



Arboricultural Impact Assessment

in Relation to Proposed Partial Demolition of
Existing Building, Construction of New Infant School
Block, and Extension of Car Parking Provision at



**St James C of E Primary School,
Greenacre Lane, Clitheroe,
Lancashire, BB7 1ED**

Prepared by:

Bowland 
Tree Consultancy Ltd

September 2023

**ARBORICULTURAL IMPACT ASSESSMENT
ST JAMES C OF E PRIMARY SCHOOL, CLITHEROE**

CONTROL SHEET

Project No.: BTC2697

Site: St James Primary School, Greenacre Lane, Clitheroe, BB7 1ED

Agent: Cassidy + Ashton Group Ltd

Council: Ribble Valley Borough Council

Survey Date: 29 March 2023

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DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques. 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 in areas of ground vegetation, cannot therefore be expected. All obvious defects, however, are reported. 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 regards 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.

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 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 potentially unacceptable risk to persons and/or property has been identified during our survey. 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 first attempt to inform the site occupier of the issues and, if not possible, then inform the relevant Council. 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 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.

The tree survey and any report information provided is intended as a guide to identify key tree related constraints to site development only. As such, 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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Validity: The findings and recommendations contained within this report are, providing its recommendations are observed and the site conditions are retained as per the date(s) of the survey, valid for a period of twelve months from the last survey date. This period of validity may be reduced should there be any changes in factors affecting both the surrounding environment and/or built structures in relative proximity to the trees. The condition of trees should be re-appraised directly, through a site survey, following major weather events such as storms, changes undertaken to the site's conditions, inclusive of demolition and/or ground works, or the removal of existing site vegetation, including trees.

**ARBORICULTURAL IMPACT ASSESSMENT
ST JAMES C OF E PRIMARY SCHOOL, CLITHEROE**

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1.0 INTRODUCTION

Terms of Reference

- 1.1 Bowland Tree Consultancy Ltd were instructed to:
- 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;
 - 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, trees proposed for removal, trees proposed for retention, etc.;
 - Prepare a tabulated Tree Survey Schedule based on guidance specified BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations;
 - Evaluate the potential tree related impacts and design conflicts of the proposals, based on the supplied development proposal plan(s);
 - Advise on removal, retention and management options for the trees in the current context and in the context of the proposed development;
 - Advise on suitable retained tree protection measures required during development; and
 - Produce an Arboricultural Impact Assessment report outlining the main tree related issues and reasonably foreseeable tree impacts in relation to the proposals and indicating 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 Ribble Valley Borough Council, 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 29 March 2023, 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 23 individual trees (prefixed 'T'), 11 groups of trees (prefixed 'G'), and five hedges (prefixed 'H'), which have been numbered accordingly on the Tree Constraints Plan (TCP) and Tree Impact Plan (TIP), as appended. The TCP, which details the existing site with the readily definable tree constraints, is based on the topographical survey plan supplied, whilst the TIP, which also has an overlay of the site proposal plans, is based on the proposed development plan supplied. Both the topographical survey plan and the proposed site plan were provided in electronic format by the client's agent, Cassidy and Ashton Group Ltd, and, for the purpose of this report, the provided plans' details are presumed to be accurate.
- 1.5 The purpose of the TCP and the TIP is to give an initial indication of the constraints that the trees present to site development and the associated projected impacts of the proposals, and should subsequently be used by the LPA's tree specialist to preliminarily assess if the proposed development is viable 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 information available on the council's website the site does not stand within a CA. Additionally, it is noted that the available information on the LPA's website does not list any TPOs at the site. Nonetheless, it should be noted that online information cannot be guaranteed to be completely up to date, and it is therefore strongly recommended that the LPA be contacted directly to check for the presence of any statutory protection 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 Bird nesting season runs from March to August inclusive. 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. 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 2017 (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 including and unlimited fine and/or a prison sentence. 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 (i.e. detailed) planning permission granted under the Town and Country Planning Act 1990.

3.0 THE SITE AND THE SURROUNDINGS

- 3.1 The site is located approximately half a kilometre south of Clitheroe town centre and stands within the administrative boundaries of Ribbles Valley Borough Council. It currently comprises of two school buildings with associated car parks and hard landscaped play areas, with one building to the east and one to the west of Mearley Brook, which runs through the centre of the site in a north-east to south-west direction (see TCP). There is a footbridge connecting the eastern and the western sections of the site.
- 3.2 The site is bordered to the north by Greenacre Street to the east by a mix of residential and commercial properties on Whalley Road, to the south by woodland and open ground, and to the west by residential properties on Woone Lane. There is a single vehicular access to the eastern section of the site, off Greenacre Street to the north, and there are various pedestrian access points to both parts of the site; from Greenacre Street to the north, Whalley Road via an alleyway to the east, the adjacent land to the south, and the alleyway to Woone Lane to the west.
- 3.3 The topographical survey plan provided indicates that ground levels within the site boundaries vary by up to approximately 1 metre, from the lowest point on the western boundary to the highest point in the south-eastern corner of the site.

4.0 THE TREE POPULATION

- 4.1 As noted previously, a total of 23 individual trees, 11 groups of trees, and five hedges were surveyed. They range from young to mature in age, with heights up to 17 metres, maximum diametral crown spreads up to approximately 17 metres, and stem diameters up to 690 millimetres. 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 site development proposals into account. However, recommendations for works included in the TSS take both current site usage into consideration and the proposed site development where there are definable development related 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'.

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

	Ret. Cats.	Tree/Group/Hedge Numbers	Totals
Those of a moderate or high quality that should be afforded appropriate consideration in the context of development	'A'	-	-
	'B'	T6, T9, T16, T17, T20, T21, T22, T23	8 Trees
Those of a low quality that should not be considered a material constraint to development	'C'	T1, T2, T4, T5, T7, T8, T10, T13, T14, T18, T19, G1, G2, G5, G6, G7, G10, G11, H1, H2, H3, H4, H5	11 Trees 7 Groups 5 Hedges
Those that should be removed for sound management reasons regardless of site proposals	'U'	T3, T11, T12, T15, G3, G4, G8, G9*	4 Trees 4 Groups
			= 23 Trees, 11 Groups & 5 Hedges in total

*Denotes trees/groups/hedges located wholly, partially or potentially partly on neighbouring land and subsequently understood to be under third party ownership

- 4.4 As detailed in Table A (previous page), eight trees were categorised as moderate quality (i.e. 'B' category), 11 trees, seven groups, and five hedges were categorised as low quality (i.e. 'C' category), and four trees and four groups were classed as unsuitable for long term retention (i.e. 'U' category) regardless of the development proposals (see TSS).

5.0 THE DEVELOPMENT PROPOSAL AND ITS PROJECTED ARBORICULTURAL IMPACTS

The Development Proposal

- 5.1 From the information provided to date by the agents for the client, Cassidy and Ashton Group Ltd, it is understood that the proposal is for the *“Redevelopment of the existing educational facility including part demolition of the existing infant school to provide a standalone nursery facility, together with the remodelling of, and extension to, the existing junior school, and erection of a new infant block to the rear of the building, alongside additional car parking, soft and hard landscaping treatment and vehicular access works off Greenacre Street”* (see TIP).

Projected Arboricultural Losses Relating to the Development Proposals

- 5.2 From the information provided to date it is projected that, as detailed in Table B, below, and not including the 'U' category trees that are recommended for removal regardless, construction of the development as proposed will require the removal of three low quality (i.e. 'C' category) trees, one low quality group, part of a second low quality group, and three lengths of low quality hedge (see TIP).

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 context of development	'A'	-	-	-
Those of a moderate quality that should be afforded appropriate consideration in context of development	'B'	-	-	-
Those of a low quality that should be afforded appropriate consideration in context of development	'C'	T1, T2, T13, G2 (part), G11, H1, H2, H3	-	3 Trees 1 Group 1 partial Group 3 Hedges
Those that should be removed for sound management reasons regardless of plans	'U'	-	T3, T11, T12, T15, G3, G4, G8, G9*	4 Trees 4 Groups
Totals		3 Trees 1 Group 1 partial Group 3 Hedges	4 Trees 4 Groups	= 7 Trees, 5 Groups, 1 partial Group & 3 Hedges in Total

*Denotes trees/groups/hedges located wholly, partially or potentially partly on neighbouring land and subsequently understood to be under third party ownership, whereby the tree owner(s) should be informed of any works recommendations for trees under their management that have been made herein

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

- 5.3 It is noted that the proposed layout, over the wider school site has a sufficient, amount of outdoor landscape space to accommodate up to approximately 17 new trees of appropriate moderate to large growing species. In this respect it is noted that the layout provides an opportunity for extensive new tree planting to the site's north, close to its northern boundary to Greenacre Street, with suggested indicative locations of new tree planting indicated on the TIP.
- 5.4 In turn, the provision of new tree planting with up to 17 appropriate moderate to large growing species is projected to confer a substantial long-term visual amenity, due to the location close the frontage to a busy road.

- 5.5 Consequently, specific details regarding tree planting, as part of a landscape proposal plan, should be prepared and provided by a landscape architect in accordance with the guidance listed herein at paragraphs 7.5 and 7.6. Accordingly, the provision of and adherence to a detailed landscape proposal plan can be assured through the imposition of a suitably worded condition attached to a planning approval.
- 5.6 In turn, the landscaping scheme should be prepared in strict accordance with any relevant government guidance, specifically BS8545:2014 - Trees: From Nursery to Independence in the Landscape – Recommendations, as well as section 5.6 and Table A.1 of BS5837:2012.

Special Design, Construction and Protection Considerations in Relation to Retained Trees

- 5.7 The appraisal identified that there are various site development works proposed in close proximity to and within the RPAs and canopies of a number of retained trees, 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 specially designed material and/or the use of appropriate working methods and procedures.
- 5.8 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 and protection measures, specific details of which are given in Table C, below.

Table C: Elements of Proposal with Potential to Impact Upon Trees and Subsequent Special Measures Required

Element(s) of Proposal with Potential to Impact Upon Retained Trees	Applicable Tree(s)	Proposed Special Measures	Relevant BS5837 Section(s) to be Adhered to	Information Required for Provision and Relevant Specialist(s)*
Construction of hard-surfaced footpath and vehicular access / car park to north-west of site	T5, T5, T6, T7	Proposed footpath and vehicular access / car park, where they encroach within retained trees' RPAs, to be constructed using a 'no dig' 3-dimensional cellular confinement system (see appended Manufacturer's Brochure), 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.	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 driveway installation

*All documentation and information supplied by the stated professional(s) should afford a suitable level of protection for the tree(s) under consideration in accordance with BS5837:2012

- 5.9 In turn, as also detailed in Table C, it will be necessary for the responsible applicable professional(s) to provide further detailed information regarding the proposed works and the special measures to be utilised, the provision of which can be assured through the imposition of a suitably worded condition attached to a planning approval.
- 5.10 Consequently, in order to ensure adequate protection of the retained trees throughout the development, specific details regarding the timing, procedures, working methods and protective measures to be used in relation to the proposed construction works within and in close proximity to RPAs, as detailed in Table C, should be included on a Tree Protection Plan (TPP) and in an Arboricultural Method Statement (AMS), as discussed at paragraph 6.6 and based on information provided from the applicable specialist(s) detailed at Table C, above. In turn, the provision of and the adherence to a TPP and AMS can be conditioned to a planning approval.

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 TCP, 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 RPAs are indicated as magenta coloured shapes on the TCP and 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 the existing service and/or drainage runs, or any proposed amendments to these routes, 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. 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. In turn, the production of and adherence to an AMS and a 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 removals should commence until necessary consents have been obtained from the LPA as part of a planning approval or in respect of statutory tree protection (e.g. TPOs).

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.

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 to the project tree consultant.

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 Twenty-three individual trees, 11 groups of trees, and five hedges were surveyed in respect of a proposed partial redevelopment of the site under consideration.
- 8.2 Eight trees were categorised as moderate quality, 11 trees, seven groups, and five hedges were categorised as low quality, and four trees and four groups were classed as unsuitable for long term retention regardless of the development proposals.
- 8.3 An appraisal of the documentation provided to date identified that construction of the development as proposed will require the removal of three low quality trees, one low quality group, part of a second low quality group, and three lengths of low quality hedge.
- 8.4 Nonetheless, it is noted that the proposed layout evidently has sufficient space that is considered suitable for new planting with up to 17 trees of appropriate moderate to large growing species, as a component of its landscape scheme, the provision of which is projected to confer a substantial long-term visual amenity.
- 8.5 In turn, the provision of high quality new tree planting, as part of a landscape proposal plan, can be assured through the imposition of a suitably worded condition attached to a planning approval.
- 8.6 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.
- 8.7 In addition to the above it is also concluded that, in order to ensure successful existing tree preservation over the long-term, it is essential that any retained trees are protected in strict accordance with current Government guidance and the recommendations included herein.
- 8.8 In this respect the appraisal identified that various proposed construction related works have the potential to impact upon the RPAs and canopy spreads of several retained trees, and special construction, working and protection methods and measures are subsequently proposed in order to minimise any potential damage to the trees in question.
- 8.9 Accordingly, in order to ensure adequate protection of retained trees, then the aforementioned special consideration factors 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.
- 8.10 As a final point, it should also be noted that all site works discussed herein should also be carried out in strict accordance with specific 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.

APPENDICES



TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT ASSESSMENT	
Site:	St James C of E Primary School, Greenacre Lane, Clitheroe, Lancashire, BB7 1ED
Agent for Client:	Cassidy & Ashton Group Ltd

Surveyor:	Phill Harris Chartered Arboriculturist
Survey Date:	29 March 2023
Job Ref:	BTC2697

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	Silver Birch	14	410	N E S W 5 2.5 5 5	4-W 3	EM	G	<ul style="list-style-type: none"> Slight stem lean east. Branch failure wound at a height of approximately 5m up to approximately 100mm diameter on west side of canopy. Previously heavily topped at a height of approximately 9m with resultant cavities to both main stems. 	<ul style="list-style-type: none"> Remove tree in order to construct development as proposed. Compensate for loss through provision of new tree planting, with appropriate moderate to large growing species (see Tree Impact Plan (TIP)). 	10+	C1	76	4.92
T2	Aspen	13	330	N E S W 1 1 4.5 4	6-NW 5	SM	M/G	<ul style="list-style-type: none"> Metal item embedded at stem base. Girdled root of approximately 50mm diameter to south. Multiple occluded pruning wounds up to approximately 100mm diameter from a height of approximately 5m. Highly biased crown south-west due to partial suppression by neighbouring tree. Low value due to very poor form. 	<ul style="list-style-type: none"> Remove tree in order to construct development as proposed. Compensate for loss through provision of new tree planting, with appropriate moderate to large growing species (see TIP). 	10+	C1	49	3.96
T3	Rowan	13.5	500	N E S W 4 5 3.5 3	3-W 5	M	M/G	<ul style="list-style-type: none"> Decay strip up to approximately 50mm width on south side of stem from base up to approximately 4m. Stem divides into multiple primary branches from a height of approximately 3m. One primary branch has decay strip from its base to a height of approximately 5m. Multiple occluded pruning wounds up to approximately 150mm diameter from a height of approximately 2m. Moderately progressive reduction in vitality. Short projected remaining life expectancy of less than 10 years. 	<ul style="list-style-type: none"> Remove tree due to poor structural condition (see Comments) and subsequent short projected remaining life expectancy. Compensate for loss through provision of new tree planting, with appropriate moderate to large growing species (see TIP). 	<10	U	113	6

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 nearest half 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: St James C of E Primary School, Greenacre Lane, Clitheroe, Lancashire, BB7 1ED
Agent for Client: Cassidy & Ashton Group Ltd

Surveyor: Phill Harris Chartered Arboriculturist
Survey Date: 29 March 2023
Job Ref: BTC2697

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)
T4	Rowan	6.5	180	N E S W 2 2 2 1	2-S 3	SM	M	<ul style="list-style-type: none"> Minor stem lean north. Multiple occluded pruning wounds to approximately 150mm diameter on north side of stem from a height of approximately 2m. Three nails embedded in stem to east at a height of approximately 2m. Crown showing a moderate reduction in vitality. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's Root Protection Area (RPA), as far as is practicable in context of proposals, throughout course of development through establishment of a Construction Exclusion Zone (CEZ) in accordance with temporary fencing specification. Construct proposed footpath and vehicular access, where they encroach within tree's RPA, using 3d cellular confinement system in accordance with s7.4 of BS5838:2012 (see Table C of AIA and TIP). 	10+	C1	15	2.16
T5	Rowan	9	300	N E S W 3 4 0 3	2-SE 4	SM	M	<ul style="list-style-type: none"> Multiple occluded pruning wounds up to approximately 100mm diameter from a height of approximately 2m. Significant reduction in vitality on western side of canopy. Moderate amounts of deadwood up to approximately 100mm diameter. Highly biased crown north. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA, as far as is practicable in context of proposals, throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. Construct proposed footpath and vehicular access, where they encroach within tree's RPA, using 3d cellular confinement system in accordance with s7.4 of BS5838:2012 (see Table C of AIA and TIP). 	10+	C1	41	3.6
T6	Whitebeam	9.5	440	N E S W 3 5 4 5.5	2-W 3	EM	G	<ul style="list-style-type: none"> Stem divides into multiple primary branches from a height of approximately 2m. Canopy slightly suppressed from neighbouring tree T5 on north side. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA, as far as is practicable in context of proposals, throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. Construct proposed footpath and vehicular access, where they encroach within tree's RPA, using 3d cellular confinement system in accordance with s7.4 of BS5838:2012 (see Table C of AIA and TIP). 	20+	B1	88	5.28
T7	Silver Birch	10.5	240	N E S W 2 3 3 4	6-NW 2	SM	M/G	<ul style="list-style-type: none"> Minor stem lean west. Signs of mechanical damage to stem base. Number of partially occluded pruning wounds up to approximately 80mm diameter from a height of approximately 3m. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA, as far as is practicable in context of proposals, throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. Construct proposed footpath and vehicular access, where they encroach within tree's RPA, using 3d cellular confinement system in accordance with s7.4 of BS5838:2012 (see Table C of AIA and TIP). 	10+	C1	26	2.88

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Surveyor:	Phill Harris Chartered Arboriculturist
Survey Date:	29 March 2023
Job Ref:	BTC2697

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m ²)	RPA Radius (m)
T8	Aspen	15.5	380	N E S W 6.5 5 2 2.5	N/A 3	SM	M	<ul style="list-style-type: none"> Located within wider group G2. Moderate stem lean and highly biased crown north-east. Sand bags packed around stem base thereby restricting access for detailed inspection. Stem base approximately 0.5m distance from steel shed. Multiple pruning wounds up to approximately 100mm diameter from a height of approximately 2m. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	10+	C1	65	4.56
T9	Silver Birch	15.5	460	N E S W 4 2.5 3 5	3-S 3	EM	G	<ul style="list-style-type: none"> Located within wider group G2 Minor stem lean north. Stem bifurcates at a height of approximately 3.5m. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	20+	B1/2	96	5.52
T10	Wild Cherry	12	350	N E S W 6 1 2 7	3-N 3	EM	G	<ul style="list-style-type: none"> Located within wider group G3. Stem divides into multiple primary branches at a height of approximately 3m. Gum exuding lesion on west of stem at a height of approximately 3m. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	10+	C1	55	4.2
T11	Common Ash	15	300	N E S W 4.5 4.5 4.5 4.5	N/A 4	SM	M	<ul style="list-style-type: none"> Located within wider group G2. Moderate reduction in vitality due to colonisation by Ash Dieback Disease (ADD). Short projected remaining life expectancy of less than 10 years. 	<ul style="list-style-type: none"> Remove tree due to colonisation by ADD and subsequent short projected remaining life expectancy. 	<10	U	41	3.6
T12	Common Ash	15	350	N E S W 4 4 4 3	2-S 3	SM	M	<ul style="list-style-type: none"> Located in greater extent of group G2. Moderate reduction in vitality due to colonisation by ADD. Short projected remaining life expectancy of less than 10 years. 	<ul style="list-style-type: none"> Remove tree due to colonisation by ADD and subsequent short projected remaining life expectancy. 	<10	U	55	4.2
T13	Lime	17	690	N E S W 8.5 8.5 3.5 8.8	2-W 2	M	G	<ul style="list-style-type: none"> Extensive ground compaction in rootzone. Exposed structural roots on south side of stem. Moderate stem lean north. Stem divides into multiple primary branches from a height of approximately 2m with tight stem unions and included bark. 	<ul style="list-style-type: none"> Remove tree in order to construct development as proposed. Compensate for loss through provision of new tree planting, with appropriate moderate to large growing species (see TIP). 	10+	C1/2	215	8.28
T14	Japanese Cherry	4.5	320	N E S W 5 3 2 2	1-E 2	SM	M	<ul style="list-style-type: none"> Located within hedge H4. Moderate stem lean east. Stem divides into multiple stems from a height of approximately 2m. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	10+	C1	46	3.84

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T15	Common Ash	13.5	350#	N E S W 4 4 4	N/A 4	EM	M	<ul style="list-style-type: none"> Located on neighbouring land on opposite side of retaining stone wall and subsequently not inspected in detail. NB: Tree understood to be within wider school ownership boundary, as denoted by blue-line boundary on TCP. Moderate reduction in vitality due to colonisation by ADD. Short projected remaining life expectancy of less than 10 years. 	<ul style="list-style-type: none"> Remove tree due to colonisation by ADD and subsequent short projected remaining life expectancy. 	<10	U	55	4.2
T16	Silver Maple	14.5	350	N E S W 4 4 4	3-W 2.5	SM	G	<ul style="list-style-type: none"> Minor stem lean east. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	20+	B1	55	4.2
T17	Norway Maple	9	290	N E S W 3.5 3.5 3.5	3 3.5	SM	G	<ul style="list-style-type: none"> Majority of root system under tarmac hard surface, which has evidently sustained some displacement. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	20+	B1	38	3.48
T18	Norway Maple	8	220	N E S W 3 2 1.5 2	2.5 2	Y	M	<ul style="list-style-type: none"> Majority of root system under tarmac hard surface. Upright 90mm diameter primary branch arises at a height of approximately 2m with a tight compression fork. Crown showing signs of a moderate reduction in vitality with moderate amount of deadwood up to approximately 90mm diameter. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	10+	C1	22	2.64
T19	Norway Maple	4.5	100	N E S W 1.5 1.5 1 1	2.5 2-E	Y	M	<ul style="list-style-type: none"> Majority of root system under tarmac hard surface. Crown showing signs of a moderate reduction in vitality. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	10+	C1	5	1.2
T20	Norway Maple	8	240	N E S W 3 2.5 3 3	2 2	Y	G	<ul style="list-style-type: none"> Majority of root system under tarmac hard surface. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	40+	B1	26	2.88
T21	Norway Maple	6	220	N E S W 3 2.5 2.5 2.5	2	Y	G	<ul style="list-style-type: none"> Majority of root system under tarmac hard surface. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	40+	B1	22	2.64

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No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m ²)	RPA Radius (m)
T22	Norway Maple	6.5	190	N 3 E 2 S 3 W 2	2 2	Y	G	Majority of root system under tarmac hard surface.	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	40+	B1	16	2.28
T23	Norway Maple	10	290	N 3.5 E 3.5 S 3.5 W 3	2.5 2-S	SM	G	Majority of root system under tarmac hard surface.	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of tree's RPA throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	40+	B1	38	3.48
G1	12no. Aspen	≤ 16	≤ 320	N ≤ 4 E ≤ 5 S ≤ 4 W ≤ 5	N/A ≥ 3	SM	M-G	<ul style="list-style-type: none"> Very closely spaced group. Eastern and southern edge of group growing in contact with retaining stone wall, with canopies overhanging adjacent river. Wooden frames from play area screwed into approximately seven trees. Moderate amounts of deadwood up to approximately 50mm diameter. All have biased crowns due to mutual suppression. 	<ul style="list-style-type: none"> Retain group in context of proposed development. Ensure protection of trees' RPAs throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. Monitor wall for displacement caused by direct contact from trees. 	20+	C2	≤ 46	≤ 3.84
G2	approx. 40no. Common Hazel, Field Maple, Common Hawthorn, Common Alder, etc.	≤ 14	≤ 320	N ≤ 3 E ≤ 3 S ≤ 3 W ≤ 3	N/A ≥ 3	SM	M-G	<ul style="list-style-type: none"> Very closely spaced group. Multiple trees growing in contact with retaining stone wall, with canopies overhanging adjacent river. Various wooden structures from children's play area screwed into trees along southern boundary of group. All have biased crowns due to mutual suppression. 	<ul style="list-style-type: none"> Remove section of group to its extreme west in order to construct proposed infant school block (See TIP). Retain remainder of group in context of proposed development. Ensure protection of retained trees' RPAs throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. Monitor wall for displacement caused by direct contact from trees. 	20+	C2	≤ 46	≤ 3.84
G3	3no. Common Ash	≤ 18	≤ 450	N ≤ 4 E ≤ 3 S ≤ 5 W ≤ 6	4-N ≥ 4	SM-EM	P-M	<ul style="list-style-type: none"> Loosely spaced group located on edge of group G2. Significant and evidently progressive reduction in vitality of all trees due to colonisation by ADD. Short projected life expectancies of less than 10 years. 	<ul style="list-style-type: none"> Remove group due to colonisation by ADD and subsequent short projected remaining life expectancy. 	<10	U	≤ 92	≤ 5.4

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No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m ²)	RPA Radius (m)
G4	6no. Common Ash	≤ 13	≤ 350	N ≤ 4 E ≤ 3 S ≤ 2 W ≤ 4	N/A ≥ 4	SM	M	<ul style="list-style-type: none"> Moderately spaced group within wider group G2. Moderate reduction in vitality due to colonisation by ADD. Short projected remaining life expectancy of less than 10 years. 	Remove group due to colonisation by ADD and subsequent short projected remaining life expectancy.	<10	U	≤ 55	≤ 4.2
G5	2no. Japanese Cherry	≤ 4	≤ 220	N ≤ 3 E ≤ 3 S ≤ 3 W ≤ 3	2-W ≥ 2	SM	M	<ul style="list-style-type: none"> Loose group located in raised planter adjacent to retaining stone wall. Eastern tree's stem covered in duct tape up to a height of approximately 1.5m. Both trees bottle grafted at a height of approximately 1.2m. Canopies showing a minor reduction in vitality. 	<ul style="list-style-type: none"> Retain group in context of proposed development. Ensure protection of trees' RPAs throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	10+	C2	≤ 22	≤ 2.64
G6	1no. Lawson Cypress, 1no. Leyland Cypress	≤ 9	≤ 180	N ≤ 1.5 E ≤ 1.5 S ≤ 1.5 W ≤ 1.5	N/A ≥ 1	Y	G	<ul style="list-style-type: none"> Closely spaced pair located in slightly raised planter. Located amongst various ornamental shrubs. 	<ul style="list-style-type: none"> Retain group in context of proposed development. Ensure protection of trees' RPAs throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	10+	C2	≤ 15	≤ 2.16
G7	2no. Lawson Cypress, 1 no. Cappadocian Maple	≤ 14	≤ 1x330 1x300 1x230 1x200 (ms)	N ≤ 4 E ≤ 3 S ≤ 3 W ≤ 3	N/A ≥ 1	SM-EM	M/G	<ul style="list-style-type: none"> Closely spaced group adjacent to chain-link fence. Western Lawson Cypress multi-stemmed from a height of approximately 1m. Areas of occluded stem damage on the western side of larger Lawson Cypress, up to approximately 70mm diameter. 	<ul style="list-style-type: none"> Retain group in context of proposed development. Ensure protection of trees' RPAs throughout course of development through establishment of a CEZ in accordance with temporary fencing specification. 	10+	C2	≤ 132	≤ 6.48
G8	2no. Common Ash	≤ 10	≤ 220#	N ≤ 4 E ≤ 3 S ≤ 3 W ≤ 4	3-W ≥ 2	SM	M	<ul style="list-style-type: none"> Loose pair located on neighbouring land on opposite side of retaining stone wall and subsequently not inspected in detail. NB: Trees understood to be within wider school ownership boundary, as denoted by blue-line boundary on TCP. Moderate reduction in vitality due to colonisation by ADD. 	Remove group due to colonisation by ADD and subsequent short projected remaining life expectancy.	<10	U	≤ 22	≤ 2.64
G9	2no. Common Ash	≤ 13	400#	N ≤ 4 E ≤ 7 S ≤ 5 W ≤ 3	N/A ≥ 3	EM	M	<ul style="list-style-type: none"> Closely spaced pair located on neighbouring land opposite fence and subsequently not inspected in detail. Very dense ivy covering stems up to a height of approximately 9m. Moderate reduction in vitality due to colonisation by ADD. 	Advise tree owner of colonisation by ADD and subsequent short projected remaining life expectancy.	<10	U	≤ 72	≤ 4.8

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No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m ²)	RPA Radius (m)
				N	E									
G10	Willow-Leafed Pear, Cherry Plum, Leyland Cypress	≤ 5	≤ 130	N ≤ 2 E ≤ 2 S ≤ 2 W ≤ 2	N/A ≥ 2	Y	M	▪ Closely spaced group of small trees and managed shrubs located adjacent to boundary fence.	▪ Retain group in context of proposed development. ▪ Ensure protection of trees' RPAs throughout course of development through establishment of a CEZ in accordance with temporary fencing specification.	10+	C1	≤ 8	≤ 1.56	
G11	Elder, Viburnum, Hinoki Cypress, etc.	≤ 4	≤ 3x80 (ms)	N ≤ 1.5 E ≤ 1.5 S ≤ 1.5 W ≤ 1.5	N/A ≥ 1	Y	M	▪ Closely spaced group of approximately five shrubs and young trees.	▪ Remove group in order to construct development as proposed.	10+	C1	≤ 9	≤ 1.66	
H1	Dog Rose	≤ 1.5	≤ 50	≈ 2 wide	N/A N/A	Y	G	▪ Short length of managed hedge located adjacent to entrance footpath.	▪ Remove hedge in order to construct development as proposed.	10+	C2	N/A	≈ 1	
H2	Common Beech	≤ 2	≤ 80	≈ 2 wide	N/A N/A	Y	G	▪ Short length of managed hedge located adjacent to building frontage	▪ Remove hedge in order to construct development as proposed.	10+	C2	N/A	≈ 1	
H3	Field Maple	≤ 2	≤ 100	≈ 2 wide	N/A N/A	SM	M/G	▪ Short length of managed hedge situated in contact with retaining stone wall. ▪ Gap of approximately 8m in hedge toward western boundary.	▪ Remove hedge in order to construct development as proposed.	10+	C2	N/A	≈ 1	
H4	Lawson Cypress, Common Holly	≤ 2.5	≤ 150	≈ 2 wide	N/A N/A	SM	M	▪ Short length of managed hedge situated adjacent to retaining stone wall.	▪ Retain hedge in context of proposed development.	10+	C2	N/A	≈ 2	
H5	Lawson Cypress, Common Holly	≤ 2.5	≤ 150	≈ 2 wide	N/A N/A	SM	M	▪ Short length of managed hedge situated adjacent to retaining stone wall.	▪ Retain hedge in context of proposed development.	10+	C2	N/A	≈ 2	

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

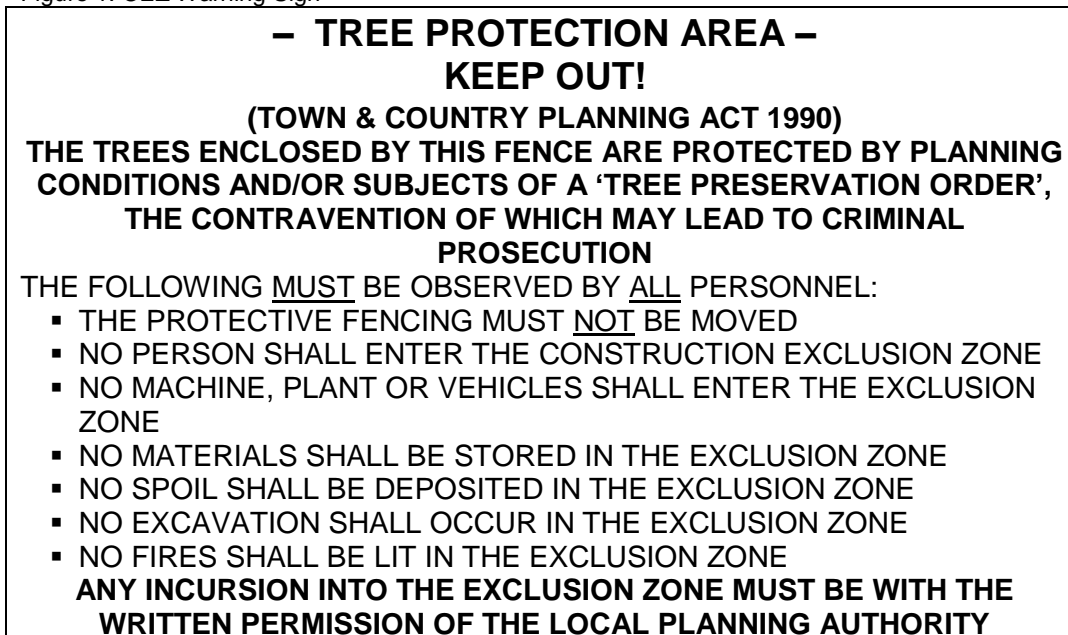
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
<p>Category U</p> <p>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> ▪ 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 <p><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></p>			Red
1. Mainly arboricultural qualities		2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Trees to be considered for retention				
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	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
<p>Category B</p> <p>Those of moderate quality and value: those in such a condition as to make a significant contribution. A minimum of 20 years is suggested.</p>	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
<p>Category C</p> <p>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</p>	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
	<p>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</p>			

- TEMPORARY PROTECTIVE FENCING & GROUND PROTECTION SPECIFICATION -

Construction Exclusion Zones (CEZs), shall be enclosed by **Temporary Protective Fencing** and/or, where necessary, **Temporary Ground Protection Measures**. The fencing/ground protection Type(s), locations, and extents shall be agreed, in writing, with the Local Planning Authority (LPA). In turn, the **Temporary Protective Fencing** and/or **Temporary Ground Protection Measures** shall:

1. be constructed as in accordance with the Type 1, Type 2 or Type 3 'Temporary Protective Fencing Construction' sections and, where applicable the 'Temporary Ground Protection Measures' section, as detailed herein and agreed, in advance with the LPA;
2. be retained in place throughout the development process until completion of the project, and only removed following receipt of written permission from the LPA;
3. be sited in the area(s) defined by the Root Protection Areas on the associated Tree Impact Plan, or as the CEZs on the Tree Protection Plan;
4. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
5. preclude any delivery of site accommodation and/or materials and/or plant machinery;
6. 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;
7. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance; and
8. be affixed with a 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below), at every 10.0 metre length of protective fencing.
9. Important: Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

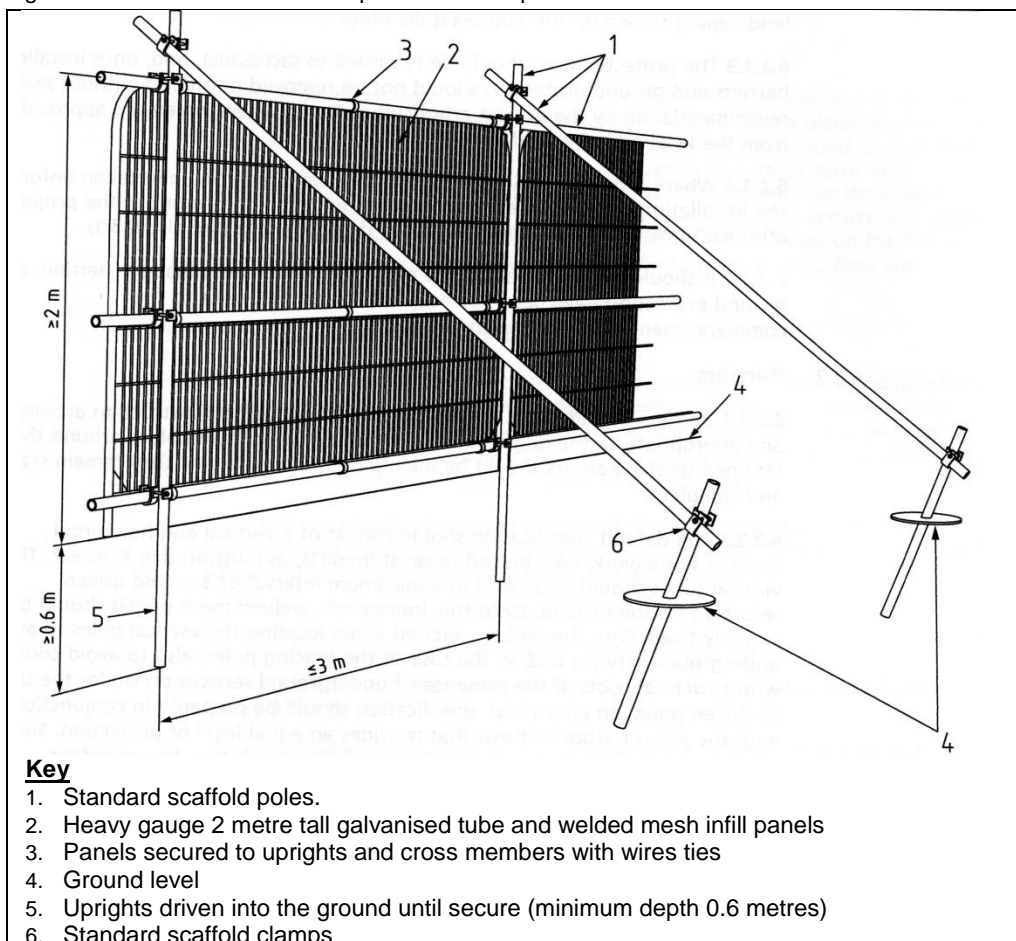
Figure 1: CEZ Warning Sign



Type 1 (i.e. 'Default') Temporary Protective Fencing Construction (see Figure 2, below)

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 points 3 to 5 of Figure 2, overleaf.
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 points 4 to 5.
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) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, 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 Protective Fencing.

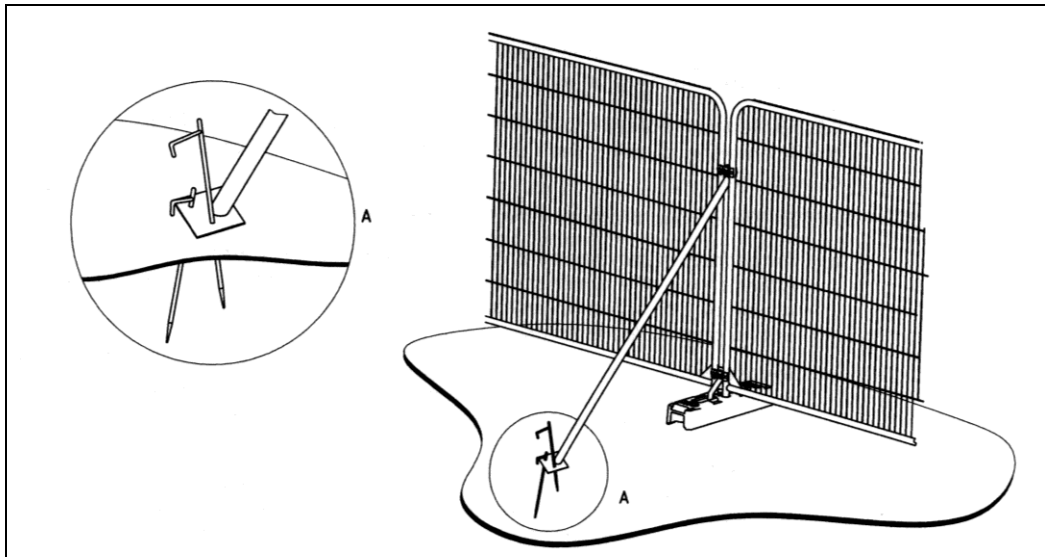
Figure 2: BS5837:2012 Default specification for protective barrier



Type 2 Temporary Protective Fencing Construction (see Figure 3(a), below)

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall stand on rubber or concrete feet.
3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45° angle and extend back into the CEZ and shall be attached to a base plate, which shall be secured to the ground with pins (Figure 3a).
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) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, 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 Protective Fencing.

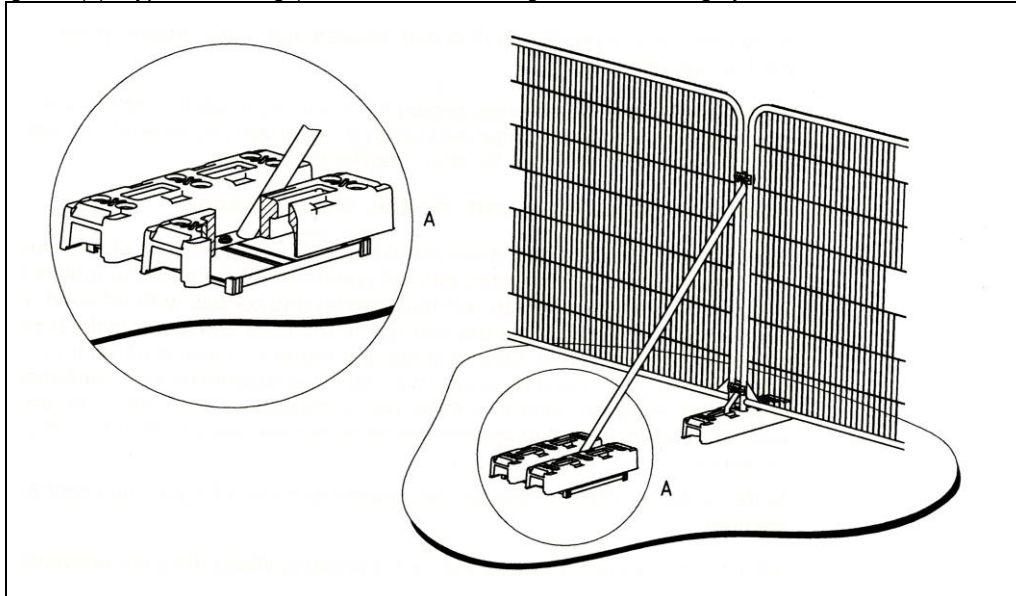
Figure 3(a): Type 2 Fencing (BS5837:2012 above-ground strut stabilising system with ground pins)



Type 3 Temporary Protective Fencing Construction (see Figure 3(b), overleaf)

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall stand on rubber or concrete feet.
3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45° angle and extend back into the CEZ and shall be attached to a block tray base (Figure 3b).
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) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, 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 Protective Fencing.

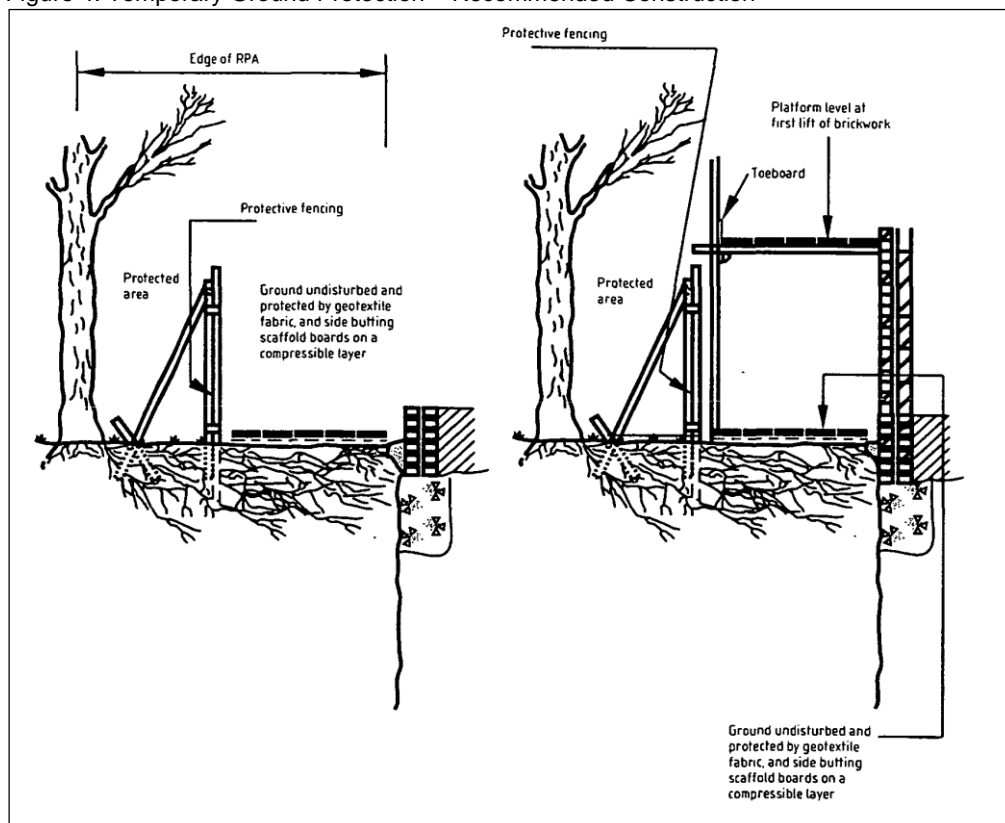
Figure 3(b): Type 3 Fencing (BS5837:2012 above-ground stabilising system with strut on block tray)



Temporary Ground Protection

1. Any necessary Temporary Ground Protection areas shall conform to Figure 4, 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.

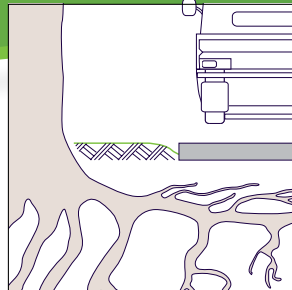
Figure 4: Temporary Ground Protection – Recommended Construction





GEOWEB®

TREE ROOT PROTECTION (TRP) SYSTEM



defining **green** in cellular confinement

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 on a tree's Critical Root Zone, they can cause negative impacts to the soil environment, including compaction of the soil and 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 environmentally sympathetic as well as comply with local and national standards and regulations.

Compliance with Standards:

In the United Kingdom, Tree Root Protection Systems must comply with BS5837 (2012) and APN12 (2020).



Without GEOWEB
Tree Root Protection

With GEOWEB
Tree Root Protection

Compaction
Damage

NO
Compaction
Damage



THE GEOWEB® SOLUTION

TREE ROOT PROTECTION (TRP) SYSTEM

Developed by Presto Products Company and the U.S. Army Corps of Engineers, GEOWEB is the original HDPE three-dimensional Cellular Confinement System used in the UK for providing protection to existing trees on development sites.

Benefits of the GEOWEB TRP System:

- Provides a load-bearing platform
- Reduces sub-base thickness
- Distributes vertical loads laterally across the system
- Prevents compaction of subsoils
- Provides confinement of clean stone infill, which allows water and air to reach the root structure
- Can be designed to take any vehicular or static loading
- Can be surfaced with any type of pavement construction including: porous asphalt, porous and standard block paving, loose or resin-bound gravel, grass or gravel pavers, concrete, standard asphalt, or tree bark and other soft materials depending upon the application.
- Reduced site costs

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

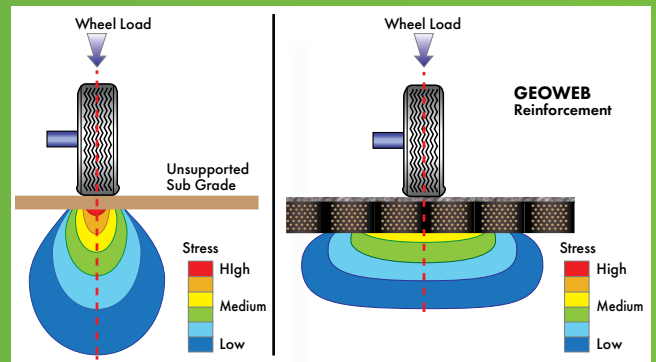
The GEOWEB TRP system is an economical solution for reducing construction vehicle impact to the tree root zone compared with other methods. Once installed, the system has minimal-to-no visibility.

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

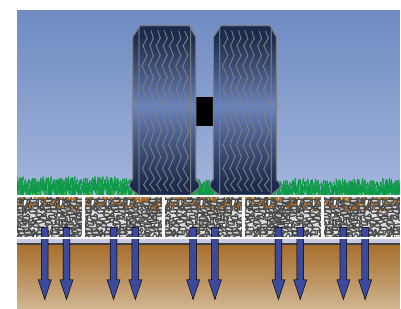
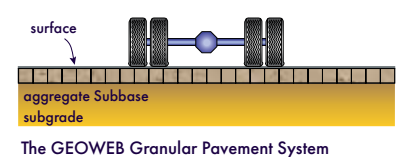
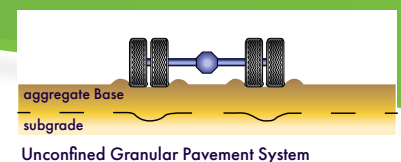
The tree root protection system can be a temporary or permanent solution.



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.



Water and air flow to the root structure

GEOWEB®

TRP SYSTEM INSTALLATION

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

Step 2: Install Greenfix TRP 4000 high-strength non-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, 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, 4/20 mm granular, non-frost-susceptible quarried rock with no fines. Overfill by up to 50mm to allow for compaction.

Step 6: Fill material should be maintained above the GEOWEB system by a minimum of 10 mm at all times. Final surfacing materials may then be placed in line with our recommendations in our installation method statement.

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.

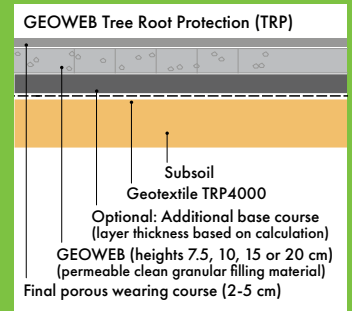


DESIGN CONSIDERATIONS

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
- final surfacing and permanent or temporary application



Greenfix and Presto GEOSYSTEMS provide site-specific design advice including CAD and PDF drawings. We also offer site evaluation at the planning stage, and on-site supervision of the GEOWEB installation at the construction phase, ensuring our clients receive the best fit for purpose solution.



Old Manor Farm Yard
Beckford Road
Ashton-Under-Hill
Evesham
Worcestershire
WR11 7SU

Tel: 01386 881493

E: info@greenfix.co.uk

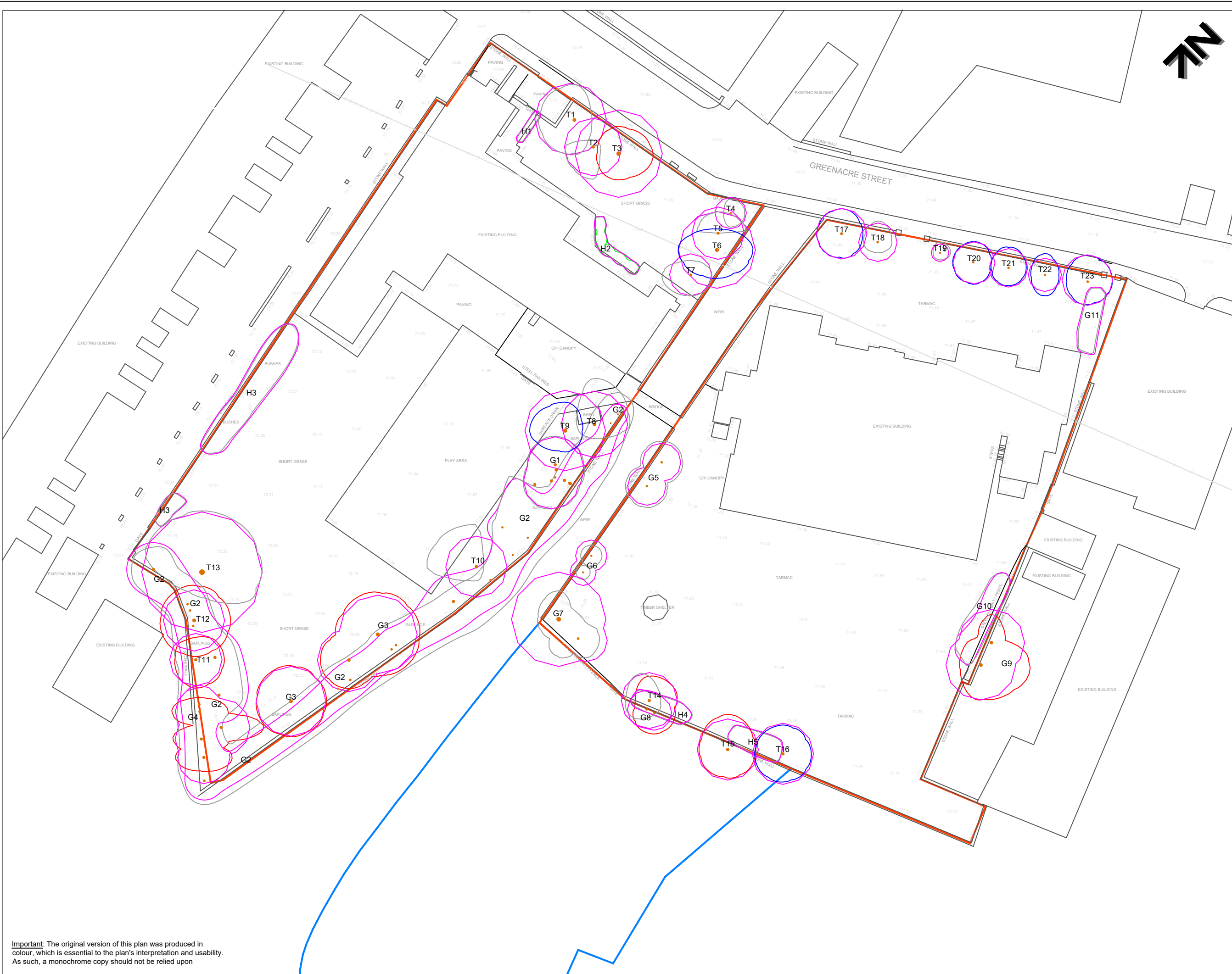
www.greenfix.co.uk

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OCT 2021
AP-9018



KEY

T = Individual Tree
 G = Group of Trees
 H = Hedge

Please refer to associated Tree Survey Schedule and appendices for specific details in respect of items below:

Tree Categorisations:

Those to be Considered for Retention:

- Category 'A' Tree/Group/Hedge
 Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years
- Category 'B' Tree/Group/Hedge
 Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years
- Category 'C' Tree/Group/Hedge
 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/Hedge
 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

Note: The stem location of tree T21 was not included on the topographical survey based site plan provided, and was subsequently plotted by the arboricultural surveyor using GPS siting and estimation at the time of the survey. As such, the plotted location of this tree cannot therefore be considered to be wholly accurate

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 - see Temporary Protective Fencing Specification

Project:
 ST JAMES PRIMARY SCHOOL
 GREENACRE LANE
 CLITHEROE
 LANCASHIRE
 BB7 1ED

Agent For Client:
 CASSIDY + ASHTON GROUP LTD

Title:
TREE CONSTRAINTS PLAN
 in Relation to Proposed Partial Demolition of Existing Building, Construction of New Infant School Block, and Extension of Car Parking Provision

Scale: 1:500@A3
 Date: April 2023
 Drawn by: MM
 Checked by: PH



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



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Note 1: The stem location of tree T21 was not included on the topographical survey based site plan provided, and was subsequently plotted by the arboricultural surveyor using GPS siting and estimation at the time of the survey. As such, the plotted location of this tree cannot therefore be considered to be wholly accurate

Note 2: Trees with their identifying numbers labelled in grey are proposed for removal in the context of the proposed development

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 - see Temporary Protective Fencing Specification

Indicative New Tree Planting:

Suggested Approximate Indicative Locations for New Tree Planting, with Trees of Species of Suitable Species for Locations. NB: New Tree Planting to be Included in a Landscape Proposal Plan

Project:
 ST JAMES PRIMARY SCHOOL
 GREENACRE LANE
 CLITHEROE
 LANCASHIRE
 BB7 1ED

Agent For Client:
 CASSIDY + ASHTON GROUP LTD

Title:
TREE IMPACT PLAN
 in Relation to Proposed Partial Demolition of Existing Building, Construction of New Infant School Block, and Extension of Car Parking Provision

Scale: 1:500@A3
 Date: September 2023
 Drawn by: MM
 Checked by: PH



Ref: BTC2697-TIP Rev: A

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