, should be carried out in strict accordance with current government guidance.

- 8.6 A 25 metre visibility splay along Tanners Street is also proposed as a component of the site access, to include the repositioning and rebuilding of the existing stone retaining wall slightly further west within the site, with a resultant minor encroachment into the generic calculated RPA of the eastern tree in group G1, and that a new footpath is also proposed within the RPA of said group.
- 8.7 In this respect it is understood that a site meeting took place between the engineer and tree officer from Bury MBC in order to discuss proposals, and that it was subsequently preliminarily agreed between the respective parties that the proposed works to the retaining wall would be unlikely to have any detrimental effects on the applicable tree's physiological and/or structural condition.
- 8.8 Further to the above it is also concluded that, in order to ensure successful existing tree preservation over the long-term, it is essential that the retained trees are protected in strict accordance with current Government guidance and the recommendations included herein.
- 8.9 In this respect the appraisal also identified that the proposed footpath also has the potential to impact upon the RPAs of several retained trees in group G1. As such, a specially designed and constructed footpath with specialist working methods is proposed, in accordance with current government guidance, in order to minimise any potential damage to retained trees.
- 8.10 As such, it will subsequently be necessary to ensure that the trees under consideration are suitably protected in strict accordance with current government guidance through the use of special working, construction and protection measures, specific details of which are detailed herein.
- 8.11 Accordingly, in order to ensure adequate protection of retained trees, these measures should be included in a suitably detailed Arboricultural Method Statement and Tree Protection Plan, the provision of which and adherence to can be conditioned to a planning permission.
- 8.12 Furthermore, it should also be noted that all site works must be carried out in strict accordance with any advice and recommendations made by the project ecologist where applicable and, in turn, in accordance with current government guidance relating to biodiversity, wildlife and development.

REFERENCES

- BS42020:2013 - Biodiversity – Code of Practice for Planning and Development. BSI British Standards, London.
- BS8596:2015 - Surveying for Bats in Trees and Woodlands. BSI British Standards, London.
- BS8545:2014 - Trees: From Nursery to Independence in the Landscape – Recommendations. BSI British Standards, London.
- BS3998:2010 - Tree Work - Recommendations. BSI British Standards, London.
- BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations. BSI British Standards, London.
- National House Building Council (2017). NHBC Standards Chapter 4.2 - Building Near Trees. NHBC, Amersham.
- National Joint Utilities Group (2007). Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) – Operatives Handbook.

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT ASSESSMENT							
Site:	Land off Tanners Street, Ramsbottom, Lancashire, BL0 9EG						
Client:	Blakeman Design and Build Ltd						

Surveyor:	Joseph Lambert BSc(Hons) FdSc MArborA
Survey Date:	19 November 2019
Job Reference:	BTC2118

Page: 1 of 3

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)	
T1	Common Lime	23	580#	N E S W	6 7 6 6	10-E 10	M	G	▪ Located on neighbouring land therefore not inspected in detail. ▪ Part of wider group of three trees along road frontage. ▪ Stem bifurcates at a height of approximately 10m with wide union. ▪ Stem of approximately 250mm arising to west at a height of approximately 1.5m has previously failed or been removed leaving a stub of approximately 200mm length, with subsequent potential for decay.	▪ Ensure protection of tree's Root Protection Area (RPA) throughout development through establishment of Construction Exclusion Zone (CEZ) in accordance with appended specification.	20+	B1/2	152	6.96
T2	Common Hawthorn	5	1x120 1x80	N E S W	1 2.5 2 1.5	N/A 0	SM	G	▪ Self-set tree with three stems arising from ground level. ▪ Significant stem lean to east from ground level. ▪ Stems crossing at a height of approximately 1m and 1.5m.	▪ Remove tree in order to construct proposed development.	10+	C1	12	1.98
T3	Common Horse Chestnut	4.5	75	N E S W	1 1 1 1	N/A 1	Y	G	▪ No significant visible defects.	▪ Remove tree in order to construct proposed development.	10+	C1	3	0.9
T4	Common Ash	5	75	N E S W	2 1 0 1	N/A 0	Y	MD	▪ Significant stem lean to north-east from ground level. ▪ Canopy and stem showing multiple effects of colonisation by Ash Dieback Disease (<i>Hymenoscyphus fraxineus</i>).	▪ Remove tree due to short projected remaining life expectancy as a result of colonisation by Ash Dieback Disease.	<10	U	3	0.9
T5	Common Beech	7	1x170 1x150	N E S W	6.5 4.5 3.5 3.5	1.3-N 0.5	SM	M	▪ Highly biased canopy to north-east due to suppression by group G1 to south. ▪ Main stem bifurcates at a height of approximately 1.3m. ▪ Significant areas of squirrel damage to bark on main stem and primary branches.	▪ Remove tree due to significantly limited future potential.	<10	U	23	2.72
T6	Common Hawthorn	4	75	N E S W	2 2 0.5 2	N/A 0	Y	G	▪ No significant visible defects. ▪ Canopy suppressed by group G1.	▪ Retain tree in context of proposed development. ▪ Ensure protection of tree's RPA throughout development through establishment of CEZ in accordance with appended specification.	10+	C1	3	0.9

Headings and Abbreviations:

No.	Allocated sequential reference number - Tree ('T'), Group ('G'), Woodland ('W') or Hedge ('H') reference number - refer to plan and to numbered tags where applicable
Species:	Common name
Height:	In metres, to half nearest metre - where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree
Stem Diam.:	Stem diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed
Branch Spread:	Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown
Branch & Canopy Clearances:	Existing height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point - to inform on crown to height ratio, potential for shading, etc.
Life Stage:	Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC:	Physiological Condition - a measure of the tree(s)' overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
General Observations and Comments:	Comments relating to the tree(s)' overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.
Management Recommendations:	Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take existing site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate
ERC:	Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)
Cat. Grade:	Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1
RPA m²:	Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage
RPA Radius (m):	Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection
# (Estimated Dimensions):	Where trees are located off-site, or are inaccessible for any other reason, and accurate measurements or other information cannot be taken then the information provided is estimated and is duly suffixed with a "#" symbol

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT ASSESSMENT							
Site:		Land off Tanners Street, Ramsbottom, Lancashire, BL0 9EG					
Client:		Blakeman Design and Build Ltd					

Surveyor:	Joseph Lambert BSc(Hons) FdSc MArborA
Survey Date:	19 November 2019
Job Reference:	BTC2118

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
G1	8no. Common Lime	≤ 26	≤ 560	N ≤ 8 E ≤ 7 S ≤ 5 W ≤ 6	3-N ≥ 1.5	M	M-G	- Moderately-close linear group evidently planted as an avenue along path leading to Prospect House, alongside neighbouring linear group G2. - Canopies moderately biased to north due to neighbouring group G2 to south. - Dense ivy on two stems to centre west of group restricting detailed inspection. - Second tree from west has decay evident between buttresses on north-east side of main stem from ground level to a height of approximately 500mm, and hollowing detected in buttress root to north-east of approximately 120mm diameter. - Tree located to west of group growing within stone retaining wall and compost bin restricting detailed inspection of buttress.	- Sever ivy on two applicable stems at ground level around entire circumferences and clear to a height of approximately 2m in order to allow future inspections of stems. - Retain group in context of proposed development. - Ensure protection of group's RPA throughout development through establishment of CEZ in accordance with appended specification. - Construct proposed pedestrian path between third floor and existing path where it encroaches within RPAs using 'no dig' 3-d cellular confinement system (see Table C of AIA). - Construct proposed visibility splay, including repositioned retaining wall adjacent to Tanners Street, in accordance with details in Table C of AIA.	40+	B1/2	≤ 180	≤ 7.56
G2	8no. Common Lime, 1no. Horse Chestnut	≤ 26	≤ 700	N ≤ 4 E ≤ 5.5 S ≤ 8 W ≤ 5	N/A ≥ 4	M	G	- Moderately-close linear group evidently planted as an avenue along path leading to Prospect House alongside linear group G1. - Located on neighbouring land therefore not accessed to inspect in detail. - Canopies moderately biased to north due to neighbouring group G2 located to south.	- Ensure protection of group's RPA throughout development through establishment of CEZ in accordance with appended specification. - Construct proposed pedestrian path between third floor and existing path where within RPAs using 'no dig' 3-d cellular confinement system (see Table C of AIA).	40+	B1/2	≤ 222	≤ 8.4
G3	Birch, Goat Willow, Hawthorn, Oak, Privet, Sycamore, Wild Cherry	≤ 8	≤ 1x90 1x80 (ts)	N ≤ 2.5 E ≤ 2.5 S ≤ 2.5 W ≤ 2.5	N/A ≥ 0	Y	M-G	- Group of closely to moderately spaced young self-set trees. - Privet located along road frontage and is evidently remains of a lapsed hedge. - Several trees close to and on top of retaining wall to road along east of site with potential to cause displacement over long term. - Goat Willows have multiple stems arising from ground level.	Remove group in order to construct development as proposed.	10+	C2	≤ 7	≤ 1.44

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT ASSESSMENT							
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Surveyor:	Joseph Lambert BSc(Hons) FdSc MArborA
Survey Date:	19 November 2019
Job Reference:	BTC2118

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
G4	Cherry Laurel, Hawthorn, Holly, Sycamore	≤ 12	≤ 1x100 1x90 (ts)	N ≤ 2.5 E ≤ 3 S ≤ 3 W ≤ 3	N/A ≥ 0	EM	M	- Closely spaced linear group. - Potentially a lapsed boundary feature. - Steep drop to north with retaining wall to neighbouring property. - Dense bramble and site topography means difficult to access and exact boundary unclear in this area at time of survey. - December 2020: Redline boundary indicates plotted position of group within site ownership, however, stem locations not plotted on topographical survey therefore subsequent stem positions and ownership of group should still be clarified by client prior to removal.	- Client to establish ownership boundaries and subsequent ownership of group. - Remove group in order to construct development as proposed. - NB: If parts of group are subsequently identified to be on neighbouring land then consent must be obtained from tree owner(s) prior to removal.	10+	C1/2	≤ 12	≤ 1.94
G5	Sycamore	≤ 12	≤ 1x260 1x230 2x160 1x80 (ms)	N ≤ 4 E ≤ 3 S ≤ 4 W ≤ 4	N/A ≥ 0	SM	M	- Very closely spaced group forming single canopy. - Located in north-west corner of site in area with unclear ownership boundary. - Multiple stems arising from ground level. - Approximately six stems up to approximately 250mm diameter to south of group have been topped at a height of approximately 1.5m height, with resultant regrowth of approximately 4m in length from below topping points, and subsequent dysfunctional wood and decay around topping points. - December 2020: Redline boundary indicates plotted position of group within site ownership, however, stem locations not plotted on topographical survey therefore subsequent stem positions and ownership of group should still be clarified by client prior to removal.	- Client to establish ownership boundaries and subsequent ownership of group. - Remove group due to poor structural form projected to significantly limit future growth and development. - NB: If parts of group are subsequently identified to be on neighbouring land then consent must be obtained from tree owner(s) prior to removal.	<10	U	≤ 80	≤ 5.06
G6	Ash, Leyland Cypress	≤ 10	≤ 200	N ≤ 2 E ≤ 2 S ≤ 2 W ≤ 2	N/A 0	SM	M-G	- Moderately-closely spaced group located on bank sloping steeply to east in area of unclear boundary. - Likely planted as screening. - All previously topped between heights of approximately 2m and 4m.	- Client to establish ownership of group. - Retain group in context of proposed development. - Ensure protection of group's RPA throughout course of development.	10+	C1/2	≤ 18	≤ 2.4
G7	Ash, Birch, Cherry Laurel, Goat Willow, Hawthorn, Cotoneaster	≤ 5	≤ 100	N ≤ 2 E ≤ 2 S ≤ 2 W ≤ 2	N/A 0	Y	M	Very closely spaced self-set group.	Remove group in order to construct development as proposed.	10+	C1/2	≤ 5	≤ 1.2

BS5837:2012 Table 1 – Cascade Chart for Tree Quality Assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see BS5837:2012 paragraph 4.5.7.</i>			Red
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Trees to be considered for retention				
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; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Green
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution. A minimum of 20 years is suggested.	Trees that might be included in the high category, but are downgraded because of impaired condition. Examples include the presence of remediable defects including unsympathetic past management and minor storm damage	Trees present in numbers, usually as groups or woodlands, so they form distinct landscape features which attract a higher collective rating than they might as individuals. But which are not, individually, essential components of formal or semi-formal arboricultural features. For example, trees of moderate quality within an avenue that includes better, A category specimens. Or trees which are internal to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	Blue
Category C Those trees of low quality and value: currently in adequate condition to remain until new planting could be established - a minimum of 10 years is suggested - or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	Grey
	Note – Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation			

- TEMPORARY PROTECTIVE FENCING SPECIFICATION -

Construction Exclusion Zones (CEZs), enclosed by **Temporary Protective Fencing**, as detailed below and to be agreed with the Local Planning Authority (LPA), shall:

1. be retained in place throughout the development process, as specified in the 'Temporary Protective Fencing Construction' section below and detailed in BS5837:2012 Figure 2 (overleaf);
2. be sited in the area(s) defined by the Root Protection Areas or, if applicable, the Construction Exclusion Zones, as detailed on the associated Tree Plan;
3. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
4. preclude any delivery of site accommodation and/or materials and/or plant machinery;
5. preclude all construction related activity, with the sole exception of specified arboricultural works and any other works to be carried out under supervision that have been agreed by all parties; and
6. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance.

Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

Temporary Protective Fencing Construction

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall butt together and be securely fixed to a scaffold framework, as per 3 to 5 below.
3. The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights, as per 4 to 5 below.
4. The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with 3 no. clamps to each joint.
5. The diagonal scaffold pole struts be clamped to the top rail of the scaffold framework at a 45° angle and extend back into the CEZ and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the LPA shall inspect and approve the Temporary Protective Fencing.

Figure 1: CEZ Warning Sign

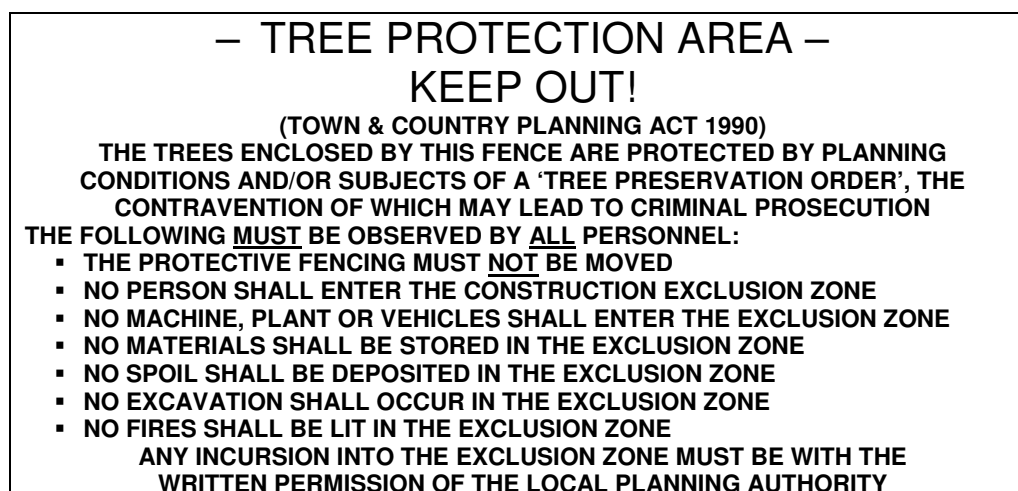
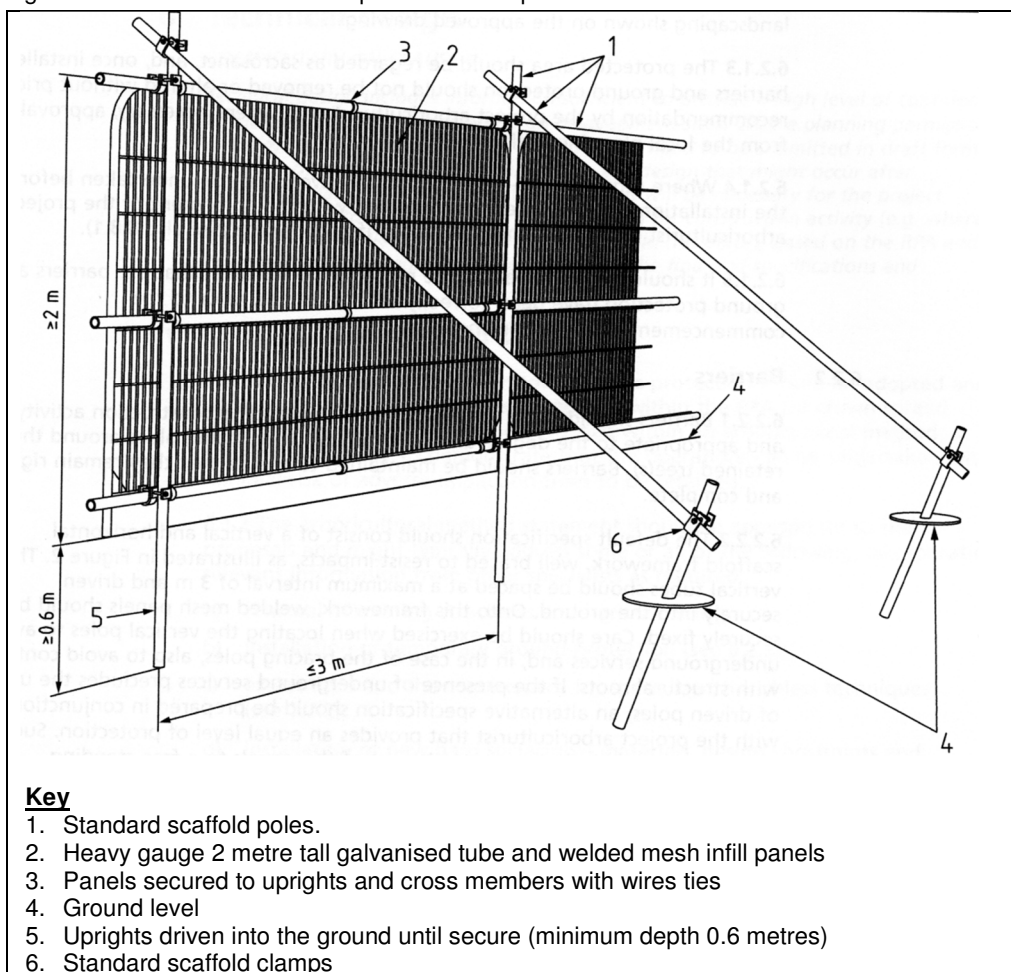


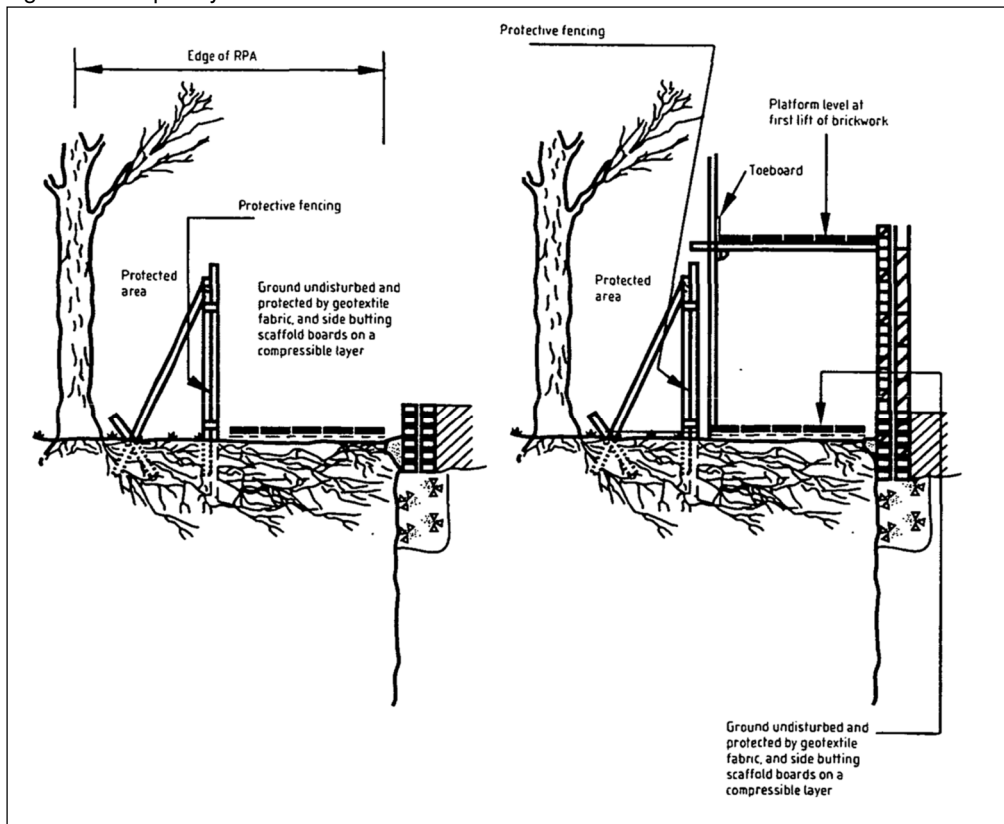
Figure 2: BS5837:2012 Default specification for protective barrier



Temporary Ground Protection

1. Any necessary Temporary Ground Protection areas shall conform to Figure 3, below, unless otherwise agreed with the LPA.
2. The Ground Protection Area shall be left undisturbed and covered by a semi-permeable geotextile membrane which shall, in turn, be covered by a compressible layer consisting of a material such as woodchip.
3. Side-butting scaffold boards shall then be fitted to cover the Ground Protection Area.
4. On completion of installation, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Ground Protection.
5. The Temporary Ground Protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

Figure 3: Temporary Ground Protection – Recommended Construction





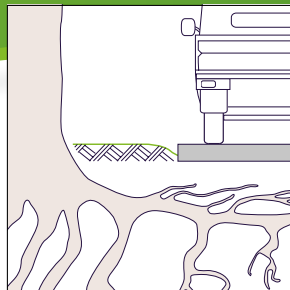
GEOSYSTEMS®



GEOWEB®

TREE ROOT PROTECTION (TRP) SYSTEM

Powered by GEOSYSTEMS® technology.



defining **green** in cellular confinement

Greenfix™

SOIL STABILISATION AND EROSION CONTROL LTD

THE PROBLEM

CONSTRUCTION-RELATED TREE DAMAGE

Critical Root Zone/Tree Protection Zone is the minimum area beneath a tree that must remain undisturbed to preserve a sufficient amount of root mass in order to give a tree a chance of survival.

When construction equipment and vehicles intrude a tree's Critical Root Zone, they can cause negative impacts to the soil environment including compaction of the soil, damage to near-surface roots and ultimately endanger the structural integrity of the tree. The majority of a tree's root system is contained within the top three feet of the surface, and construction excavation and compaction can damage or even destroy roots to the point where trees may not survive.

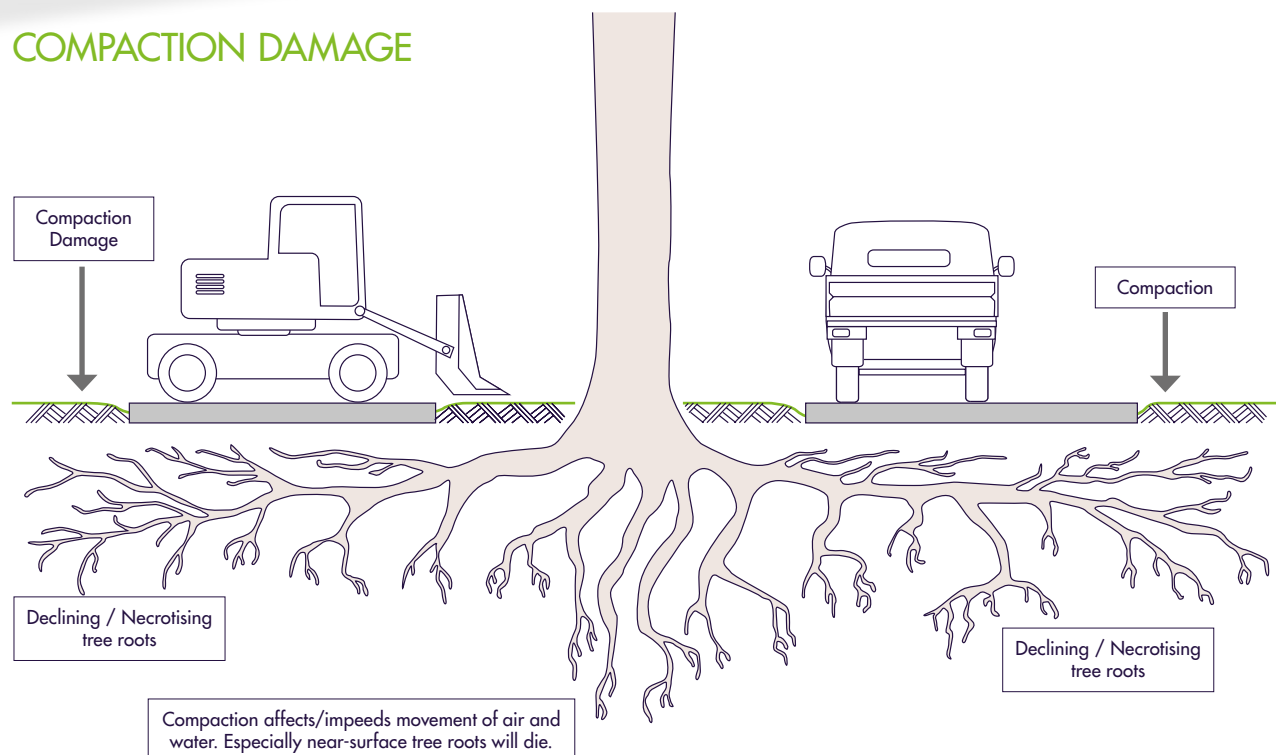
Tree Root Protection (TRP) systems should be eco-friendly as well as comply with local standards and regulations.*

*Compliance with Standards:

In the United Kingdom, Tree Root Protection systems must comply with the Arboricultural Method Statement as outlined in BS5837:2005 and may require supervision by an Arboriculturist.



COMPACTION DAMAGE



THE GEOWEB® SOLUTION

TREE ROOT PROTECTION (TRP) SYSTEM

Used extensively in civil engineering construction for over 30 years, the GEOWEB® system is a three-dimensional structure that:

- provides strength to confined soils
- distributes loads laterally, not vertically
- reduces point loads
- reduces compaction of the subsoil

Manufactured from high quality, high-strength polyethylene with a textured surface and perforated walls, GEOWEB® cells with selected infill control shearing, lateral and vertical movement, and reduce subbase depth requirements.

The GEOWEB® system is a low impact development (LID) solution with exceptional load-bearing capabilities and environmental benefits. The system has a long history of solving heavy load support problems for roadways, road base support, parking lots, road shoulders, ports, trucking/intermodal terminals and railroads.

COST BENEFITS

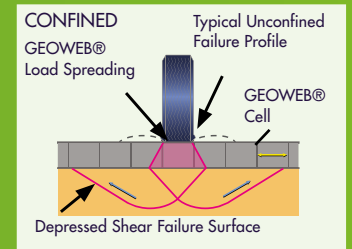
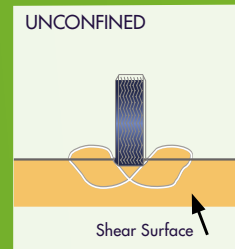
The GEOWEB® TRP system is an economical solution for reducing construction vehicle impact to the tree root zone compared with other methods. Once installed, the system has minimal-to-no visibility.

ENVIRONMENTAL BENEFITS

With permeable infill (topsoil/vegetation, aggregate, sand), perforated GEOWEB® cell walls offer environmental benefits:

- water infiltration
- lateral movement of air and water
- water and nutrient migration
- promotes root development

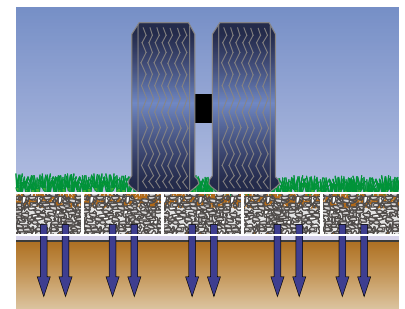
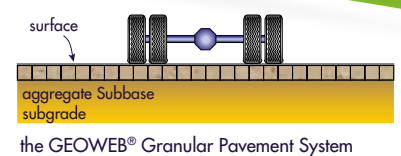
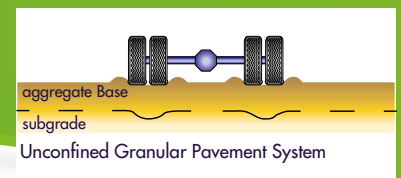
The tree root protection system can be a temporary or permanent solution.



LOAD DISTRIBUTION

By distributing and bridging applied loads, the GEOWEB® TRP system reduces vertical stresses that are typically applied to the underlying soil and root zone.

The GEOWEB® system is ideally suited for tree root protection applications where weak subsoil or no-dig restrictions exist.



GEOWEB®

TRP SYSTEM INSTALLATION

Step 1: Remove the upper grass and soft soils by hand or by machine if acceptable.

Step 2: Install a high-strength woven geotextile allowing adequate drainage as a separation layer between soft subgrade and GEOWEB® infill material.

Step 3: Expand GEOWEB® sections over the area to be protected and use temporary stakes or weights to hold sections open to prevent movement during infilling.

Step 4: Connect adjacent sections using ATRA® Keys. Position the sections so the slots are aligned, insert the key and turn 90 degrees locking the panels together. ATRA® Keys provide a long-term connection that is safer, quicker and stronger than staples or cable ties. In environmentally protected areas (SSSI in United Kingdom), ATRA® Keys can be used without the requirement for diesel-fueled compressors.

Step 5: For permeability, infill the fully connected GEOWEB® system with a well graded, crushed, angular stone such as MOT Type 1X (also known as MOT Type3). Over fill the cells by up to 30mm to allow for compaction.

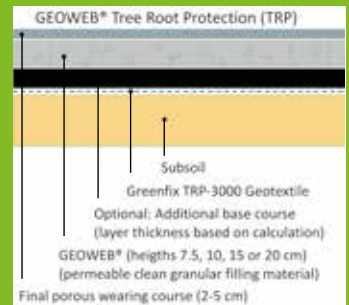
Step 6: Compact the fill material with conventional plant or non-vibratory plant when required. Fill should be maintained above the GEOWEB® system by a minimum of 10mm at all times or a permanent wearing course of blocks, porous asphalt or gravel installed.



DESIGN CONSIDERATIONS

It is important to ensure the correct GEOWEB® cell size and cell depth are specified and installed based on the anticipated pavement loads. These are calculated based on the following criteria:

- traffic type and loading
- frequency of traffic
- subgrade strength (typically CBR, Ev2, Cu or SPT values)
- infill type
- allowable settlement of the pavement



To assist you in determining the correct GEOWEB® solution for your application, Presto GEOSYSTEMS® or their network of distributors/representatives can assist with the calculation for your project. You can be confident that you will receive the most suitable and economical solution for your project.

PRESTO GEOSYSTEMS® COMMITMENT — To provide the highest quality products and solutions.

Presto GEOSYSTEMS® is committed to helping you apply the best solutions for your tree root protection needs. Our solutions-focused approach to solving problems adds value to every project. Rely on the leaders in the industry when you need a solution that is right for your application. Contact Presto GEOSYSTEMS® or our worldwide network of knowledgeable distributors/representatives for assistance.



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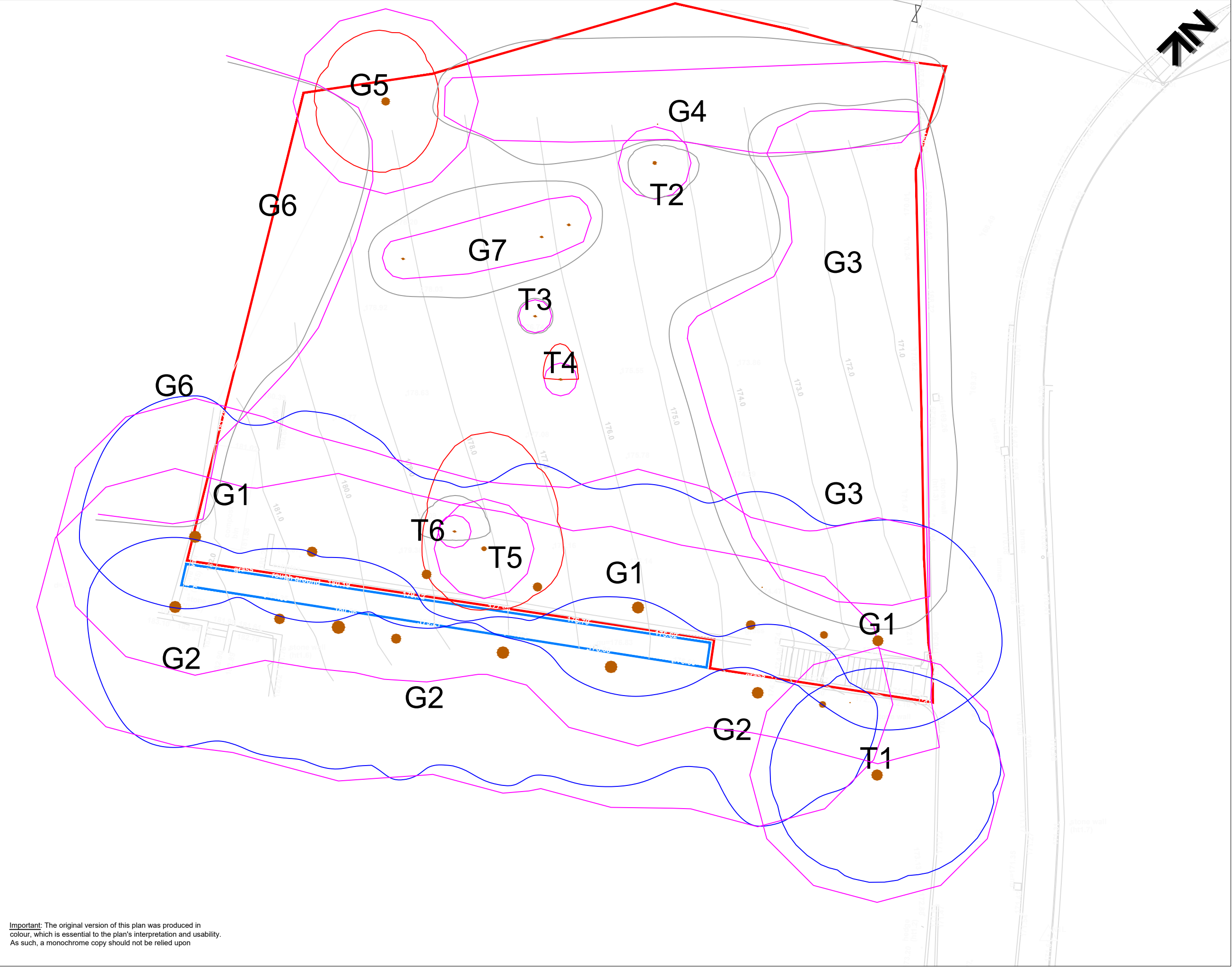
GREENFIX SOIL STABILISATION AND EROSION CONTROL SPECIALISTS

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GW/TRP01-A4 JAN 2012
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AP-6852



Important: The original version of this plan was produced in colour, which is essential to the plan's interpretation and usability. As such, a monochrome copy should not be relied upon

KEY

T = Individual Tree
G = Group of Trees

Please refer to associated Tree Survey Schedule for specific details in respect of items below:
Tree Categorisations:
Those to be Considered for Retention:

Category 'A' Tree/Group
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years

Category 'B' Tree/Group
Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years

Category 'C' Tree/Group
Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Those Considered Unsuitable for Retention:

Category 'U' Tree/Group
Those in Such a Condition that they Cannot Realistically be Retained as Living Trees in the Context of the Current Land Use for Longer Than 10 Years

Root Protection Areas (RPAs):

RPAs
Area(s) of Ground Around Trees that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone

Note: The tree locations of trees T2 to T4, and the locations and full extents of groups G3 to G7 were not included on the topographical site plan provided, and were subsequently plotted by the arboricultural surveyor at the time of the survey using GPS siting and, where possible, measurement triangulation from existing land features. As such, the locations and extents of these trees and groups cannot be considered to be entirely accurate

Project:
LAND OFF TANNERS STREET
RAMSBOTTOM
LANCASHIRE
BL0 9EG

Client:
BLAKEMAN DESIGN AND BUILD LTD

Title:
TREE CONSTRAINTS PLAN
in Relation to Proposal to Construct Detached Residential Dwelling

Scale:1:200@A3

Date:November 2019

Drawn by:EA

Checked by:JL

Bowland

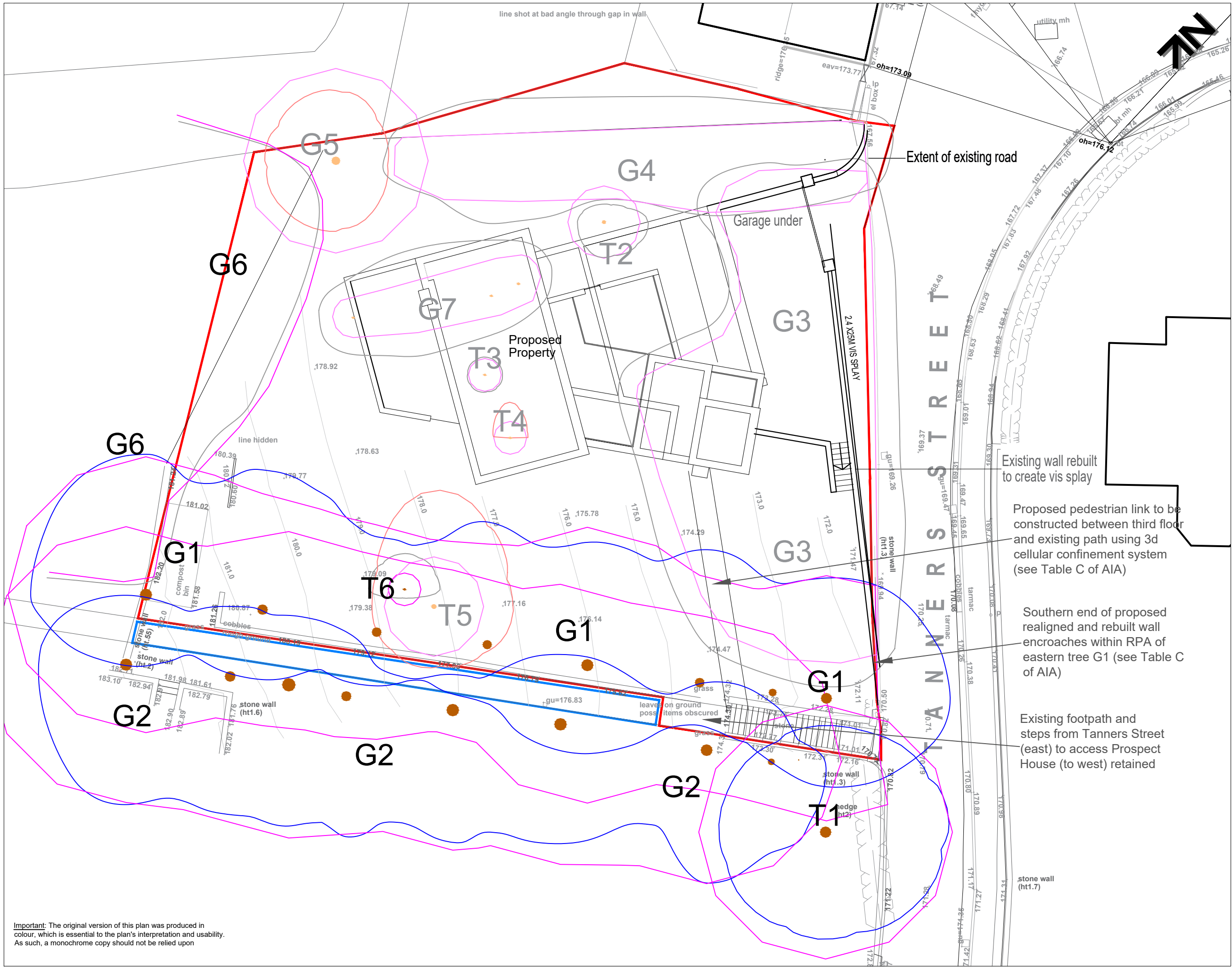
Tree Consultancy Ltd

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Ref: BTC2118-TCP

Rev:



KEY

T = Individual Tree
G = Group of Trees

Please refer to associated Arboricultural Impact Assessment for specific details in respect of items below:

Tree Categorisations:

Those to be Considered for Retention:

Category 'A' Tree/Group
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years

Category 'B' Tree/Group
Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years

Category 'C' Tree/Group
Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Those Considered Unsuitable for Retention:

Category 'U' Tree/Group
Those in Such a Condition that they Cannot Realistically be Retained as Living Trees in the Context of the Current Land Use for Longer Than 10 Years

Root Protection Areas (RPAs):

RPAs
Area(s) of Ground Around Trees that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone

Note 1: The locations of trees T2 to T4, and the locations and extents of groups G3 to G7, were not included on the topographical site plan provided, and were subsequently plotted by the arboricultural surveyor at the time of the survey using GPS stiling and, where possible, measurement triangulation from existing land features. As such, the locations and extents of these trees and groups cannot be considered to be entirely accurate
Note 2: Trees and groups with their identifying numbers labelled in grey are proposed for removal in the context of the proposed development

Project:
LAND OFF TANNERS STREET
RAMSBOTTOM
LANCASHIRE
BL0 9EG

Client:
BLAKEMAN DESIGN AND BUILD LTD

Title:
TREE IMPACT PLAN
in Relation to Proposal to Construct Detached Residential Property

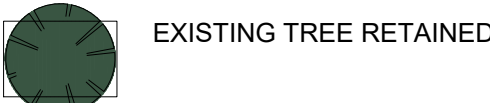
Scale: 1:200@A3
Date: March 2021
Drawn by: EA & JL
Checked by: PH

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Ref: BTC2118-TIP
Rev:



EXISTING SITE:



SOFT LANDSCAPE:

- PROPOSED FEATURE TREE/LARGE SPECIMEN TREE
SIZES AS PER PLANT SCHEDULE
- PROPOSED SPECIMEN STRUTURE TREES FEATHERED/MULTI-STEM
TREES/SHRUBS TO CREATE SCREENING
SIZES AS PER PLANT SCHEDULE
- PROPOSED CLIMBING PLANTS TO GREEN BUILDING FACADE
SECURED TO FACE OF WALL WITH STEEL CABLE SYSTEM
SYSTEM SUPPLIED BY 'JACOB' OR SIMILAR APPROVED
- PROPOSED NATIVE STRUCTURE PLANTING
INCLUDING NATIVE WOODLAND EDGE SPECIES
PLANTED AS WHIPS AND FEATHERS
- PROPOSED GROUNDCOVER PLANTING
INCLUDING NATIVE WOODLAND GROUND FLORA
(FERNS, HERBS AND GROUNDCOVERS)

- SOFT LANDSCAPE SPECIFICATION NOTES:
- ALL PLANTING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS 4043, BS 4428 AND BS 5837
 - ALL PLANTING/TURF AREAS TO BE PREPARED BY REMOVING ANY DETRITUS/CONSTRUCTION MATERIALS AND STONE/ROCK/BRICK GREATER THAN 40MM DIAM. AREA SHALL BE CLEARED OF WEEDS USING A TRANSLOCATED HERBICIDE AND CULTIVATED TO A DEPTH OF 300MM. WHERE EXISTING SOIL IS POOR QUALITY TOPSOIL SHALL BE IMPORTED.
 - ALL PLANTS SUPPLIED SHALL COMPLY WITH BS3936: PARTS 1 TO 10 AS RELEVANT, BS 4043 AND THE NATIONAL PLANT SPECIFICATION, PUBLISHED BY THE HORTICULTURAL TRADES ASSOCIATION.
 - ALL LAWN AREAS TO BE CULTIVATED TO A DEPTH OF 150MM PRIOR TO LAYING OF TURF. IF THE EXISTING SOIL IS POOR QUALITY - TOPSOIL SHOULD BE IMPORTED.
 - ALL SHRUB PLANTING AREAS TO RECEIVE A 50MM LAYER OF ORGANIC SOIL CONDITIONER (GRO CHAR OR SIMILAR APPROVED) AND BE CULTIVATED TO A DEPTH OF 300MM PRIOR TO PLANTING.
 - ALL IMPORTED TOPSOIL MUST COMPLY WITH BS 3882:2015
 - ALL PLANTS ARE TO RECEIVE SLOW RELEASE FERTILISER TO THE PITS. SIDES OF PITS TO BE LOOSENEED PRIOR TO PLANTING.
 - ALL PLANTING AREAS TO BE MULCHED WITH 75MM TO 100MM DEPTH OF BARK CHIP.

- GENERAL NOTES:
- DO NOT SCALE FROM THIS DRAWING
 - DIMENSIONS GOVERN
 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE ON THE DRAWINGS
 - ALL DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO ANY CONSTRUCTION
 - YD2 SHALL BE NOTIFIED OF ANY DISCREPANCIES

DRAWING NOTES:					
(-)	FIRST ISSUE - ISSUED FOR PLANNING APPLICATION	AV	AV	12/03/2021	
REV	DESCRIPTION	DRAWN	CHECKED	DATE	

PROJECT TITLE

**LAND OFF TANNERS STREET
RAMSBOTTOM**

DRAWING TITLE

**LANDSCAPE PLAN
PLANTING PROPOSALS**

SCALE

**@ A1
1:100**

DATE

MAR 21

PROJECT NUMBER

YD2_YR_NO

DRAWING No.

YD2_TL_LP001

REVISION

(-)

Squareyard

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