



Arboricultural Method Statement

SITE: Hillbank St & Church Ave Development

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Contents

1	Introduction
2	Executive Summary
3	Statutory Protection and Guidance
4	Tree Survey
5	Arboricultural Impact Assessment
6	Tree Protection Measures
7	Recommendations
8	New Tree Planting
9	Arboricultural Method Statement
10	Site Management
11	Prohibited Works within the Root Protection Area
12	Sequence of Works
13	Protective measures during Construction and Demolition
14	Construction Exclusion Zone
15	Protective Barrier Fencing
16	Hard Surfacing
17	New Landscaping
18	Foundations within the RPA
19	New Underground Services
20	Monitoring and Supervision
21	Qualifications
22	Bibliography

APPENDICES

APPENDIX A: Arboricultural Survey Data

APPENDIX B: Tree Survey Methodology

APPENDIX C: Arboricultural Monitoring & Supervision Sign Off Checklist

APPENDIX D: Photographs.

DRAWINGS.

DRAWING 1: Tree Constraints Plan

DRAWING 2: Tree Protection Plan

Table 1: General Information

Document Title	Arboricultural Method Statement and Tree Protection Recommendations.
Prepared For	Harrison Construction Ltd
Prepared By	Robert A. Goodwin
Date	17 th July 2024
Proposed layout drawing No	0002

1 Introduction

- 1.1.1 North West Tree Consultancy Ltd is commissioned by Harrison Construction Ltd to conduct an arboricultural survey at Hillbank Street & Church Avenue, Middleton, Manchester, M24 2RB. The sites are centered on UK Grid References SD88549 08826 and SD88529 08754. The survey is in accordance with British Standard 5837: 2012 'Trees in relation to design, demolition and construction-Recommendations' and is used as guidance to assess trees, hedges and major shrub groups growing on and within influencing distance of the site, and to produce a schedule of trees, tree constraints plan, arboricultural impact assessment, arboricultural method statement and tree protection plan.

2 Executive Summary

- 2.1.1 This report describes the extent and effect of the proposed development on individual and groups of trees both on and adjacent to the site.

Figure 1: Site Location



- 2.1.2 Trees within the site were assessed using the methodology and guidance from British Standard 5837: 2012 ‘Trees in relation to design, demolition and construction-Recommendations’.
- 2.1.3 This report has been produced by balancing the layout of the proposed development against the competing needs of the trees on site. This report therefore comprises all of the requisite elements of an arboricultural implications assessment, method statement along with supporting plans.

3 Statutory Protection and Guidance

National Planning Policy Framework (NPPF)

The NPPF assumes protection of all ancient woodland and veteran trees unless there are wholly exceptional reasons and a suitable compensation strategy exists. In this respect ancient woodland is defined as an area which has been wooded continuously since at least 1600 AD and a veteran as a tree that because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value.

Under section 197 and 198 of the Town and Country Planning Act 1990, local planning authorities, when granting planning consent for development, have a duty to protect trees and woodlands, in the interests of amenity, from wilful damage or removal through the use-of planning conditions and TPO’s.

Tree Preservation Orders & Conservation Area Designations

Works to trees which are covered by Tree Preservation Orders (TPO’s) or those that are within a Conservation Area (CA) require permission or consent from your Local Planning Authority (LPA).

Section 211 of the Town and Country Planning Act 1990 relates to the preservation of trees within a Conservation Area. Under section 211 anyone proposing to remove, uproot or destroy any tree within a Conservation Area is required to give the Local Planning Authority (LPA) 6 weeks prior notice (A Section 211 notice).

It is necessary to obtain confirmation from the LPA of any TPO’s or CA’s upon the site and to follow the appropriate application procedure if tree surgery or any works are required in respect of protected trees.

A statutory protection check has been performed and confirmation by Rochdale Borough Council has revealed the site is free of TPO and CA constraints. However, BS5837 does not distinguish between trees which are subject to statutory protection such as a Tree Preservation Order (TPO) and those trees without. This is due to the fact that a detailed planning consent overrides any TPO protection. We do not seek to bias our findings and decisions in favour of protected trees over other trees without protection.

Protected Species – Birds

- It is a criminal offence under the Wildlife & Countryside Act 1981 to intentionally kill, injure or take any wild bird, or take or destroy their eggs or nest, or damage a nest while that nest is in use or being built. It is advised not to carry out any tree works during bird nesting season which in the UK falls between mid - March to the end of July.

Protected Species – Bats

- Mature trees often contain cavities, crevices and hollows, which are a potential habitat for roosting bats. Bats are afforded protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as under Schedule 2 of the Conservation of Species and Habitats Regulations 2010, and as such causing damage to a bat roost constitutes an offence.

Felling Licenses

- The Forestry Act (1967) requires that a felling license is obtained to remove trees amounting to more than five cubic metres of timber in a calendar quarter. The licenses are administered through the Forestry Commission and contravention of the associated controls can incur substantial penalties.

4 Tree Survey

- 4.1.1 An arboricultural survey was carried out on all trees within impacting distance of the site. The survey was undertaken by Robert Goodwin of North West Tree Consultancy Ltd on the 13th July 2024.
- 4.1.2 13 individual trees (T001- T013), two hedges (H001 & H002) and four groups of trees (G001 – G004) were recorded within influencing distance of the proposed development. A schedule of all trees and groups including species, condition, age, management recommendations and BS 5837:2012 quality categories is provided within **Appendix A**.
- 4.1.3 Tree and group locations along with their canopy spreads and Root Protection Areas (RPA) are shown on **Drawing 1**.

Limitations

- 4.1.4 The survey was carried out from ground level only using visual observations. No detailed examinations were made such as decay detection or aerial inspections, such recommendations if required are detailed in recommendations within the tree survey schedule found in **Appendix A**.
- 4.1.5 Measurements were measured using specialist measurement equipment unless otherwise indicated as approximate.

Scope

- 4.1.6 The scope of pre-development tree surveys are to make arboricultural management recommendations purely based upon individual tree or group of trees condition relative to their present context and not in relation to the proposed development.

Tree Quality Categorisation

4.1.7 Under BS 5837:2012 Trees in relation to design, demolition and construction- Recommendations, trees and groups of trees are assigned a quality category in order to quantify their value within any future development. The table below contains a summary of the categories set out in the British Standard. The full table is reproduced in **Appendix B**.

Table 2: BS 5837: 2012 Tree Quality Categorisation

HIGH QUALITY	MODERATE QUALITY	LOW QUALITY	FELL/REMOVE
A	B	C	U
Trees of high quality with an estimated remaining life expectancy of at least 40 years.	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.	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.

5 Arboricultural Impact Assessment

5.1.1 Issues that may need to be addressed in an arboricultural impact assessment between the trees and the proposed development are as follows:

- The effect and extent of the proposed development within the root protection areas (RPAs) of retained trees;
- Potential conflicts of tree canopies of retained trees upon the proposed development;
- The likelihood of future remedial works to retained trees which are beyond usual management schedules.

5.1.2 To facilitate the proposed development incursion into the RPA T002 will be required. Mitigation methods to ensure the appropriate level of protection is afforded upon the retained trees will be discussed within the Arboricultural Method Statement (AMS) in section 9 of this report.

Trees to be removed

5.1.3 The implementation of the proposed development requires the removal of 2No individual trees (T001 & T004) and two shrub groups (G003 & G004).

Table 3: Number of individual trees to be removed

U	A	B	C
0	N/A	1, (T001)	1, (T004)

Table 4: Number of groups to be removed

U	A	B	C
2, (G003 & G004)	N/A	N/A	0

6 Tree Protection Measures

- 6.1.1 The following information sets out precursory considerations in determining the requirement for tree protection measures and in the assessment of development impact.

Root Protection Areas

- 6.1.2 As per BS 5837: 2012, a Root Protection Area (RPA) has been assigned to each tree or group of trees and is based on the stem diameter at 1.5m above ground level. This area represents the minimum area around each tree that must be left undisturbed to ensure its survival.
- 6.1.3 Tree roots are typically found in the first 600mm of soil and most of the fine roots that absorb nutrients and water are found close to the surface.
- 6.1.4 Root morphology is influenced by site conditions past and present (including roads, buried structures and underground services), soil type, drainage and topography. Due to these influencing conditions, tree roots may not be a circular area centered on the tree stem.

Ground Contamination

- 6.1.5 Storage areas for fuels and oils should not be located within 10 metres of any retained tree due to the risk of soil contamination caused by accidental spillage.
- 6.1.6 Care and attention should be taken particularly when working on or near slopes to avoid unintentional runoff of harmful materials into the rooting areas of retained trees.

Underground Utilities

- 6.1.7 No underground utility drawings have been provided and no assessment has been made to the position of tree roots and the likely location of any new utility services. It is therefore presumed for the purposes of this report that all new utilities will be positioned outside of the Root Protection Areas.
- 6.1.8 Where the installation of new services within the RPA of retained trees is unavoidable, appropriate work methods will be required in order to ensure that the safe long-term health and survival of the tree is maintained. This process will require additional consultation with the project arboriculturist before any works commence. An additional Arboricultural Method Statement may be necessary to implement these works effectively.

Ground Level Changes

- 6.1.9 A rise or reduction in ground level can have a serious implication on the longevity and health of the trees. Minor changes (up to 100mm) can be tolerated in some cases but largely dependent on the tree species, health, condition and growing environment.
- 6.1.10 Existing ground levels within the RPA should be maintained. No information regarding changes in ground level have been made available, it is therefore assumed that for the purpose of this report that all ground levels are to remain unchanged. . If changes are required within the RPA of retained trees then advice should be sought from the project arboriculturist and agreement with the LPA Tree Officer prior to any works taking place.

Drainage & Storm Water Run-off

- 6.1.11 Drainage and storm water run-off requires due consideration. This is to prevent excessive and/or polluted run-off into the rooting area of retained trees. Where possible any drainage of foul water should be directed away from the rooting area of the retained trees.
- 6.1.12 When using pile and void type foundations it is essential to prevent the desiccation of soil below the building by installing a rain water irrigation system from the down pipe of the guttering of the building and which lies in the void below. This allows the natural rain water to flow onto the covered rooting area thus preventing excessive soil desiccation. The irrigation system mimics the natural rainfall pattern delivering water which the trees would normally receive.

Permanent Hard Surfacing

- 6.1.13 No permanent hard surfacing is required within the RPAs of retained trees on site, however if hard surfacing is found to be required within the RPA of a retained tree then specifications and guidance should be followed which is available within section 16 of this report.

Tree protection during demolition

- 6.1.14 Demolition of the existing garages is proposed on site.
- 6.1.15 Any access facilitation pruning that is required should be carried out as necessary in order to prevent injurious damage by demolition plant to any retained trees on site during the demolition process.
- 6.1.16 When demolition is required within the RPA of a retained tree, protective barriers and suitable ground protection should be erected before any works commence. This is to protect the underlying soil at the edge of the existing structure.
- 6.1.17 Plant and vehicles carrying out such demolition works should operate outside the RPA or run on ground protection.
- 6.1.18 Demolition works should be carried out inwards and away from adjacent retained trees and within the footprint of the existing building. This technique is often referred to as “top down, pull back”.
- 6.1.19 Existing hard surfacing that is required to be removed should be carried out with care so as not to disturb any underlying roots that may be present below the surface.
- 6.1.20 Hand tools or appropriate machinery should be used to remove any existing hard surfacing under arboricultural supervision and by working backwards over the area, this is to ensure the machine is not moving over any exposed roots thus causing irrevocable damage.

7 Recommendations

Pre-Construction Tree Care

- 7.1.1 All trees if required should receive such works as detailed under Recommendations in the Tree Survey Schedule in Appendix A.
- 7.1.2 Some access facilitation pruning will be required to T002 & T003 to allow construction access, this is to ensure that no unintentional damage is caused upon the retained trees. The work requires some minor overhanging branches to be pruned away from the construction area. These trees are owned by the neighbouring property owners and control should be granted before any works are carried out.
- 7.1.3 All tree works must be carried out by suitably qualified and experienced contractors in accordance with British Standard 3998: 2010 'Tree work-Recommendations.

8 New Tree Planting

- 8.1.1 It is foreseeable that new tree planting will be required to mitigate the loss of trees associated to the site and should be carried out as per Planning Conditions state.
- 8.1.2 All new tree planting is an essential consideration to the future development of the site. Trees form the dominant elements of the landscape structure and an enhancement to the biodiversity of the site in the long term. Careful consideration should be given to their characteristics such as ultimate height, crown spread, form, habit and colour, density of foliage and maintenance implications.
- 8.1.3 Decisions regarding the location and selection of species of newly planted trees should be sought from a landscape architect or other competent person.

9 Arboricultural Method Statement

- 9.1.1 The purpose of this method statement is to demonstrate how any aspect of the proposed development that may damage or result in harm to a retained tree can be implemented along with the provision of adequate levels of protection for trees that are to be retained.
- 9.1.2 Any protection measures required should be in accordance with this method statement and remain in situ for the duration of the works.
- 9.1.3 *No works or delivery of materials is to occur until all relevant protection methods are in situ and briefed to the relevant staff on site in accordance with this method statement.*

10 Site Management

- 10.1.1 The site manager will be responsible for the briefing to all personnel during all stages of the development including personnel of whom will be working adjacent to the canopies and RPAs of the retained trees.
- 10.1.2 The site manager will provide a copy of this method statement including the tree protection plan to all relevant personnel on site.
- 10.1.3 The site manager will be responsible for the running of the site and ensuring the protection of the retained trees, liaising with the project arboriculturist regarding any such matters relating to the trees, ensuring that the movement of plant, mixing of materials, excavations other than those necessary to facilitate the works, pouring, mixing or storage of any caustic materials is excluded from the RPAs of the retained trees.
- 10.1.4 Any damage to the trees or parts of the trees will be documented by the site manager and will be reported to the project arboriculturist immediately where work will cease until the project arboriculturist has inspected the damage, and where appropriate agreed a mitigation method with the Local Planning Authority Tree Officer.
- 10.1.5 If the site manager designates another person to take charge of the site in his absence, then the site manager will be responsible for informing the new person of all relevant information relating to the protection of the retained trees.
- 10.1.6 If any pruning works are required during the works, then permission must be sought from the Local Planning Authority and or third party before being carried out. Any pruning works will be carried out by trained, competent arborists in accordance with BS3998 (2010) Tree work – Recommendations.

11 Prohibited Works within the Root Protection Area

- Any mechanical excavation or scraping works to be carried out in the defined Root Protection Area.
- The leaning or attachment of objects to any of the retained trees.
- The washing of machinery or plant is prohibited within 10m of any retained trees.
- Chemicals and materials are not to be stored, used or mixed within the Root Protection Area.
- Cement silos, mixing sites are to be positioned within a bunded area to prevent pillage or leakage of chemicals into the soil which can cause harm to retained trees. They are to be sited well clear of the retained trees.
- Refueling of plant and machinery is prohibited within 10m of retained trees.
- The siting of refueling/mixing/washing of plant and materials should be positioned with the slope of the land in mind so as not to cause run off and spillage into the rooting area of the retained trees.
- The storage of any caustic materials should be stored at a reasonable distance away from the rooting area of the retained trees with particular attention paid to the slope of the land.

12 Sequence of Works

Table 3: Sequence of Works

Stage	Event
1	Pre – commencement meeting
2	Installation of protective measures in accordance with the Tree Protection Plan
3	Site set up
4	Undertake and complete demolition works
5	Undertake and complete construction works
6	Removal of all construction vehicles and materials from site
7	Dismantle all Tree Protection measures
8	Sign off by project arboriculturist

13 Protective measures during Construction and Demolition

- 13.1.1 Protective measures are to be installed before any works commence on site.
- 13.1.2 These should be sited and in accordance with the Tree Protection Plan detailed in Drawing 2 to this report.
- 13.1.3 Upon installation of protective measures around the retained trees, the project arboriculturist will visit the site to ensure the specifications and location are correct.
- 13.1.4 Should any of the protective fencing or signage become damaged during the construction, the project arboriculturist should be informed immediately and the damage be rectified within a timely period.
- 13.1.5 No equipment, vehicles or plant shall operate beyond the protective barrier fencing. Booms, hoists and rigs should be kept as far away from the canopies of trees as is reasonably practicable at all times.
- 13.1.6 Where it is necessary for plant and machinery to operate within 5 metres from the tree canopy, this should be carried out with extreme caution and under the control of a banksman to ensure no injurious contact is made with the tree from machinery.
- 13.1.7 The protective measures will remain in place until the completion of all works. On completion of the works they will be carefully dismantled and removed upon agreement with the project arboriculturist or Local Authority Tree Officer.
- 13.1.8 Existing site boundaries are to be retained for the duration of the development. Should the requirement be necessary for the dismantling of boundary fencing during construction, protective barrier fencing is to be installed along the existing course of the boundary fence and should only be removed upon the agreement with the project arboriculturist.
- 13.1.9 Temporary ground protection will be required for the retained tree T002 during the installation of pile foundations. Specifications should meet those set out below under Temporary Ground Protection.

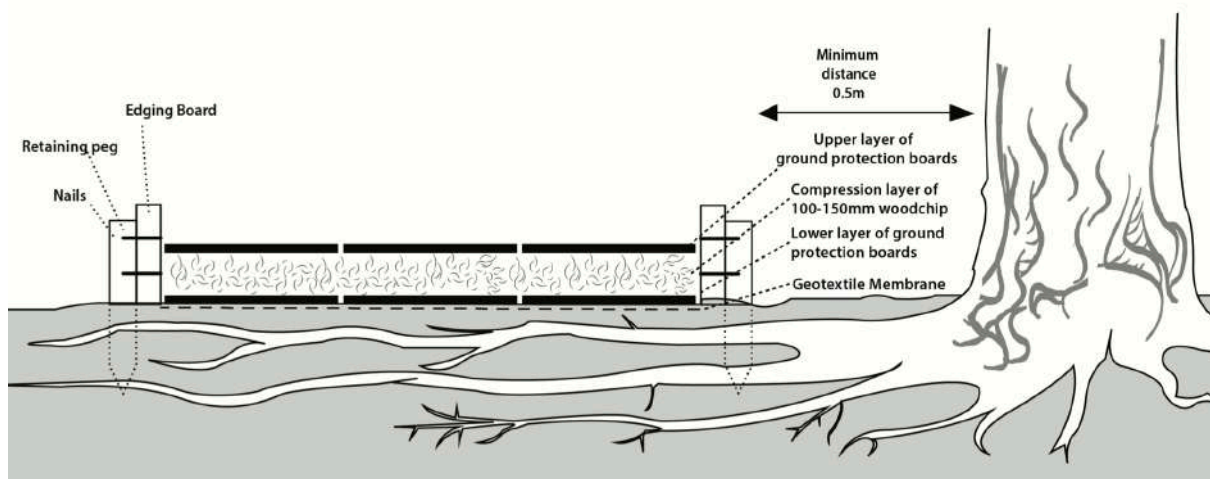
Temporary Ground Protection

13.1.10 Temporary ground protection should be capable of supporting any traffic entering and using the site without being distorted or causing compaction of the underlying soil. If it is decided that the existing ground protection is not a viable option then the removal of the hard surfacing should be carried out under direct supervision from the project arboriculturist and the areas covered by ground boarding designed by the project engineer to ensure the correct loading of the area. An example is shown below in **Figure 2**.

Suitable ground protection could comprise of one of the following:

- a) *For pedestrian movement only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression resistant layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane;*
- b) *For pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane;*
- c) *For wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

FIGURE 2: Example temporary ground protection to be used within RPA.



14 Construction Exclusion Zone

- 14.1.1 A Construction Exclusion Zone (CEZ) is a designated area where construction or activity of any kind is prohibited. There should be no storage of materials, parking of vehicles or machinery, loading or unloading of machinery in this area. The CEZ is denoted by the protective barrier fencing as detailed on the Tree Protection Plan on **Drawing 2** of this report.

Additional precautionary measures outside the Construction Exclusion Zone

- 14.1.2 Fires, if required on site should be avoided wherever possible. Where fires are unavoidable, they should not be lit in a position where heat could affect the foliage or branches of trees. The size of fire and the direction of the wind should be taken into account when determining its location, it should be attended at all times until safe to leave.

15 Protective Barrier Fencing

- 15.1.1 Site wide protective barrier fencing will be required for the duration of the construction phase of the proposed development.
- 15.1.2 Protective barrier fencing should be fit for purpose for excluding construction activity along with being appropriate to the degree and proximity of the work taking place.
- 15.1.3 The fencing is to comprise of 2m tall welded mesh panels on rubber or concrete feet. Panels are to be joined together using a minimum of two anti-tamper couplers, installed in such a way that they can only be removed from inside the fence. The panels should be supported on the inner side by stabiliser struts, which should be attached to a base plate and secured with ground pins. Examples of the protective fencing can be found in **Figures 3 & 4**. “Tree Protection Zone – Keep Out” will be attached with cable ties to every other panel, an example of which can be found in **Figure 5**.

Figure 3: BS5837: 2012 –Default specification for protective barriers

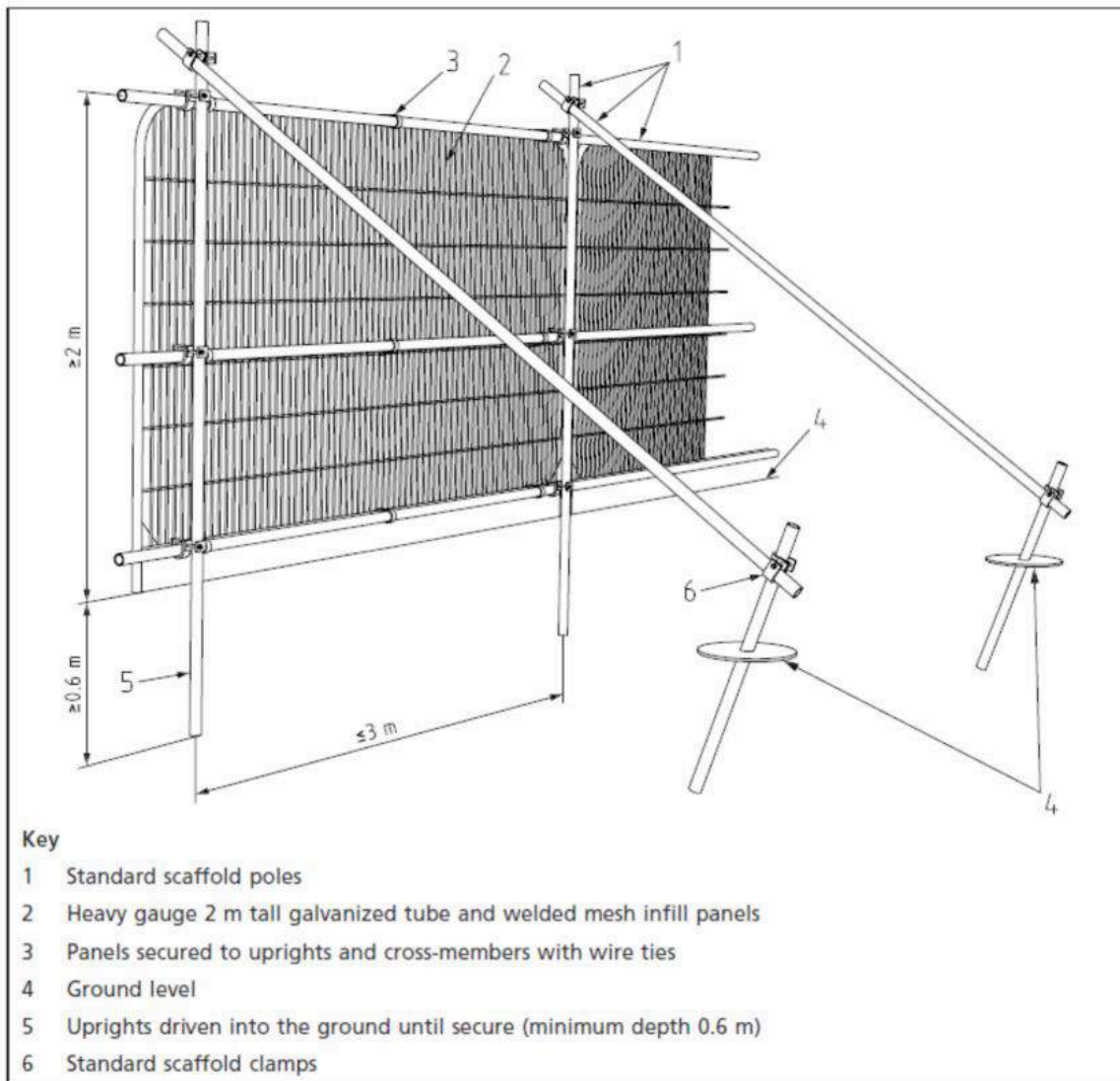


Figure 4: BS5837: 2012 – Alternative specification for protective barriers

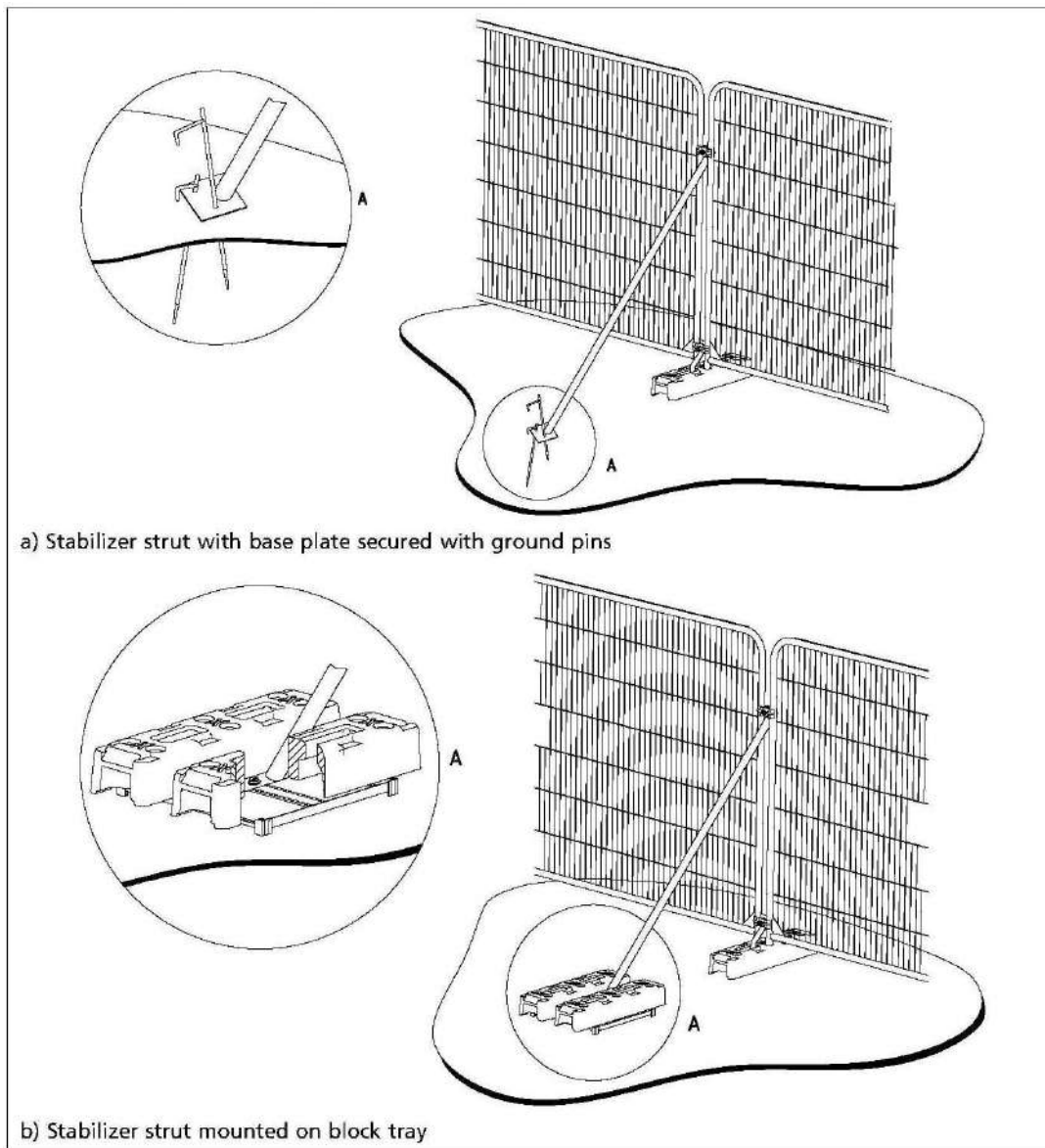


Figure 5: Example Tree Protection Area warning sign



16 Hard Surfacing

- 16.1.1 No permanent hard surfacing is proposed within the RPAs of any retained tree on the development site.
- 16.1.2 Should it be decided that new surfacing is required the design and layout should meet the specifications set out below.
- 16.1.3 The design and specification of the new wearing course should be agreed with the project arboriculturist and Local Authority Tree Officer prior to being laid.
- 16.1.4 The design should not require excavation into the sublayer of the soil, this includes the lowering and or scraping of the surface other than to remove the turf layer using hand tools only.
- 16.1.5 A geotextile should be used at the base of construction in order to prevent pollution contamination of the below rooting area.
- 16.1.6 The hard surface should be resistant to deformation by tree roots and should be set back from the tree stem at least 500mm to allow for growth and movement. An example is shown in **Figure 6**.
- 16.1.7 An appropriate sub-base shall be used for the new hard surfacing, this will be an approved three dimensional cellular confinement system. An example is shown in **Figure 7**.

Figure 6: Example basic approach to using cellular confinement systems near trees.
(AA_GuidanceNote12_CellularConfinementSystems)

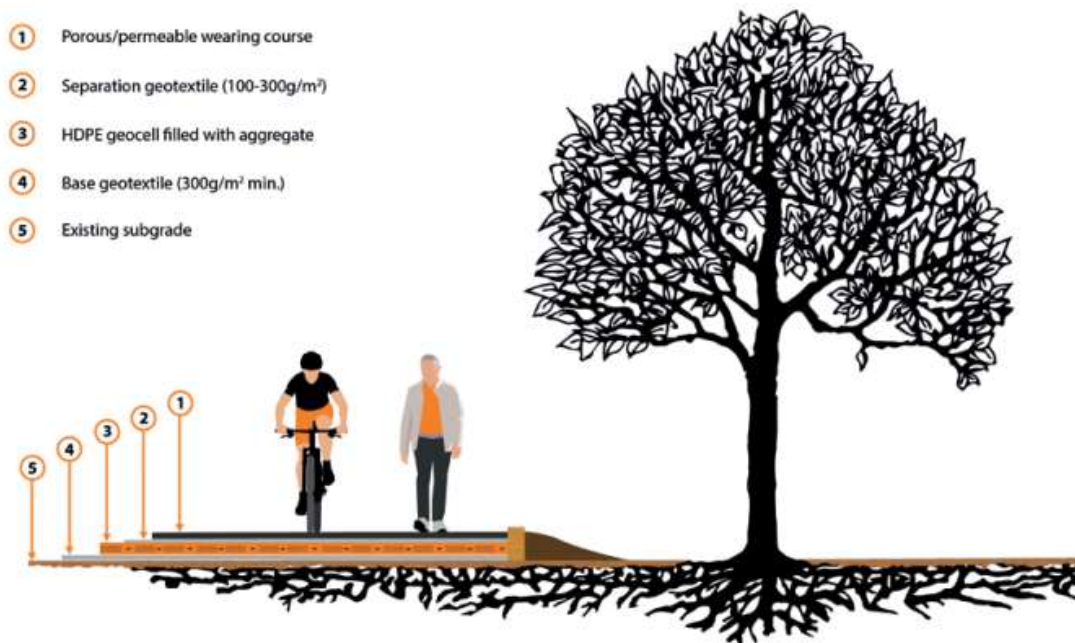
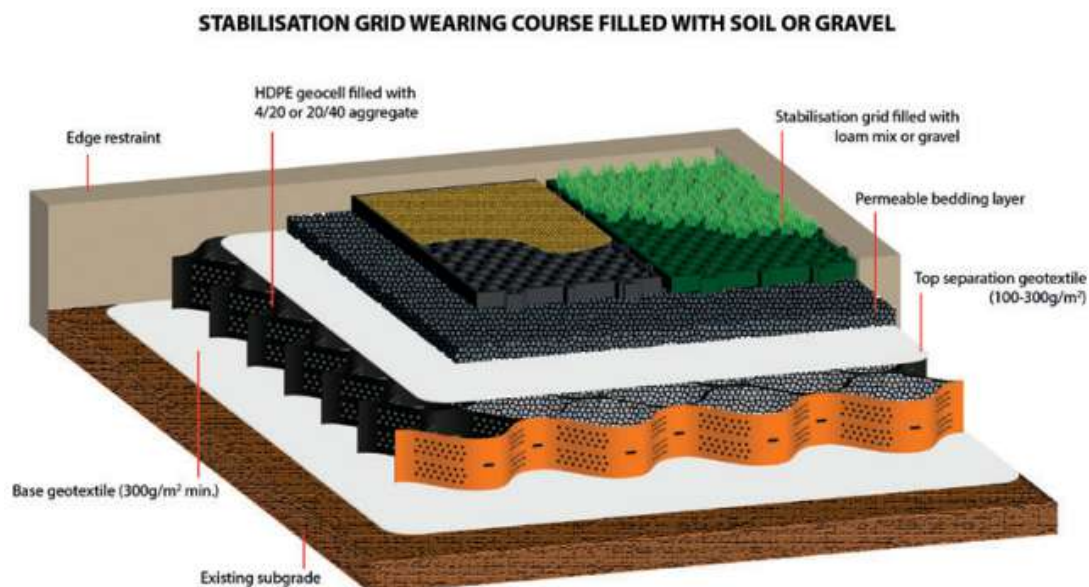


Figure 7: Sub-base configuration for gravel or grass surfacing.
(AA_GuidanceNote12_CellularConfinementSystems)



17 New Landscaping

17.1.1 New soft landscaping is proposed within the RPAs of T011 and T012.

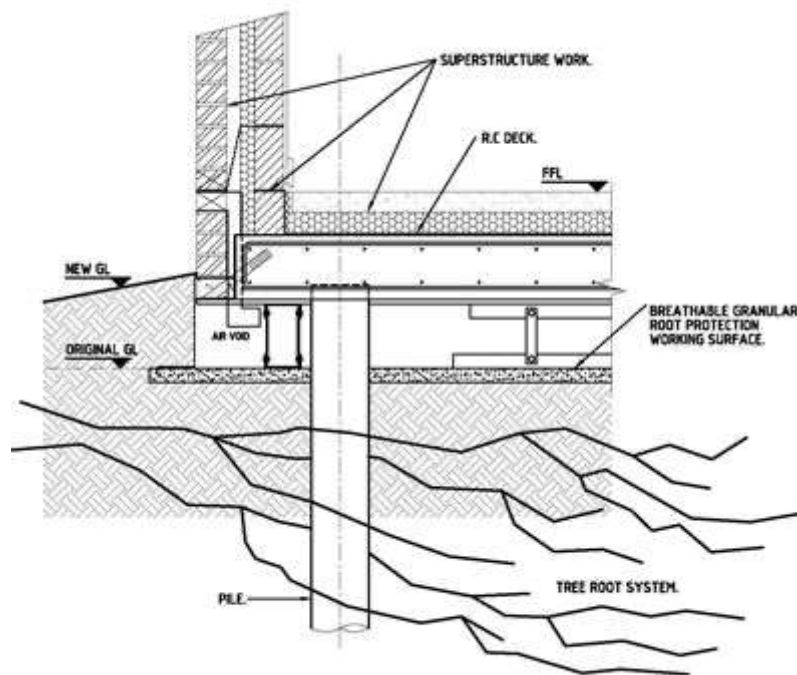
17.1.2 It is recommended that designs and specifications should be sought from a landscape architect or other competent person and agreed with the Local Planning Authority prior to being carried out.

17.2 All new landscaping should be carried out to BS 4428: 1989 Code of practice for general landscape operations (excluding hard surfaces).

18 Foundations within the RPA

- 18.1.1 The use of traditional foundation footings can result in extensive root loss and damage to trees and should be avoided.
- 18.1.2 The use of specially engineered structures to be used within the RPAs may be justified to enable the retention of good quality trees.
- 18.1.3 Root damage can be mitigated by the use of pile foundations.
- 18.1.4 Preliminary site investigations to determine the optimal location of the piles should be carried out under the supervision of the project arboriculturist.
- 18.1.5 Investigations made should be by means of hand tools or compressed air soil displacement and should be made to a minimum depth of 600mm.
- 18.1.6 Cast insitu concrete ground beams, cast within the ground can be used subject to the hand formed excavations being lined with an impermeable inert membrane min specification Visqueen 2000g.
- 18.1.7 Sub floor void (solum) area provided with through flow ventilation equivalent to a continuous ventilation gap of 25mm with that area below left loosely formed and not compacted to allow for air to pass through the soil and for gasses to escape.
- 18.1.8 The use of piling mats will not be required to facilitate the operation. Existing hard surfacing will be used to compensate for this.
- 18.1.9 The type of pile selected should take into consideration the need to protect the soil and surrounding roots from the potentially toxic effects of uncured concrete, **Figure 8** shows the construction and specification of the pile type to be used.
- 18.1.10 An irrigation system will be installed from the gutter down pipes from flexible perforated piping and laid underneath the concrete raft, this will ensure that the underlying soil does not dry out and that moisture can flow laterally through the soil mimicking the wider rainfall, therefore the covered rooting area is not restricted of normal amounts of water.

Figure 8: Example Sleeved Bored Pile system to be used within RPA.



19 New Underground Services

- 19.1.1 Trenching methods used for the installation of underground services have the potential to sever roots that may be present and as such have an adverse effect on the health of the tree. Care should at all times be taken to ensure that the routing of underground services do not pass through the RPA'S of retained trees.
- 19.1.2 If it is impossible to avoid the RPAs through the routing of new underground services then the sections to be installed should be carried out in one of three ways in accordance with guidelines set out under the National Joint Utilities Group (NJUG 4), under arboricultural supervision. Entry and retrieval pits should be sited outside of the RPA.

Trenchless Techniques

- 19.1.3 Trenchless techniques can include guided and unguided boring and pipe replacement by lining or bursting. These techniques allow for the maintenance and renewal of underground services without unduly disturbing the soil in which the roots are likely to have colonised. Staring and receiving pits are to be located outside of the RPA and a bore depth of 600mm should be maintained below the existing ground level.
- 19.1.4 Techniques which require the lubrication of equipment shall use no material other than water as lubrication for this task as other lubricants could contaminate the surrounding soil.

Manual Excavation

- 19.1.5 Excavation within the RPA if required should be undertaken by hand under direct supervision by the project arboriculturist to the desired depth of a minimum of 600mm.
- 19.1.6 The surrounding soil is to be loosened with the aid of a fork or pick axe and then cleared with the aid of an Air spade, Air vac or shovel. Any roots which are found will be cleanly severed by the project arboriculturist by the use of a hand saw or secateurs.
- 19.1.7 Roots of <25mm will be cleanly severed under supervision by the project arboriculturist and roots of >25mm will be excavated around without damaging them. If it is impractical or impossible to excavate around such roots, then an alternative approach and method should be discussed with the project arboriculturist.

Broken Trench – Hand Dug

- 19.1.8 This technique combines both trenchless and manual excavation techniques where any excavation is unavoidable. Such excavation should be limited to where there is clear access below and around the roots. Trenches shall be excavated by hand incorporating the same precautions as for manual excavation. The open sections of the trench should only be large enough to allow the next section of ducting to be joined.

20 Monitoring and Supervision

- 20.1.1 The development's tree protection measures are to be monitored at all times and all construction works within the RPA of retained trees is to be supervised by the project arboriculturist, who will retain a record of observations at appropriate intervals of the construction phase.
- 20.1.2 A site specific record sheet is shown at **Appendix C**.

Supervised activities

- 20.1.3 The project arboriculturist will be required to attend site to supervise the following measures:

1. Location of protective measures.
2. Any excavations or exploratory investigations and excavations within or adjacent to the RPAs including hard surfacing, pile location and installation.
3. Removal of protective measures.
4. Sign off by project arboriculturist.

APPENDECIES

Appendix A: Arboricultural Survey Data

Appendix B: Survey Methodology

Appendix C: Arboricultural Monitoring and Supervision Sign off Checklist.

Appendix D: Photographs

APPENDIX A: Arboricultural Survey Data

Ref.	Species	Structure	Num. Stems	Height	Ult. Height (m)	Stem diameter(s) (mm)	Combined Stem Diam	Life Stage	Rem. Contrib.	Comments	General Observations	Retention Category	North	East	South	West	Crown Clearance (m)	Lowest Branch Direction	RPA	Physiological Condition	Structural Condition	Recommendations
G001	Mixed species <i>(Mixed species)</i>	Group	10+	-	-	-	0	-	10+ Years	This tree does not form a constraint to the redevelopment of the site.	Mixed species group in fair condition on site boundary.	C	-	-	-	-	-	-	Area: 152 sq m.	Fair	Fair	No work required
G002	Mixed species <i>(Mixed species)</i>	Group	10+	-	-	-	0	-	10+ Years	This tree will form the constraint to the north side of the site.	Mixed shrub group on neighbouring property.	C1	-	-	-	-	-	-	Area: 43 sq m.	Fair	Fair	During construction: Protect trees with protective barriers - as shown on plans.
G003	Mixed species <i>(Mixed species)</i>	Group	10+	-		-	0	-	10+ Years	These trees will have to be removed to facilitate a proposed future development.	Mixed shrub group.	U	-	-	-	-			No RPA due to Retention Category of U.	-	-	Remove tree.
G004	Mixed species <i>(Mixed species)</i>	Group	10+	-	-	-	0	-	10+ Years	These trees will have to be removed to facilitate a proposed future development.	Mixed shrub group.	U	-	-	-	-	-	-	No RPA due to Retention Category of U.	-	-	Remove tree.
H001	Mixed species <i>(Mixed species)</i>	Hedge	10+	-	-	-	0	-	10+ Years	This tree will form the constraint to the north side of the site.	Mixed species hedge on boundary with neighbouring property. Hedge in neighbouring property.	C1	-	-	-	-	-	-	No RPA.	Fair	Fair	During construction: Protect trees with protective barriers - as shown on plans.
H002	Leyland cypress <i>(X Cuprocyparis leylandii)</i>	Hedge	10+	-	20.0	-	0	-	10+ Years	This tree will form the constraint to the east side of the site.	Boundary hedge on neighbouring property.	C1	-	-	-	-	-	-	No RPA.	Good	Fair	During construction: Protect trees with protective barriers - as shown on plans.
H003	Common beech <i>(Fagus sylvatica)</i>	Hedge	10+	-	20.0	-	0	-	10+ Years	This tree will form the constraint to the south side of the site.	Maintained Boundary hedge in neighbouring property.	C1	-	-	-	-	-	-	No RPA.	Fair	Fair	During construction: Protect trees with protective barriers - as shown on plans.
T001	Sycamore <i>(Acer pseudoplatanus)</i>	Tree	4	10.0	22.0	260,190,190,190	419	Semi Mature	10+ Years	This tree will form the constraint to the east side of the site.	Fair overall Physiological and Structural condition. Multi stemmed tree.	B1	4.0	4.0	4.0	4.0	2.0	SW	Radius: 5.0m. Area: 79 sq m.	Fair	Fair	This tree will have to be removed to facilitate a future development.
T002	Common beech <i>(Fagus sylvatica)</i>	Tree	1	14.0	20.0	700	560	Mature	20+ Years	This tree will form a constraint to the south of the site.	Fair overall Physiological and Structural condition. Codominant stems at main union.	B1	8.0	7.0	8.0	9.0	2.0	N	Radius: 6.7m. Area: 141 sq m.	Good	Fair	Pile foundations within RPA. Some minor pruning of lateral overhanging branches will be required to facilitate construction.

APPENDIX A: Arboricultural Survey Data

T003	Goat willow (<i>Salix caprea</i>)	Tree	1	8.0	24.0	220	220	Early Mature	10+ Years	This tree does not form a constraint to the redevelopment of the site.	Tree in neighbouring property. Fair overall Physiological and Structural condition.	C1	4.0	4.0	5.0	2.0	2.0	E	Radius: 2.6m. Area: 21 sq m.	Fair	Fair	Some minor pruning of overhanging lateral branches will be required to facilitate construction. During construction: Protect trees with protective barriers - as shown on plans.
T004	Sycamore (<i>Acer pseudoplatanus</i>)	Tree	3	8.0	22.0	180,180,180	312	Semi Mature	10+ Years	This tree does not merit retention due to poor location of tree and will cause future constraints to the development.	Multi stemmed tree on site boundary. Fair overall Physiological and Structural condition.	C1	3.0	2.0	3.0	4.0	2.0	S	Radius: 3.7m. Area: 43 sq m.	Fair	Fair	Remove tree.
T005	Cotoneaster (<i>Cotoneaster sp.</i>)	Tree	1	5.0		100	100	Semi Mature	10+ Years	This tree does not form a constraint to the redevelopment of the site.	Tree on boundary in neighbouring property.	C1	3.0	3.0	3.0	3.0	2.0	S	Radius: 1.2m. Area: 5 sq m.	Fair	Fair	During construction: Protect trees with protective barriers - as shown on plans.
T006	Cotoneaster (<i>Cotoneaster sp.</i>)	Tree	1	5.0		100	100	Semi Mature	10+ Years	This tree does not form a constraint to the redevelopment of the site.	Tree on boundary in neighbouring property.	C1	3.0	3.0	3.0	3.0	2.0	S	Radius: 1.2m. Area: 5 sq m.	Fair	Fair	During construction: Protect trees with protective barriers - as shown on plans.
T007	Cotoneaster (<i>Cotoneaster sp.</i>)	Tree	1	5.0		100	100	Semi Mature	10+ Years	This tree does not form a constraint to the redevelopment of the site.	Tree on boundary in neighbouring property. Damage to roots on South side of rooting area caused by excavations.	C1	3.0	3.0	3.0	3.0	2.0	S	Radius: 1.2m. Area: 5 sq m.	Fair	Fair	During construction: Protect trees with protective barriers - as shown on plans.
T008	Fir (<i>Abies sp.</i>)	Tree	1	9.0		280	280	Semi Mature	20+ Years	This tree does not form a constraint to the redevelopment of the site.	Good overall Physiological and Structural condition. Tree in neighbouring property. Damage to roots on South side of rooting area caused by excavations.	B1	2.0	2.0	2.0	2.0	3.0	SW	Radius: 3.4m. Area: 36 sq m.	Good	Good	Pre construction: No action required. During construction: Protect trees with protective barriers - as shown on plans.
T009	Silver birch (<i>Betula pendula</i>)	Tree	1	10.0	14.0	300	300	Early Mature	20+ Years	This tree does not form a constraint to the redevelopment of the site.	Good overall Physiological and Structural condition. Tree in neighbouring property.	B1	5.0	4.0	4.0	4.0	3.0	NW	Radius: 3.6m. Area: 41 sq m.	Good	Good	During construction: Protect trees with protective barriers - as shown on plans.
T010	Lawson cypress (<i>Chamaecyparis lawsoniana</i>)	Tree	3	6.0	18.0	100,100,100	173	Semi Mature	10+ Years	This tree does not form a constraint to the redevelopment of the site.	Tree in neighbouring property. Good overall Physiological and Structural condition.	B1	2.0	2.0	2.0	2.0	1.0	Multiple	Radius: 2.1m. Area: 14 sq m.	Good	Good	During construction: Protect trees with protective barriers - as shown on plans.

APPENDIX A: Arboricultural Survey Data

T011	Flowering cherry <i>(Prunus Serrulata)</i>	Tree	1	6.0		200	200	Semi Mature	10+ Years	This tree does not form a constraint to the redevelopment of the site.	Tree in neighbouring property. Good overall Physiological and Structural condition.	B1	3.0	2.0	2.0	2.0	2.0	Multiple	Radius: 2.4m. Area: 18 sq m.	Good	Good	During construction: Protect trees with protective barriers - as shown on plans.
T012	Cherry plum <i>(Prunus cerasifera)</i>	Tree	2	6.0	10.0	150,200	250	Semi Mature	10+ Years	This tree does not form a constraint to the redevelopment of the site.	Tree in neighbouring property. Good overall Physiological and Structural condition.	B1	2.0	2.0	2.0	2.0	2.0	NW	Radius: 3.0m. Area: 28 sq m.	Good	Fair	During construction: Protect trees with protective barriers - as shown on plans.
T013	Wild cherry <i>(Prunus avium)</i>	Tree	1	9.0	17.0	280	280	Semi Mature	20+ Years	This tree does not form a constraint to the redevelopment of the site.	Tree in neighbouring property. Good overall Physiological and Structural condition.	B1	5.0	4.0	5.0	3.0	2.0	SW	Radius: 3.4m. Area: 36 sq m.	Good	Good	During construction: Protect trees with protective barriers - as shown on plans.

APPENDIX B: SURVEY METHODOLOGY

SURVEY METHOD

REF: Notional ID given to each tree or group of trees

SPECIES: Common name is given. Latin name may also be given to aid clarification if required

NUMBER of STEMS: Number of stems arising from below 1.5 metres

HEIGHT IN METRES: Top height of tree measured in metres

ULT HEIGHT: Tree species ultimate growing height in metres

STEM DIAMETER (mm): Single stemmed trees are measured at 1.5 metres above ground level & recorded in millimetres.

COMBINED STEM DIAMETER (mm): For multi-stemmed trees an average of all stems is measured at 1.5 metres above ground level and recorded in millimetres.

LIFE STAGE: Y= Young trees - less than 1/3 normal life expectancy

SM= Semi-Mature trees - 1/3 to 2/3 normal life expectancy

M= Mature trees -over 2/3 normal life expectancy

OM= Over mature trees - beyond usual life expectancy

REMAINING CONTRIBUTION IN YEARS: Trees estimated life expectancy

COMMENTS: An evaluation of potential impacts on the tree prior to proposed construction

GENERAL OBSERVATIONS: A brief description of the tree with comments on form, vitality, any significant defects or ill health along with structural and physiological condition.

RETENTION CATEGORY:

A=Trees of High Quality & Value

B=Trees of Moderate Quality & Value

C=Trees of Low Quality & Value

U=Trees to be Removed or Felled

SPREAD: Crown spread (North/East/South/West) measured in metres from centre of trunk

CROWN CLEARANCE: Height of growth of first significant living branch

LOWEST BRANCH DIRECTION: Direction of growth of first significant living branch

RPA: The RPA is allocated to ensure a sufficient area around the tree is left undisturbed during development. It is provided as an area (m²) and as a radius of a circle in metres, and typically plotted from the centre of the tree.

APPENDIX B: SURVEY METHODOLOGY

Survey Method Cont'd

PHYSIOLOGICAL CONDITION: Overall physiological condition of tree, group or hedge, *Good, Fair, Poor*.

STRUCTURAL CONDITION: Overall structural condition of tree, group or hedge, *Good, Fair, Poor*.

RECOMMENDATIONS: Recommendations for pre, during and post development tree works taking into account the tree or group attributes without bias to the proposed development.

APPENDIX B: SURVEY METHODOLOGY

Table 4: BS 5837: 2012 Tree Quality Categorisation Chart

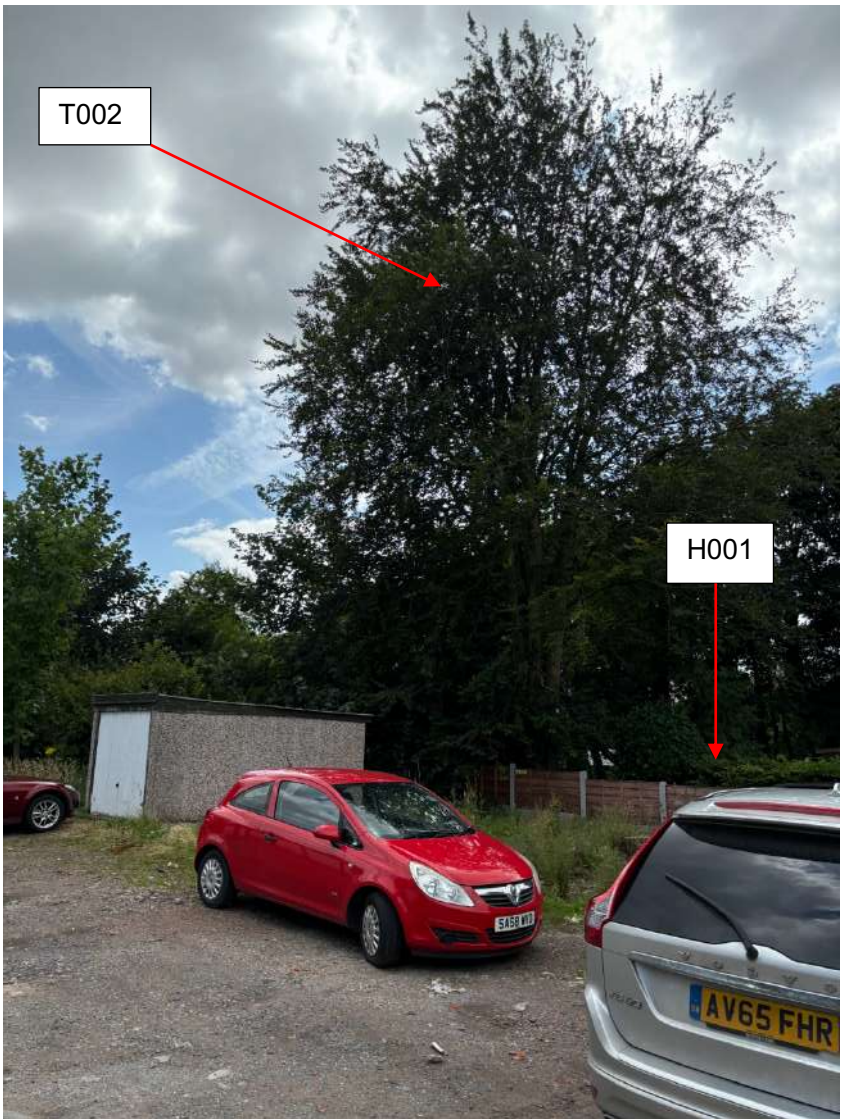
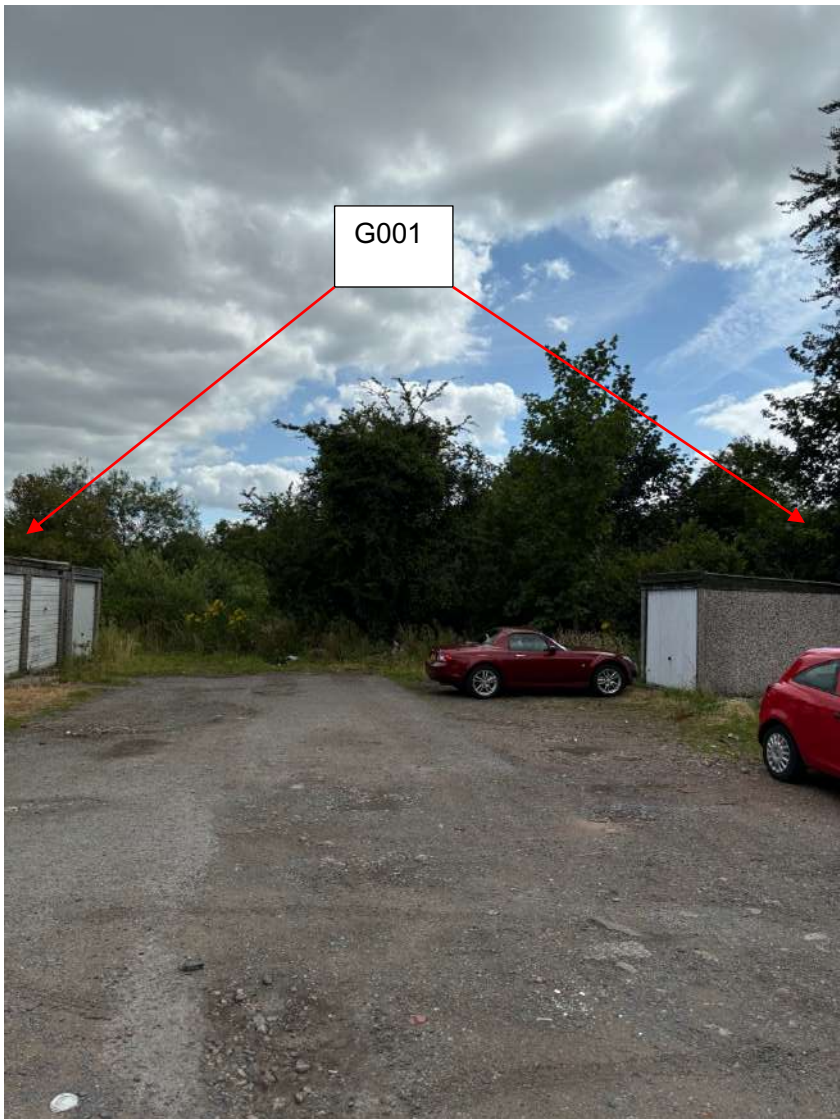
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

APPENDIX C: ARBORICULTURAL MONITORING AND SIGN OFF CHECKLIST

Table 5: Arboricultural Monitoring and Supervision Sign off Checklist.

Tree Number	Task	Completion Date	Signed (Project arboriculturist)	Signed (Site Manager)
All	Location of protective measures			
T002	Any excavations within or adjacent to the RPAs including hard surfacing, pile excavations, location of underground services.			
All	Removal of protective measures.			
All	Sign off by project arboriculturist			

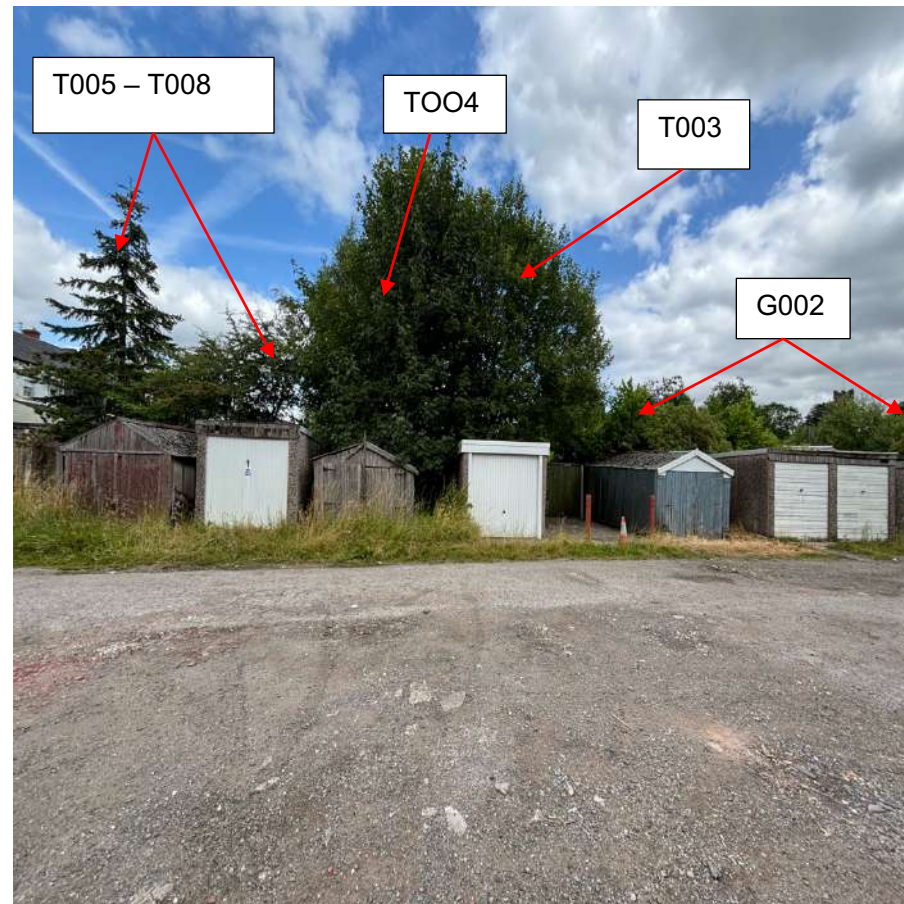
APPENDIX D: PHOTOGRAPHS



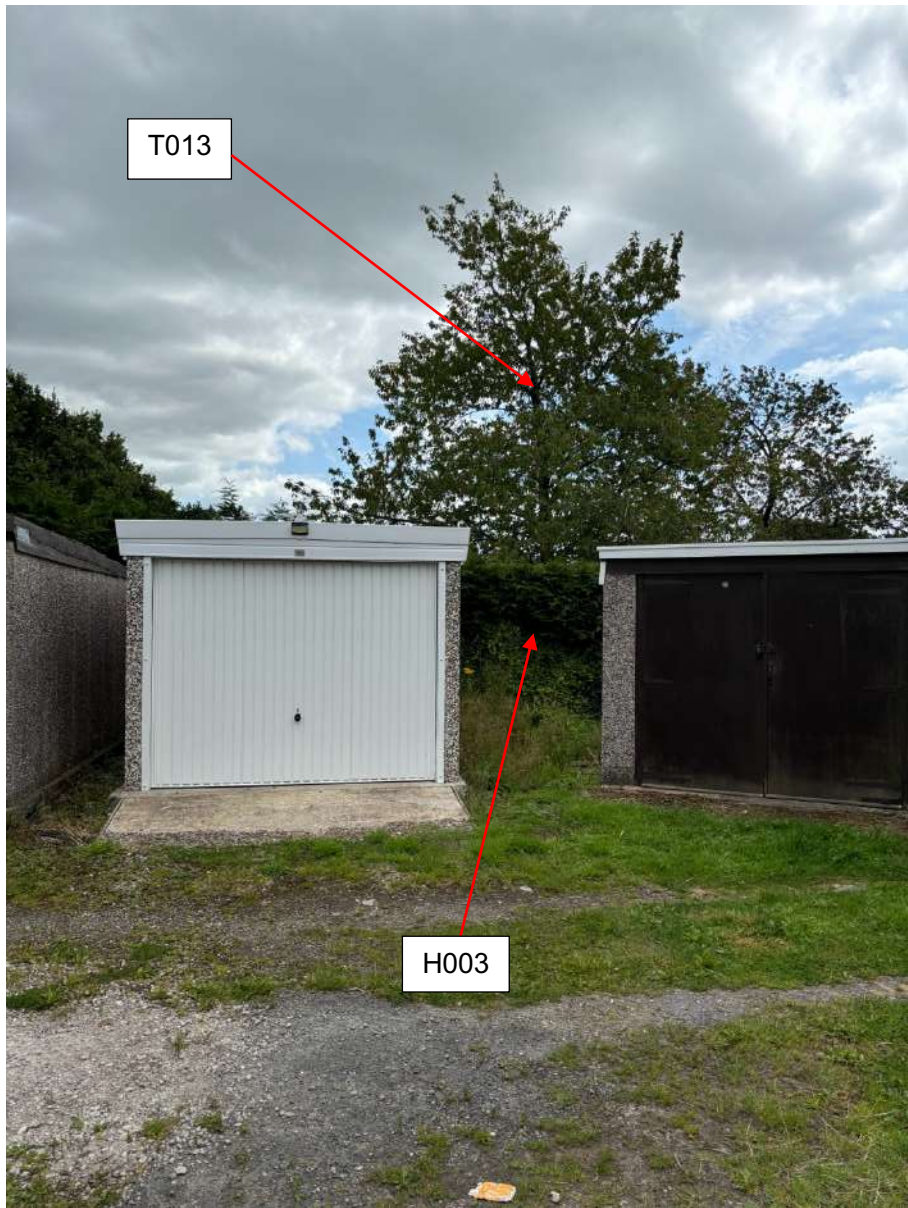
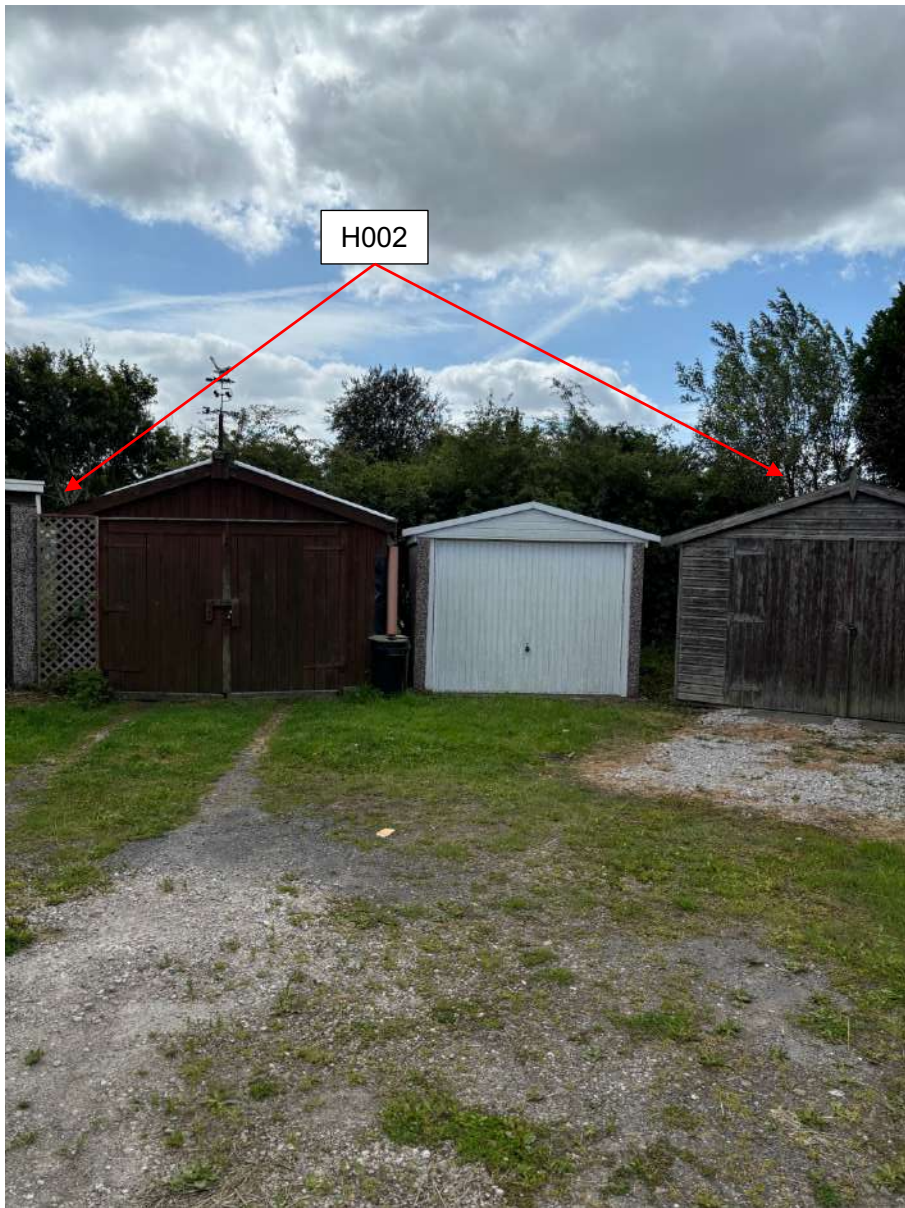
APPENDIX D: PHOTOGRAPHS



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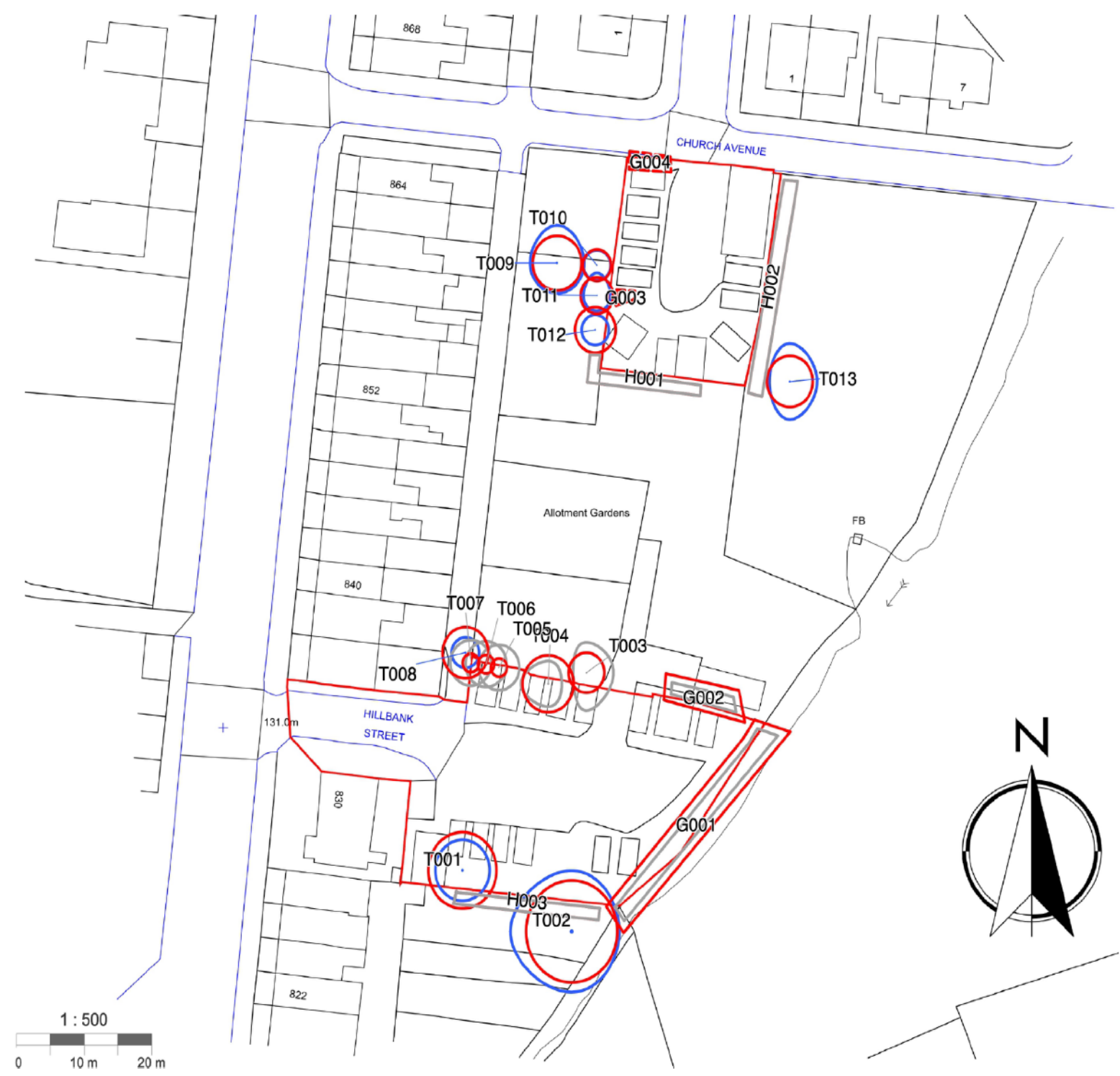


DRAWINGS

Drawing 1 – Tree Constraints Plan

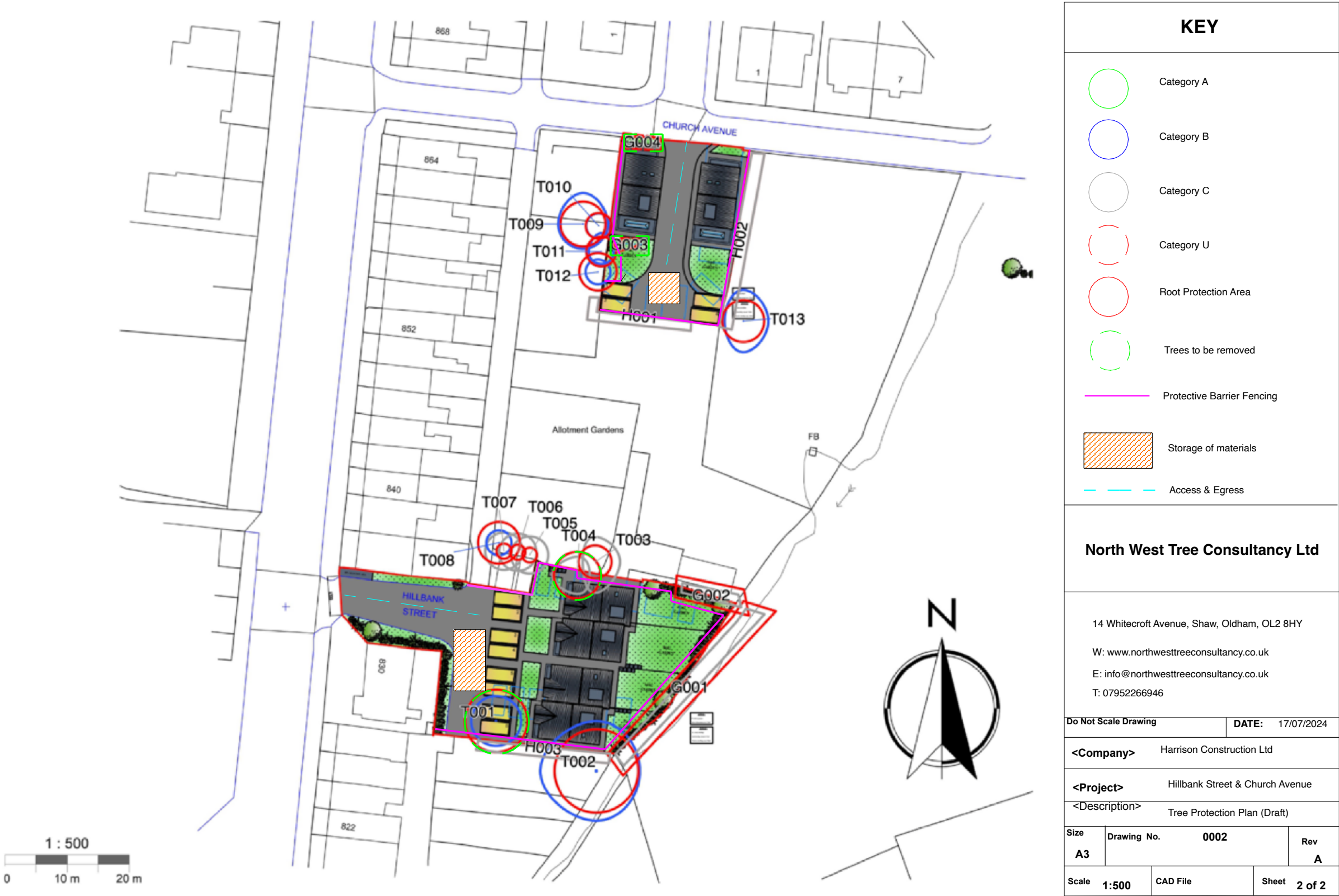
Drawing 2 – Tree Protection Plan

Drawing 1: Tree Constraints Plan



KEY			
	Category A		
	Category B		
	Category C		
	Category U		
	Root Protection Area		
North West Tree Consultancy Ltd			
14 Whitecroft Avenue, Shaw, Oldham, OL2 8HY			
W: www.northwesttreeconsultancy.co.uk			
E: info@northwesttreeconsultancy.co.uk			
T: 07952266946			
Do Not Scale Drawing		DATE: 17/07/2024	
<Company>		Harrison Construction Ltd	
<Project>		Hillbank Street & Church Avenue	
<Description>		Tree Constraints Plan	
Size	Drawing No.		Rev
A3	0001		A
Scale	1:500	CAD File	Sheet 1 of 2

Drawing 2: Tree Protection Plan



21 Qualifications

- ABC Level 4 Diploma in Arboriculture
- ABC Level 4 Certificate in Arboriculture
- Professional Tree Inspection (Lantra Awards)

Membership

- Technician member of the Arboricultural Association (TechArborA)
- Associate member of the Institute of Chartered Foresters

22 Bibliography

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- British Standards 3998 (2010) *Tree work – Recommendations UK; British Standards Institution*
- British Standards 4428 (1989) Code of practice for general landscape operations (excluding hard surfaces).
- British Standards 5837 (2012) *Trees in relation to design, demolition and construction - Recommendations; British Standards Institution*
- WheelD. (2012). National Planning Policy Framework 2012. *National Planning Policy Framework 2012*
- Hirons, A., & Thomas, P. (2017). Applied Tree Biology



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