Arboricultural Impact Assessment & Method Statement

BE-1368-01A
26 High Street, Royston, Barnsley, S71 4RD

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Report title	Arboricultural Impact Assessment & Method Statement
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Site address	26 High Street, Royston, Barnsley, S71 4RD
Grid reference	SE 36072 11360
Report composed by	David Watts MICFor MArborA MCIEEM
Client	Mr A. Needle
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Executive Summary

David Watts Associates Ltd have been instructed on behalf of Mr A. Needle to produce an Arboricultural Impact Assessment and Method Statement in relation to a proposed development at 26 High Street, Royston, Barnsley, S71 4RD. The development proposals are to construct an extension onto the existing building and to repave the existing driveway.

The site survey identified two Category B trees of moderate quality and one Category C group of low quality with the potential to be affected by the development proposals. The two Category B trees are afforded protection by Tree Preservation Orders (TPOs).

No tree works are required within the context of the development proposals.

The proposed driveway will be within the root protection areas (RPAs) of two trees. This area is already under a hardstanding surface, and therefore provided that no excavation is carried out, construction of the driveway is not anticipated to impact negatively upon these trees.

An Arboricultural Method Statement is provided, which contains specifications of temporary tree protection fencing to be installed and precautionary working practices to be adopted during development works.

1. Introduction

1.1. Background

David Watts Associates Ltd have been instructed on behalf of Mr A. Needle to produce an Arboricultural Impact Assessment and Method Statement in relation to a proposed development at 26 High Street, Royston, Barnsley, S71 4RD, hereafter referred to as 'the site'.

The purpose of the report is to:

- Assess the quality of the trees on and immediately adjacent to the site, in accordance with British Standards (2012)[1], hereafter referred to as 'BS5837: 2012'.
- Identify trees suitable for retention and for removal due to the proposed development.
- Prescribe tree protection measures to ensure that retained trees survive the proposed development and thrive after its completion.
- Prescribe arboricultural recommendations for the long-term management of trees on the site.
- If necessary, to assess the site for its suitability for mitigation planting, and to specify planting requirements.

1.2. Site Details

The site is located at grid reference SE 36072 11360 and consists of a semi-detached residential dwelling, its driveway and garden. The site is bordered by High Street (B6428) to the north, adjacent residential properties to the east and south, and by Redwood Avenue to the west.

1.3. Development Proposals

The development proposals are to construct an extension onto the west aspect of the building. The access to the west of the site is to be extended, and a new pedestrian access is to be created to the north of the site.

1.4. Soil Type of the Surrounding Area

Cranfield (2020)[2] states that the surrounding area consists of slowly permeable, seasonally wet, acid loamy and clayey soils. No further detailed soil analysis was carried out as part of the survey.

1.5. Legislation

A search on the website of Barnsley Metropolitan Borough Council (2020)[3] confirmed that there are two lime (*Tilia*) trees afforded protection by Tree Preservation Orders (TPOs) on the site. The TPO

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[1] British Standards (2012). *BS5837: 2012 - Trees in Relation to Design, Demolition and Construction: Recommendations.* British Standards Institute, London

[2] Cranfield (2020). *Interactive Soilscapes Viewer* [online]. Available at: >www.landis.org.uk< [accessed 1st July 2020]

[3] Barnsley Metropolitan Borough Council (2020). *Interactive Maps* [online]. Available at: >www.barnsley.gov.uk< [accessed 1st July 200]

reference number is 2 and the tree reference numbers are T5 and T6. Note that the TPO tree reference numbers do not correlate with the reference numbers of trees detailed within this report.

The site is not within a Conservation Area.

1.6. Survey Methods

The site survey was carried out in suitable weather conditions by David Watts on 26th June 2020.

Trees were inspected from ground level. Any notable defects of trees were recorded, although the site survey did not constitute a full tree risk assessment. Tree heights, crown clearances and crown spreads of trees were measured to the nearest 0.5 m. The diameter at breast height (DBH) of trees was measured to the nearest 1 cm, and was used to calculate the root protection areas (RPA) of trees using methods prescribed in BS5837: 2012. Dimensions for groups of trees were recorded as averages, and where individual stems were not recorded, the RPAs of groups were plotted as synonymous with the canopy extents.

In accordance with BS5837: 2012, trees were classified as either A, B, C or U, using the criteria shown in Table 1. Trees were subcategorised with the suffix 1, 2 and/or 3, to denote amenity, landscape or cultural qualities.

Table 1: BS5837 Cascade Chart (Adapted from British Standards, 2012)

Category	Definition	Retention	Colour code
Category A	Trees of high quality with an estimated remaining life expectancy of at least 40 years; trees that are particularly good examples of their species, especially if rare or unusual.	Highly desirable	Light green
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years; trees lacking the special quality to merit category A designation.	Desirable	**Dark blue**
Category C	Trees of low quality with an estimated remaining contribution of at least 10 years, or trees with a stem diameter below 15 cm; unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.	Feasible, but should be removed if posing a constraint to development	Grey
Category U	Trees that have serious, irremediable, structural and/or physiological defects, including those that will become unviable after removal of other category U trees.	Unfeasible	**Dark red**

1.7. Survey Constraints

The survey was constrained by the season in which it took place. Some pathogens of trees, in particular fruiting bodies of decay fungi, are only visible at certain times of year.

A full topographical survey was not provided. Trees were plotted onto an OS base plan using GPS. Both OS plans and GPS contain a level of inaccuracy, and therefore tree locations may vary to those detailed within this report.

1.8. Qualifications of the Author

David Watts is a Chartered Arboriculturist (registered with the Institute of Chartered Foresters) and a Professional member of the Arboricultural Association, who holds an FdSc Arboriculture, a BSc (Hons) Ecology, a PGCert Arboriculture and Urban Forestry and the LANTRA Professional Tree Inspection Certificate.

2. Impact Assessment

2.1. Tree Population Assessment

The site survey identified two trees and one group of trees on the site. These included two Category B trees of moderate quality and one Category C group of low quality.

Table 2: Summary of Tree Categories

Category	Tree reference numbers	Totals
A (high quality)	-	
B (moderate quality)	T1, T2	2 Trees
C (low quality)	G3	1 Group
U (unsuitable for retention)	-	-
	Total	**2 Trees** **1 Group**

Tree species included Leyland cypress (*Cupressus x leylandii*), holly (*Ilex aquifolium*), laburnum (*Laburnum anagyroides*) and common lime (*Tilia x europaea*).

Tree data can be viewed in **Appendix 1: Tree Survey Schedule**. Photographs of trees can be viewed in **Appendix 2: Photographs**. Tree locations can be viewed in **Appendix 3: Tree Protection Plan.**

2.2. Tree Works

No trees will necessitate removal due to the development proposals.

T1 and T2 both have dense epicormic growth which obscures a full inspection of their stems. The amenity value of this trees could be improved through removal of the epicormic growth up to a height of 3-5 m. These works are not required within the context of development, and therefore a separate TPO application will be required.

G3 is a low-quality group with two laburnum exhibiting severe crown dieback. Trees within this group should be removed at the discretion of the landowner. At the time of writing these trees are not afforded protection by TPOs and are not within a Conservation Area, although this may be subject to change and should be verified with the local authority prior to works commencing.

2.3. Works Within Root Protection Areas

The proposed extension does not affect the RPAs of any trees on the site. The paved driveway is within the RPAs of T1 and T2. As this area is already under a hardstanding surface which is relatively flat, construction of the driveway is not anticipated to negatively impact upon either tree, provided that no excavation of this area is carried out.

2.4. Protection of Retained Trees

To ensure that retained trees survive the development works and thrive upon their completion, all works must follow an Arboricultural Method Statement. This is detailed within Section 3.

3. Arboricultural Method Statement

3.1. Timing of Works

The phasing of works should be carried out in accordance with Table 3, below:

Table 3: Timing of Works

Stage	Works
1	Site induction
2	Install temporary tree protection fencing
3	Inspection by project arboriculturist or local authority tree officer
4	Carry out construction works, including supervised construction of pile foundations
5	Remove tree protection fencing once all construction works completed
6	Final inspection by project arboriculturist or local authority tree officer

3.2. Site Induction

Prior to works commencing, all contractors must attend a site induction. Contractors must be briefed on arboricultural concerns arising from the development proposals, including tree root protection areas (RPAs). This method statement must be made available to all contractors working on the site.

3.3. Tree Protection

Prior to machinery entering the site, it will be necessary to ensure that all trees are adequately protected by the installation of temporary tree protection fencing. This must remain in place during development works. The location of tree protection fencing can be viewed in **Appendix 3: Tree Protection Plan.** Note that due to required access to the proposals, the installation of tree protection fencing throughout the entirety of RPAs is not feasible; however, the areas of the RPAs outside of the tree protection fencing consist of existing hardstanding surfaces and will therefore not be affected by the development works (discounting the replacement of the driveway, detailed in Section 3.4).

Tree protection fencing should consist of a vertical scaffold framework, well braced to resist impacts. The vertical poles should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be fixed (see Figure 1, below).

Laminated waterproof A3 signs should be fixed securely to fencing panels on each enclosure at 9 m intervals. The signs should clearly read: ‘Protected Tree Zone, no storage or operations within fenced off areas.’

Once the construction works have been completed, the tree protection fencing may be removed. This should be done with care to ensure that no damage to trees is caused.

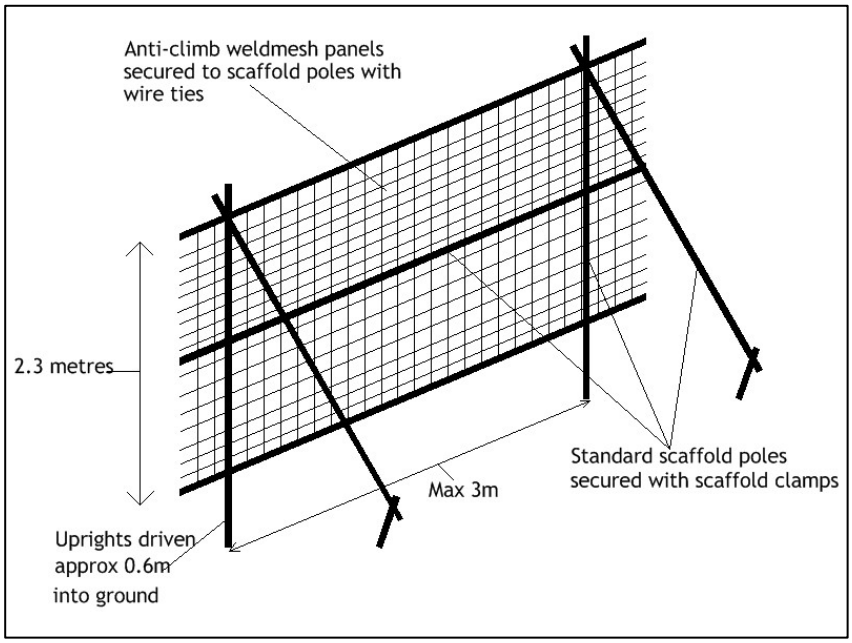

Figure 1: Temporary Protective Fencing

3.4. Removal and Reinstatement of Hardstanding Surfaces

Any hardstanding surfaces within the RPAs of T1 and T2 should be removed using handheld tools only. Pneumatic drills may be used, but not diggers or breakers attached to JCBs.

Upon removal of the hardstanding surfaces, construction of the new paved driveway should commence immediately. No vehicles or heavy machinery should be driven over this area; even just one pass of a vehicle over the unprotected roots of tree can cause compaction, resulting in dieback and potentially death of the tree.

If upon removal of hardstanding surfaces but prior to construction of the new driveway the passage of vehicles or heavy machinery over the RPAs of T1 and T2 is considered necessary, temporary ground protection must be in place. This should consist of three layers:

- A geotextile membrane
- 15 cm wood chip
- Interlinked scaffold boards or similar, well-braced to resist impacts

Construction of the new paved driveway should be carried out without any further excavation. If for any reason excavation is required within the RPAs of T1 and T2, further advice from the project arboriculturist and/or the local authority tree officer will be required.

Note that as T1 and T2 are protected by TPOs, any damage to roots resulting from compaction or excavation may result in a criminal offence being committed, subject to an unlimited fine.

3.5. General Precautionary Measures

Prior to the commencement of development works, a site storage area should be designated. This should be outside the RPAs of trees.

No materials hazardous to tree health, such as oil, bitumen or cement should be stored within the RPAs of trees.

No fires should be lit within the site.

Where there is a risk of polluted water runoff into RPAs, heavy duty plastic sheeting and sandbags must be used to contain any spillages and prevent contamination.

If any breach in the tree protection measures occurs, it is the site manager's responsibility to report this to an arboricultural consultant so that appropriate measures may be taken.

3.6. Further Inspections

It is recommended that inspections by an arboricultural consultant are undertaken:

- Upon installation of the tree protection fencing to determine if it is satisfactory.
- Upon completion of the development works.

After each inspection, a letter accompanied by photographic evidence should be submitted by the arboricultural consultant to the local authority tree officer to confirm if the method statement has been followed correctly and whether trees have been adversely affected by construction works.

Alternatively, if the site is visited by the local authority tree officer both after installation of the tree protection fencing and upon completion of the development proposals, further visits by an arboricultural consultant are unlikely to be necessary.

3.7. Project Arboriculturist Details

If any issue regarding tree protection arises during the course of development works, the project arboriculturist should be contacted using the details below:

David Watts MICFor MArborA

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Lancaster University
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Appendix 1: Tree Survey Schedule

Key			
Species	Common name (see Section 2 for scientific names)	**Age**	Y – Young sapling/newly planted tree
Height	Measured to nearest 0.5 m		SM – Semi-mature; tree 1/3 of mature size
CC	Height of crown clearance, measured to nearest 0.5 m		EM – Early mature; tree 2/3 of mature size
Stems	Number of stems bifurcating below 1.5 m		M – Mature; tree 3/3 of mature size
DBH	Diameter at breast height (1.5 m), in cm		V – Veteran tree
Crown spread	Measured to nearest 0.5 m	**SULE**	Safe useful life expectancy, in years
Category	See BS5837 cascade chart (Table 1)	**#**	Denotes estimated value
	Average values given for groups of trees		

A plan showing the location of trees can be viewed in **Appendix 3: Tree Constraints Plan**.

Tree No.	Species	Height	CC	Stems	DBH	Crown Spread				Age	Comments	SULE	Category
						N	E	S	W				
T1	Common lime	14.5	0	1	72	5	4	3.5	4	M	Dense epicormic growth at basal area. Cavity on primary branch at 6 m to south. Minor dieback of tertiary branches to south.	21-40	B2
T2	Common lime	13	0	1	62	5	3#	4	4	M	Dense epicormic growth ast basal area. Mechanical damage to tertiary branches to south. Utility wires through crown.	21-40	B2
G3	Laburnum, Leyland cypress, holly	6	1	6	15	2	2	2	2	SM	Group of semi-mature trees of low quality. Extensive dieback of laburnum to north of group.	11-20	C1

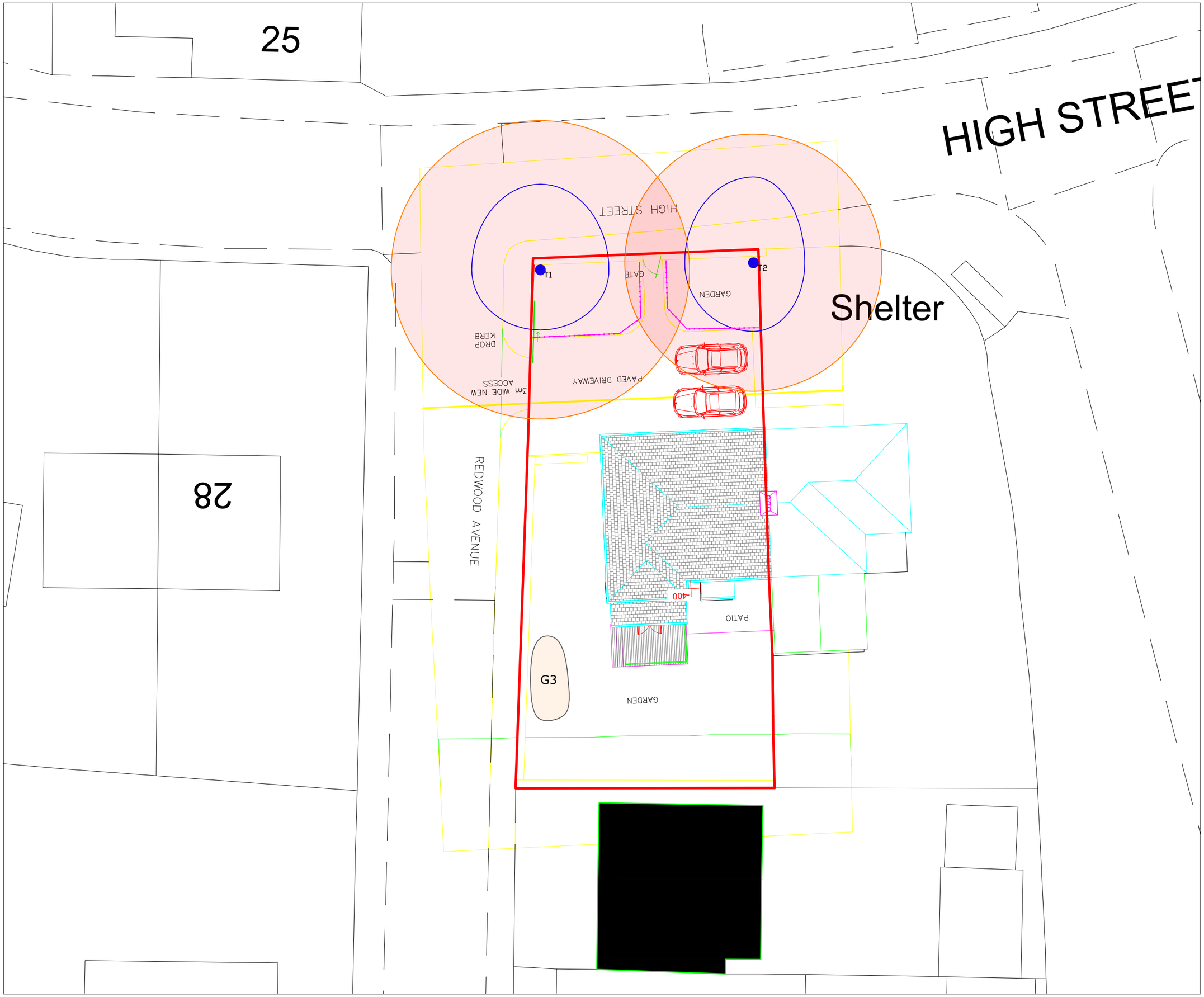
Appendix 2: Photographs

T1

T2

G3

Appendix 3: Tree Protection Plan



Key:

Category B trees of moderate quality

Root protection area (RPA)
Tree stem
Tree canopy

Category C trees of low quality

Root protection area (RPA)
Tree stem
Tree canopy

Tree protection fencing - to remain in place during development works

For further details regarding tree protection fencing and precautionary working practices, refer to Arboricultural Method Statement

Drawing title:	Tree Protection Plan
Project:	26 High Street
Drawn by:	David Watts
Drawing number:	TPP-1368-01
Date:	01/07/2020
Scale:	1:200 @ A3

To be reproduced in colour only

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