Arboricultural Method Statement

WC-266.1a

Spen Valley High School, Roberttown Lane, Liversedge WF15 7LX

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Report type:	Arboricultural Method Statement
Report reference:	WC-266.2
Revision:	a
Client:	Spen Valley High School
Site address	Spen Valley High School, Roberttown Lane, Liversedge WF15 7LX
Grid reference:	SE 20044 23224
Report prepared by:	Jack Delaney MICFor MArborA
Date:	24th May 2024

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Contents

1. Introduction

1.1. Introduction and Scope of Report

1.1.1. Woodsage Consulting Ltd have been instructed by Spen Valley High School to produce an Arboricultural Method Statement (AMS) in relation to the proposed development of the land at the main campus, which is located at Roberttown Lane, Liversedge WF15 7LX.

1.1.2. An AMS is usually required when the implementation of any aspect of a development has the potential to result in the loss of or damage to trees which are to be retained.

1.1.3. In accordance with *BS 5837: 2012 - Trees in Relation to Design, Demolition and Construction: Recommendati*ons (hereafter referred to as *BS 5837: 2012*), this AMS will prescribe the necessary tree protection measures which will ensure the successful retention of the retained trees at the site throughout the proposed development.

1.1.4. This AMS is based upon the supporting information that accompanies the planning application (Application Number: 2023/62/93386/E).

1.1.5. This AMS should be read in conjunction with the Arboricultural Impact Assessment (Report Ref: WC-266.1a) which was issued by Woodsage Consulting Ltd in April 2024.

1.1.6. The contents of this AMS are concerned with arboricultural issues alone; although other disciplines such as engineering and ecology may referenced, it is important to gain advice from an appropriate expert on these matters.

1.2. Site Details

1.2.1. The site, which is shown in ***Fig. 1.1***, below, is centred on OS Grid Reference SE 20044 23224, and lies within the town of Liversedge, approximately 3 miles west of Dewsbury. The site is accessed north-west off Roberttown Lane.

Figure 1.1: *Aerial imagery showing the approximate boundaries of the site, outlined in red, and study area, highlighted in yellow (Google Earth, 2024).*

1.2.2. The study area is located to the south-east of the site, and comprises an existing lodge building (School House), car parking facilities, and amenity areas.

1.3. Site Topography and Elevation

1.3.1. The study area lies at an altitude ranging between 95 - 105 m above sea-level.

1.3.2. The topography of the study area is undulating; there is a steep embankment to the north-west, which leads onto the school playing fields.

1.4. Desk Based Study and Planning Context

1.4.1. Cranfield (2024) states that the site and surrounding area consists of Soilscape 17; these are acidic, loamy, and clayey soils, that are slowly permeable and seasonally wet. No further detailed soil analysis was carried out as part of the survey.

1.4.2. According to information available on the website of Kirklees Council (2024), there are no tree preservation orders (TPOs) within the site, and the site is not located within a conservation area.

1.5. Development Proposals

1.5.1. The development proposals include the erection of a new office building, and extensions and alterations to an existing lodge building (School House).

1.5.2. The development proposals shown in drawings produced by Paul Matthews Architectural Ltd (Refs: 23/924-5-6/07b, 23/924-5-6/10b, and 23/924-5-6/8c) have been used to inform this report.

2. Arboricultural Method Statement

2.1. Timing of Works

2.1.1. It is not the Project Arboriculturist's role to determine the timing and implementation of works on site, however, an input into the process can avoid issues once work is underway.

2.1.2. The phasing of works should be carried out in accordance with ***Tab. 2.1***, below.

Table 2.1: *Timing of Works.*

Stage	Works
1	Site induction
2	Install temporary tree protection fencing and ground protection, in the locations shown in ***Tree Protection Plan (1)***
3	Inspection of tree protection measures by the Project Arboriculturalist
4	Carry out construction works
5	Once construction of the proposed extension and office building have been completed, remove the temporary ground protection**,** and reposition the tree protection fencing to the locations shown in ***Tree Protection Plan (2)***
6	Install the proposed 2 m high permanent mesh fencing
7	Remove tree protection fencing once installation of the mesh fencing is completed
8	Final inspection by the Project Arboriculturalist

2.2. Site Supervision

2.2.1. Prior to development works commencing, it is the responsibility of the main contractor, or assigned agent, to ensure that details regarding tree protection are understood and adhered to by all site personnel.

2.2.2. During the site induction, this AMS, and copies of the ***Tree Protection Plans*** – which are provided in ***Appendices 3*** and ***4*** - should be made available to all contractors attending the site.

2.3. Tree Protection Fencing

2.3.1. Tree protection barriers shall be installed prior to the commencement of development works, and should be fit for the purpose of excluding site personnel and machinery. The default specification should be in accordance with *Section 6.2.2* of *BS 5837: 2012.*

2.3.2. The barriers shall be a minimum 2 m high, and should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as is illustrated in ***Fig. 2.1***, below, and ***Fig. 2.2***, on the following page.

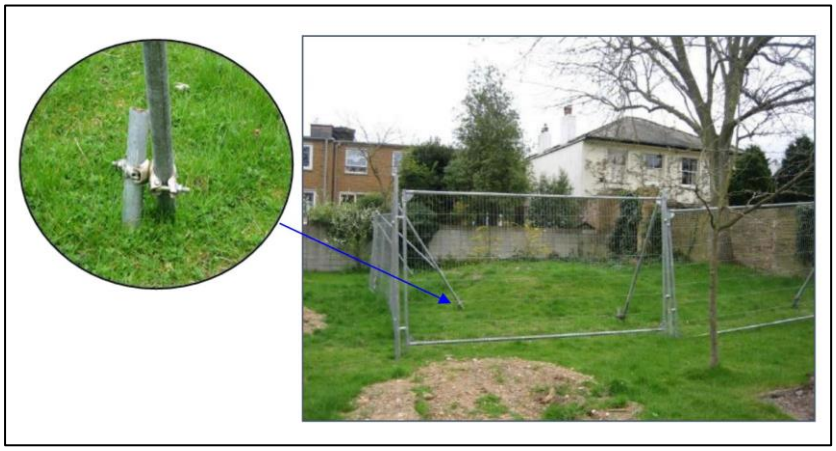

Figure 2.1*: Example of mesh welded type barriers in-situ.*

2.3.3. The vertical tubes should be spaced at a minimum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed.

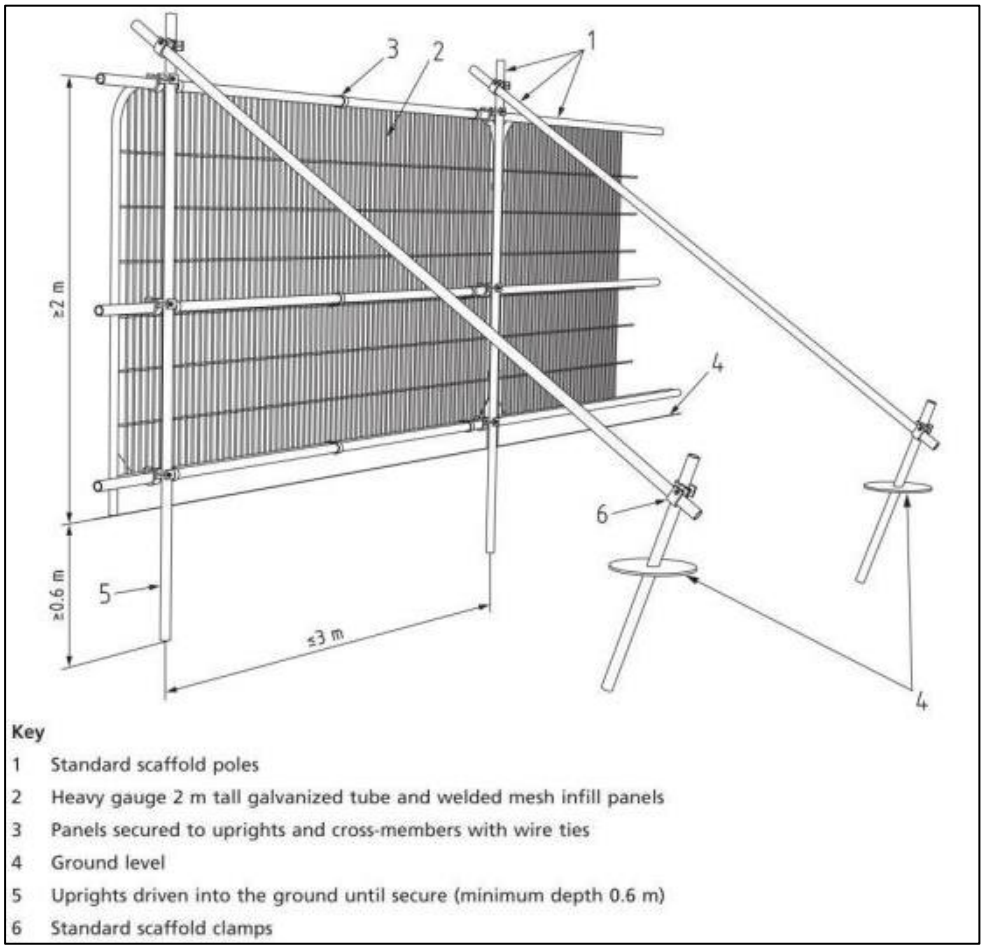

***Figure 2.2**: Temporary 2 m steel protective fencing (British Standards Institution, 2012)*

2.3.4. All-weather notices should be attached to the barriers at 9 m intervals with the words 'TREE PROTECTION ZONE - NO ACCESS' clearly visible.

2.3.5. **Location:** The temporary tree protection fencing should be installed in two phases:

1. Prior to development works commencing, in the locations shown in ***Tree Protection Plan (1).***
2. Once construction of the proposed extension and office building have been completed, in the locations shown in ***Tree Protection Plan (2)***, to facilitate installation of the proposed 2 m permanent mesh fencing.

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

2.3.7. If any breach in the tree protection measures occurs it is the Site Manager's responsibility to report this to the Project Arboriculturalist, so the appropriate measures may be taken. Any breach in the tree protection resulting in the death or damage to trees, could result in a criminal offence being committed.

2.3.8. The temporary tree protection fencing shall only be removed once construction works have been completed, to facilitate the proposed soft-landscaping.

2.4. Additional Details

2.4.1. No materials hazardous to tree health, such as oil, bitumen or cement should be stored within the protective fencing. Where possible this area should be extended to 10 m away from the fencing.

2.4.2. 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. No fires should be lit within 20 m of the protective fencing.

2.5. Excavations within Tree Root Protection Areas (RPAs)

2.5.1. Excavations within the RPAs of T011 and T012 - which will be required to install footings for the proposed office building – are considered unlikely to impact tree roots due to sudden level changes which occur between T011 and T012, and the site of the proposed building.

2.5.2. However, to further ensure that tree roots are not adversely impacted, excavations within the RPAs of T011 and T012 shall be carried out under the supervision of the Project Arboriculturalist, using compressed air soil displacement or hand-operated tools.

2.5.3. If during these excavations roots are encountered that occur in clumps or that are greater than 25 mm diameter, these should not be severed without first consulting with the Project Arboriculturalist. If roots under this diameter are present, these may be pruned using an appropriate sharp pruning tool, such as pruning saw or secateurs.

2.5.4. Any roots which are temporarily exposed during the excavations should be covered with sharp sand to prevent desiccation.

2.5.5. As the majority of tree roots are typically found within the first 100 cm of ground level - particular attention should also be paid to existing levels - which should be observed and maintained within RPAs the retained trees.

2.6. Ground Protection

2.6.1. Due to site constraints, and to allow for suitable working space during construction, the temporary tree protection fencing adjacent to T001, T009, T010, T011, and T012 will be setback from the default *BS 5837:2012* positioning. As a result, soft-landscape within RPAs will be exposed to development activities.

***Figure A2.3**: Examples of ground protection panels.*

2.6.2. Temporary ground protection should be installed throughout the exposed RPAs of T001, T009, T010, T011, and T012 – in the locations shown in ***Tree Protection Plan (1)*** – and shall remain in place until construction phase has been completed.

2.6.3. The temporary ground protection should consist of inter-linked boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip) which are laid onto a geotextile membrane, as illustrated in ***Fig. A2.3***, on the previous page.

2.6.4. Any plant or machinery operating within the RPAs of T001, T009, T010, T011, and T012 must ensure it does so upon the ground protection at all times.

2.6.5. The temporary ground protection shall only be removed once construction works have been completed, to facilitate installation of the proposed 2 m permanent mesh fencing.

2.7. Services

2.7.1. All services and/or alterations to existing services must be installed outside of the RPAs of the retained trees. If there are any areas of conflict, these should first be reported to the Project Arboriculturalist or LPA Arboricultural Officer, so that appropriate measures may be taken.

2.8. Installation Method Statement for Permanent Mesh Fencing within Tree RPAs

2.8.1. A proposed 2 m permanent mesh fence will pass through the RPAs of T001, T006, T007, T008, and G001.

2.8.2. Installation of permanent fencing within tree RPAs should adhere to the following guidelines:

1. No part of any fencing is to be attached to the adjacent trees.
2. The post dimensions are to be a maximum of 100 mm x 100 mm.
3. Holes are to be hand-dug to a depth of 600 mm.
4. If roots are encountered that are less than 25 mm dimeter, these may be pruned back, by making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps, or which are greater than 25 mm diameter, should only be severed following consultation with the Project Arboriculturalist. Any roots which are temporarily exposed during the excavations should be covered with sharp sand to prevent desiccation.
5. Posts will be set in concrete and in holes lined with polythene to minimise leaching.
6. Concrete will be mixed outside of tree RPAs and transported to site.

3. Site Monitoring and Legal Constraints

3.1. Responsibility and Site Management

3.1.1. It is the responsibility of the main contractor or assigned agent to ensure that details regarding tree protection are understood and followed by all site personnel.

3.1.2. It is recommended that inspections by the Project Arboriculturalist are undertaken at the following stages:

1. Once the tree protection fencing and ground protection has been installed – in the locations shown in ***Tree Protection Plan (1)*** – and prior to development works commencing.
2. Whilst excavations using compressed air soil displacement or hand-operated tools are carried out within the RPAs of T011 and T012.
3. Upon completion of the development works.

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

3.2. Project Arboriculturalist Details

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3.3. Legal Information

3.3.1. Trees provide valuable habitat for wild birds, bats, and many other forms of wildlife. Under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Wildlife and Countryside Act 1981:

- it is an offence to intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or destroy at a nest containing eggs or young.
- it is an offence to intentionally or recklessly damage or destroy a bat roost site, even if the roost is not occupied at the time.

3.3.2. The risks posed to the local wildlife should therefore be suitably assessed before the recommendations provided within this AMS are completed.

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

3.3.4. Trees are dynamic living organisms, and their condition can change rapidly; the information given in this report is therefore valid for a period of 18 months. This period may be reduced if significant changes occur to the trees, or the ground conditions, which surround them.

References

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

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

Cranfield (2024) *Soilscapes* [online]. Available at: >www.landis.org.uk/soilscapes< [accessed 2nd January 2024].

Google Earth Pro (2024). *Google Earth* [online]. Available at: >www.google.co.uk/earth< [accessed 2nd January 2024].

Kirklees Council (2024) *Interactive Planning Map* [online]. Available at: >www.kirklees.gov.uk< [accessed 2nd January 2024].

Lonsdale, D (2015) *The principles of Tree Hazard Assessment and Management.* Stonehouse: The Arboricultural Association.

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

Appendices

Appendix 1: Tree Survey Schedule

Table Key			
Tree/Group Ref: Reference numbers, as shown in the ***Tree Protection Plans*** in ***Appendices 3*** and ***4***			**DBH:** Diameter at breast height (1.5 m), in millimetres
Height (Ht.): Overall height of tree, measured to nearest 0.5 m			**SULE:** Safe useful estimated life expectancy of tree, in years
Crown Spread (CS): Radius of crown to N, E, S, and W aspects, measured to nearest 0.5 m			**Crown Clearance (CC):** Clearance from ground level of lowest branch, measured to nearest 0.5 m
Structural Condition (SC): An assessment of structural condition. **G** = Good; **F =** Fair; **D =** Decaying; **C** = Collapsing; **PD** = Physical Defect			**Physiological Condition (PC)**: An assessment of physiological condition for species and age of tree. **G** = Good; **F =** Fair; **P =** Poor; **D =** Dead
Species: Common (and *binomial name*)			**#:** Denotes estimated value
Age	**Young (Y):** Newly planted or self-seeded tree	**Early-mature (EM):** Trees in second-third of life expectancy for species type	**Over-mature (OM):** Mature trees which have entered stages of natural decline
	Semi-mature (SM): Trees in within first-third of life expectancy for species type	**Mature (M):** Trees in final-third of life expectancy for species type	**Veteran (V):** Trees of any age, which display ancient characteristics
BS 5837: 2012 **Categories**	**Category A:** Trees of high-quality with an estimated remaining life expectancy of at least 40 years, and that are particularly good examples of their species type		**Category C:** Unremarkable trees of low-quality offering limited arboricultural merit and/or of such impaired condition that they do not warrant in higher categorisation
	Category B: Trees of moderate-quality with an estimated remaining life expectancy of at least 20 years, though lacking the necessary qualities to warrant Category A designation		**Category U:** Trees which display serious, irremediable, structural and/or physiological defects

Individual Trees

Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	PC	*BS 5837:2012* Category	Recommendations
						N	E	S	W					
T001	Common lime *(Tilia x europaea)*	M	80+	21	830	7	7.5	6.5	7.5	3.5	No obvious significant defects. Growing in proximity to boundary wall. Epicormic shoots on main stem to 7 m, encroach upon roof of existing lodge house building.	G	G	A1
T002	Horse chestnut *(Aesculus hippocastanum)*	M	40-80	20	870	7	6	7.5	7	2	No obvious significant defects. Epicormic on main stem to 5 m.	G	G	A1

Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	PC	*BS 5837:2012* Category	Recommendations
						N	E	S	W					
T003	Whitebeam *(Sorbus aria)*	SM	20-40	9	280	4	2.5	4	5	2	Suppressed by adjacent trees with asymmetrical crown spread in result.	G	F	B1
T004	Apple *(Malus* sp.)	SM	40-80	7	210	3.5	4	3.5	4.5	1	No obvious significant defects.	G	G	B1
T005	Turkey oak *(Quercus cerris)*	M	80+	19	1020	11	10	8.5	12	4	Bifurcates at 2-3 m into multiple co-dominant stems; unions appear structurally optimised. Branch cavity at 6 m in south aspect of crown.	G	G	A1
T006	Wild cherry *(Prunus avium)*	SM	20-40	15	310	4	2.5	1.5	6	3.5	Asymmetrical crown spread due to proximity with adjacent trees. Minor deadwood < 100 mm in diameter scattered throughout crown	F	F	B1
T007	Common ash *(Fraxinus excelsior)*	SM	40-80	15	360	4.5	2.5	5	6	2.5	Asymmetrical crown spread due to proximity with adjacent trees. Minor deadwood < 100 mm in diameter scattered throughout crown. Ivy on main stem to 3 m.	F	F	B1
T008	Horse chestnut *(Aesculus hippocastanum)*	Y	20-40	11	200	2	2	2	3	2	Dense ivy established on main stem and structural branches, obscuring tree features and potential defects. Limited arboricultural merit and lacking qualities for higher BS 5837 categorisation.	F	F	C1

Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	PC	*BS 5837:2012* Category	Recommendations
						N	E	S	W					
T009	Horse chestnut *(Aesculus hippocastanum)*	M	20-40	16	780	4	6	8	8	4	Several oozing lesions on main stem, and longitudinal splits in cambium, possibly indicating bleeding canker (Pseudomonas syringae pv. *aesculi*) infection, though vitality remains fair. Asymmetrical crown spread due to proximity with adjacent trees. Approx. 3 m below levels of proposed structure.	F	F	B1
T010	Sycamore *(Acer pseudoplatanus)*	EM	40-80	18	460	3	7	7	4	4.5	Asymmetrical crown spread due to proximity with adjacent trees. Approx. 3 m below levels of proposed structure.	G	F	B1
T011	Sycamore *(Acer pseudoplatanus)*	M	20-40	15	670	4	6	5	5.5	7.5	Historically reduced at circa 13 m. Approx. 3 m below levels of proposed structure.	F	F	B1
T012	Sycamore *(Acer pseudoplatanus)*	M	20-40	14	700	4.5	5.5	5	6.5	6.5	Historically topped at circa 13 m. Approx. 3 m below levels of proposed structure.	F	F	B1
T013	Sycamore *(Acer pseudoplatanus)*	EM	80+	17	440	4	6.5	3.5	4.5	6	No obvious significant defects.	G	G	B1
T014	Common lime *(Tilia x europaea)*	EM	80+	18	520	5	5	5.5	4.5	2	Dense epicormic around base of main stem, obscuring tree features and potential defects, though upper portion of crown appears of good vitality and vigour.	G	G	B1

Groups of Trees

Group Ref:	Species Composition	Age	SULE	Av. Ht.	Av. DBH	Approx. No. of Stems	CC	Comments	PC	*BS 5837* :2012 Category	Recommendations
G001	Goat willow *(Salix caprea)* Sycamore *(Acer pseudoplatanus)* Wild cherry *(Prunus avium)* Whitebeam *(Sorbus aria)* Elder *(Sambucus nigra)* Common hawthorn *(Crataegus monogyna)*	SM EM	40-80	16	440	12	2	Linear group of trees situated on adjacent property. Dense ivy established throughout group, obscuring tree features and potential defects.	F	F	B1
G002	Silver birch *(Betula pendula)* Common dogwood *(Cornus sanguinea)* Hazel *(Corylus avellana)* Wild cherry *(Prunus avium)* Common ash *(Fraxinus excelsior)* Horse chestnut *(Aesculus hippocastanum)* Common alder *(Alnus glutinosa)*	Y SM	20-40	17	460	15	2	Woodland plantation. Multiple specimens display features typical of woodland trees, including acute primary and secondary unions, asymmetrical forms, and/or leaning stems.	F	F	C1

Appendix 2: Images of Trees

Plate 1: *T001*

Plate 2: *T002*

Plate 3: *T003*

Plate 4: *T004*

Plate 5: *T005*

Plate 6: *T006, T007, & T008 (right to left)*

Plate 7: *T009, T010, & T011 (right to left)*

Plate 8: *T009, T010, & T011 (left to right)*

Plate 9: *T012*

Plate 10: *T013 (foreground, left) & T014 (foreground, right)*

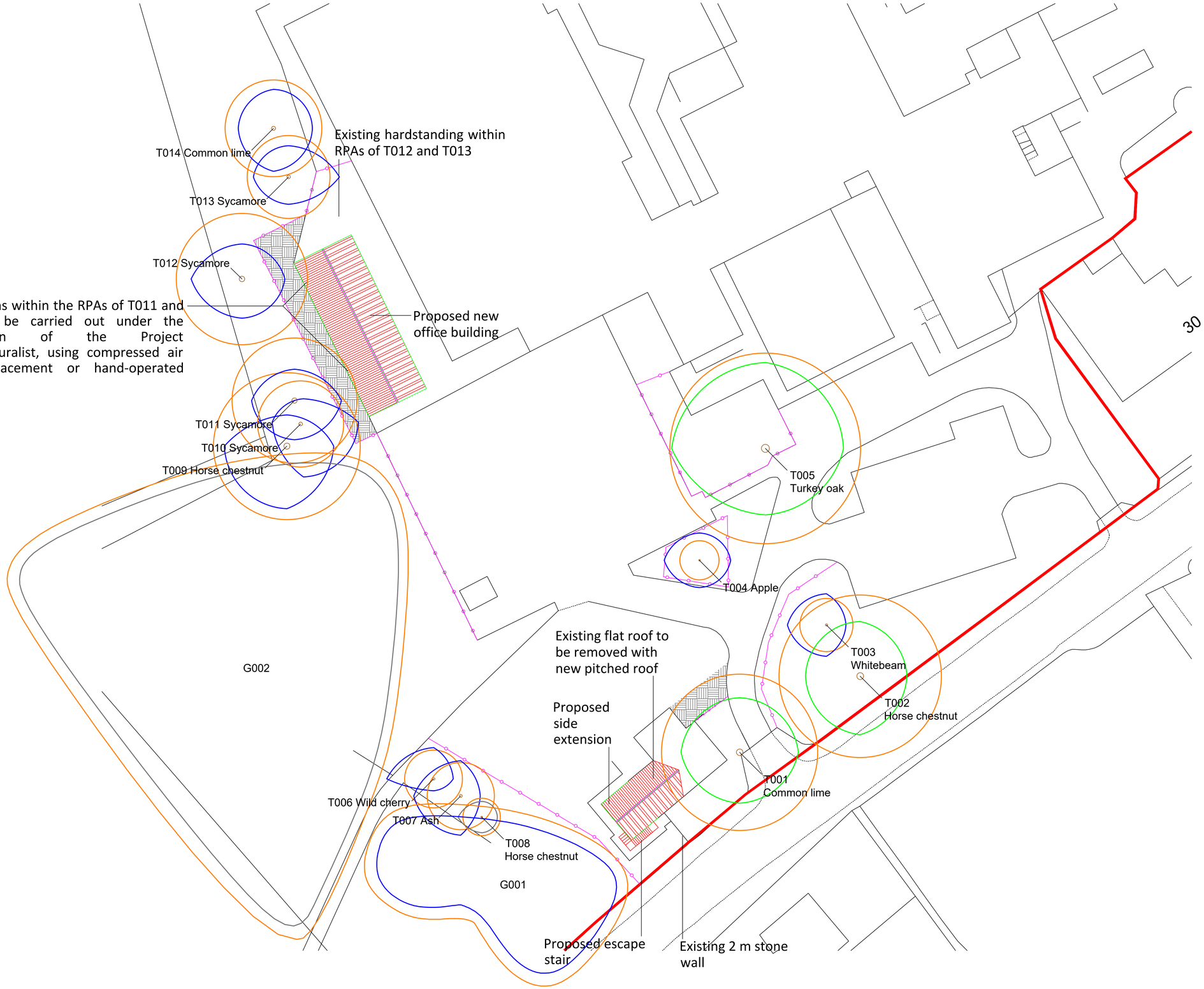
Plate 11: *G001*

Plate 12: *G002*

Appendix 3:
Tree Protection Plan (1)

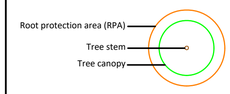
Project:	Spen Valley High School, Liversedge WF15 7LX
Drawn by:	Jack Delaney
Date:	24th May 2024
Scale:	1:250 @ A1
Drawing Number:	WC-266.2a.3

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

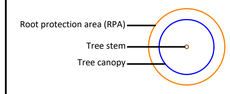


Map Key:

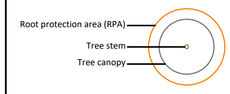
Category A trees of high-quality



Category B trees/groups of moderate-quality



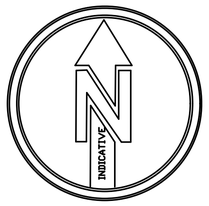
Category C trees/groups of low-quality



Application boundary

Temporary tree protection fencing, to *BS 5837: 2012* specification, as detailed in the ***Outline Arboricultural Method Statement (AMS)***

Temporary ground protection, to *BS 5837: 2012* specification, as detailed in the ***Outline AMS***



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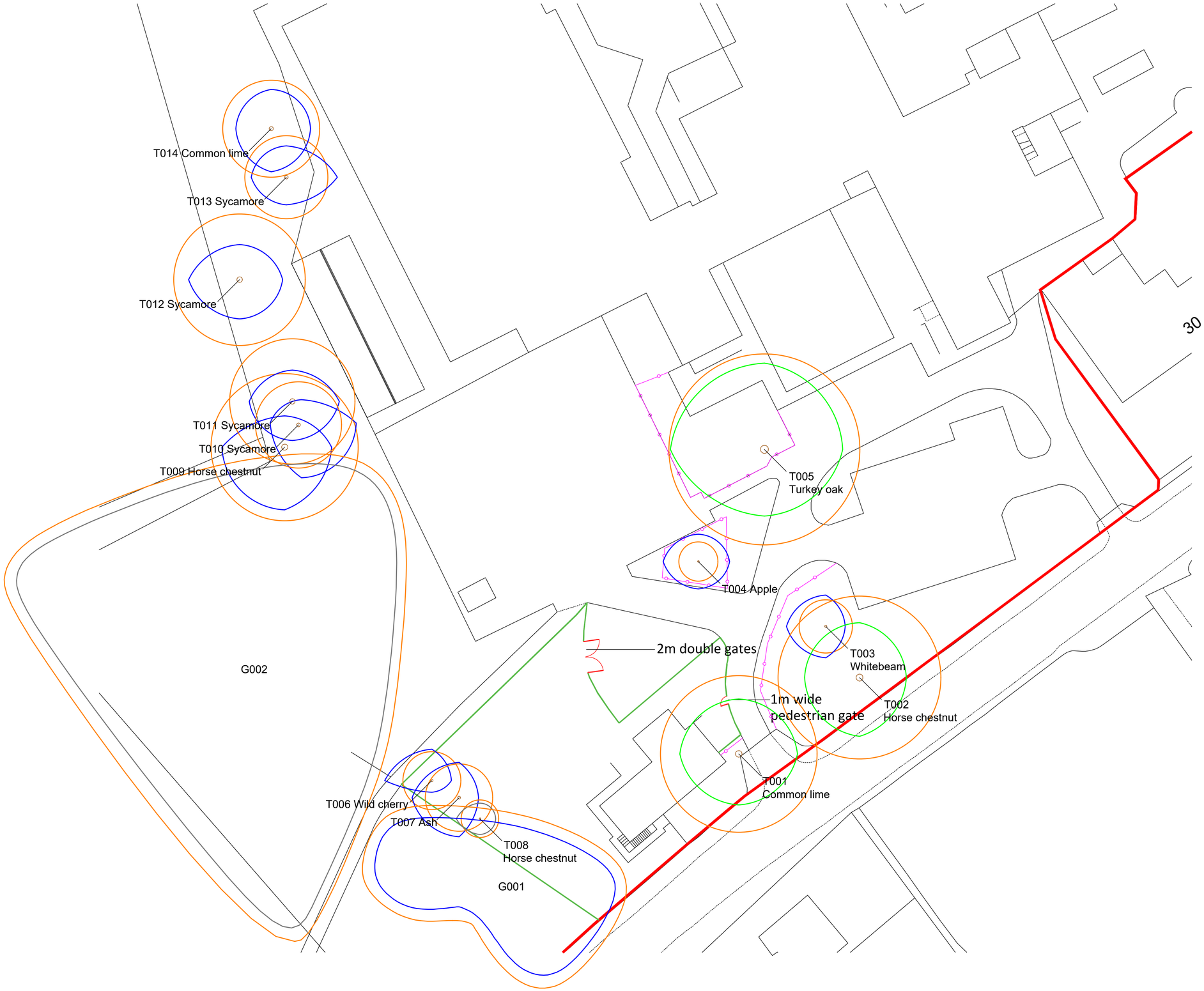

Appendix 4:
Tree Protection Plan (2)

Project:	Spen Valley High School, Liversedge WF15 7LX
Drawn by:	Jack Delaney
Date:	24th May 2024
Scale:	1:250 @ A1
Drawing Number:	WC-266.2a.4

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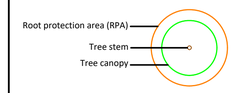
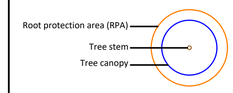
Map Key:

Category A trees of high-quality



Category B trees/groups of moderate-quality



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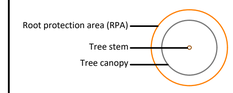

	Application boundary
	Denotes line of 2m high permanent mesh fencing
	Temporary tree protection fencing, to *BS 5837: 2012* specification, as detailed in the ***Outline Arboricultural Method Statement (AMS)***

INDICATIVE

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