# Victoria Park Probation Centre
# Manchester

## The Britannia Group

# ARBORICULTURAL IMPACT ASSESSMENT
# AND
# METHOD STATEMENT
# Revision D

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landscape architects

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Ref: MG/6765/AIA&AMS/REVD/DEC23

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## 1.0 Introduction

1.1 This document has been prepared by Trevor Bridge Associates on the behalf of The Britannia Group. It provides an Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS) in regard to the following proposed development.

- Demolition of existing structures and construction of residential infrastructure.

1.2 This document follows, and should be read in conjunction with, a pre-development tree survey that was undertaken by TBA Ltd in September 2022 (ref: *MG/6765/TSR/OCT22*).

1.3 For the purposes of preparing this document the following material was referenced:

- Ollier Smurthwaite Architects drawing: ***Proposed Residential Development. Job No. 18056. Drawing. No. A662_P_100S. Revision S. Date started: July 2022.***

1.4 This report assesses the potential impacts to trees as a consequence of the development proposals, as well as specifying the necessary methodologies required during construction to ensure that trees being retained are afforded adequate protection from harm.

1.5 Accompanying this report is the following drawings (present within Appendix E) which must be read in conjunction with this report:

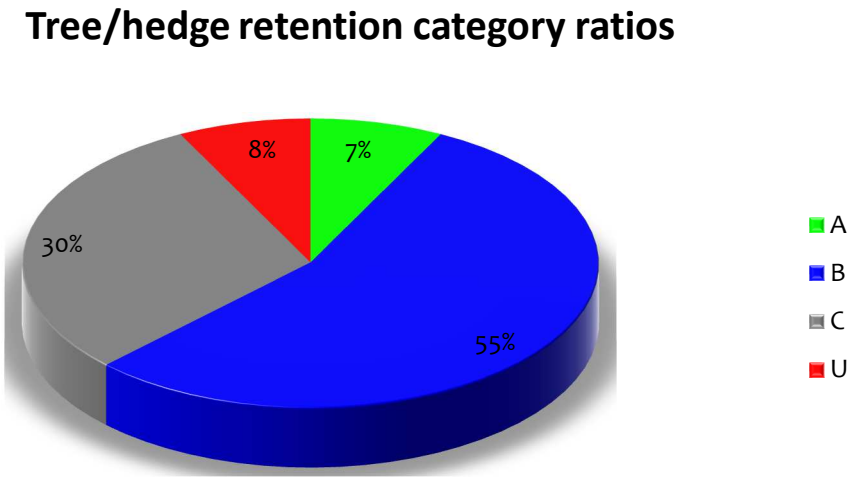
- ***TBA Drawing: Tree Protection Plan. Drawing Nos. 6765.04 & 6765.05 Revision D. Date started: October 2022.***

## 2.0 Arboricultural Impact Assessment

2.1 The consequences on existing trees situated within and adjacent the proposed development site are considered.

### 2.2 The value of the trees and vegetation surveyed

In the initial tree survey report a total of 40 items were surveyed within and adjacent the development site. These items comprised 32 individual trees and 8 groups. The chart and table below show the ratio of tree retention categories on the site and number of items (be it groups or individuals etc that were surveyed).




| Retention Category | No. |
|---|---|
| A (High Value) | 3 |
| B (Moderate value) | 22 |
| C (Low value) | 12 |
| U (Remove) | 3 |

## 3.0 Arboricultural Impact Table - Key

3.1 The Arboricultural Impact Table (section 3.3) lists all items surveyed within the site. The tree data is taken from the initial tree survey report. The table is colour coded for ease of reference, particularly in relation to the value of trees and the potential impact that may occur to them:

### Tree Values

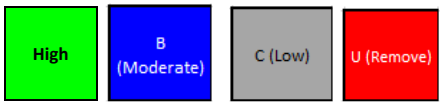
| | |
|---|---|
| High | High value tree / group / hedge as included within the initial tree survey |
| B (Moderate) | Moderate value tree / group / hedge as included within the initial tree survey |
| C (Low) | Low value tree / group / hedge as included within the initial tree survey |
| U (Remove) | Tree / group / hedge in poor condition. Retention unsustainable within context of development |

### Impacts on Tree's / Groups

| | |
|---|---|
| Removal | Tree / Group / Hedge will require removal in order to facilitate the development proposals |
| Partial Removal | Group or hedge will require partial removal to facilitate the development proposals |
| High | The development proposals will have a high impact the on the tree /group / hedge |
| Moderate | The development proposals will have a moderate impact on the tree / group /hedge |
| Low | The development proposals will have a low impact on the tree / group / hedge |
| None | The development proposals will have no impacts on the tree / group / hedge |

## 3.2 Arboricultural Impact Table - Cascade Chart:

3.2.1 Tree **Values** are taken from BS: 5837 and comprise of the following:




3.2.2 The **Impacts** comprise of 6 elements:




3.2.3 Causes of impacts comprise of 6 factors: '***None***', '***To facilitate development***', '***Due to poor condition***', '***Direct disturbance to roots***', '***Pruning required***' and '***Possible future pruning pressure due to shade and other factors***'.

3.2.4 Comments are also included providing more information where necessary.

| | REMOVAL | PARTIAL REMOVAL | HIGH | MODERATE | LOW |
|---|---|---|---|---|---|
| TO FACILTATE DEVELOPMENT | Tree / group requires removal. | Partial removal of group is required. I.e., 'a section of hedge may require removal to allow a new access road'. | N/A | N/A | N/A |
| DUE TO POOR CONDITION | Tree or group require removal due to poor structural and / or physiological condition. | Part of group require removal due to poor structural and / or physiological condition. | N/A | N/A | N/A |
| DIRECT DISTURBANCE TO ROOTS | N/A | N/A | In many case this will result in the loss of tree/s - refer to '**TO FACILIATE DEVELOPMENT**'.<br><br>In rare cases a Tree/s may be retained but damage will occur to the roots. | Disturbance will be caused to roots of a tree/s that are likely to result in some physiological and structural dysfunction. The extent of damage does not require trees to be felled. Remedial actions may be taken in some cases that would help mitigate against damage but site topography, tree age, condition and species condition may result in disturbance being considered **MODERATE** as opposed to **LOW.** | Activity will occur within the root protection area of trees which will have a low impact, or can be mitigated by special measures. |
| PRUNING REQUIRED | N/A | N/A | Pruning that may retain a tree but will have a potential impact on the tree condition and visual appearance | Pruning is required that is acceptable within recommendations within BS3008:2010, but would require a material alteration to the tree/group affected. | Pruning is required that will have little impact to the structural, physiological and visual amenity of a tree or group. |
| POSSIBLE FUTURE PRUNING PRESSURE DUE TO SHADE OR OTHER FACTORS | Removal of tree/s required as retention is unsustainable and/or undesirable within the context of development. i.e. fast growing tree in small garden. | Partial removal of tree/s required as retention is unsustainable and/or undesirable within the context of development. i.e. fast growing tree in small garden. | Tree/s likely to cause significant shading. i.e. small garden areas with dense mature trees to south. | Some level of shade or other inconvenience will occur. Not highly oppressive, but some residents may seek management of trees in long term. | Some level of shading / overhang will occur. |

### 3.3 ARBORICULTURAL IMPACT TABLE - RESULTS

| Ref No. | Species | Value | Impact | Impact Cause | Management Options / Comments | Other |
|---|---|---|---|---|---|---|
| 1T | Horse chestnut | B2 | Removal | To facilitate development | | |
| 2T | Common lime | B2 | Removal | To facilitate development | | |
| 3T | Turkey oak | A2 | Low | Pruning required | Reduce the easterly lateral canopy by approximately 1m in length to ensure clearance of scaffolding. | |
| | | | Moderate | Direct disturbance to roots | Various impacts within the nominal root protection area. New access drive will impede within an outer section of the root protection area, new parking bays are to be constructed. Kitchen garden will require construction within a central section of the tree's root protection area. | Working area adjacent Block 1 apartments to be restricted to only 2m width. Parking bays to be constructed using a three dimensional cellular confinement system. Controlled construction of kitchen garden - to comprise raised beds. |
| 4T | Hawthorn | U | Removal | Due to poor condition | | |

| Ref No. | Species | Value | Impact | Impact Cause | Management Options / Comments | Other |
|---|---|---|---|---|---|---|
| 5T | Beech | A2 | Low | Pruning required | Reduce the easterly lateral canopy by approximately 2m in length to ensure clearance of scaffolding. | |
| | | | Moderate | Direct disturbance to roots | Various impacts within the nominal root protection area. Construction space needed adjacent Apartment Block 1 and kitchen garden to be created. | Working area adjacent Block 1 apartments to be restricted to only 2m width. Controlled construction of kitchen garden - to comprise raised beds. |
| 6T | Hawthorn | C2 | None | N/a | | |
| 7T | Common lime | B2 | None | N/a | | |
| 8T | Common lime | B2 | None | N/a | | |

| Ref No. | Species | Value | Impact | Impact Cause | Management Options / Comments | Other |
|---|---|---|---|---|---|---|
| **9T** | Horse chestnut | **B2** | Low | **Pruning required** | Reduce the southerly lateral branch spread by approximately 2m to ensure clearance for working space adjacent Apartment Block 1. | |
| | | | Moderate | **Direct disturbance to roots** | Impact within the root protection area to allow construction working space. | Working area to the north of Apartment Block 1 to be only 2.5m. |
| **10T** | Sycamore | **B2** | Low | **Pruning required** | Reduce the southerly lateral branch spread by approximately 1m to ensure clearance for working space adjacent Apartment Block 1. | |
| | | | Moderate | **Direct disturbance to roots** | Impact within the root protection area to allow construction working space. | Working area to the north of Apartment Block 1 to be only 2.5m. |
| **11T** | Common lime | **C2** | None | **N/a** | | |
| **12T** | Sycamore | **B2** | None | **N/a** | | |

| Ref No. | Species | Value | Impact | Impact Cause | Management Options / Comments | Other |
|---|---|---|---|---|---|---|
| **13T** | Tree of heaven | **B2** | Removal | **To facilitate development** | | |
| **14G** | Sycamore x 3, lime x 2 | **B2** | Low | **Pruning required** | Reduce the southerly lateral branch spread by approximately 2.5m to ensure clearance for working space adjacent Apartment Block 1. | |
| | | | Moderate | **Direct disturbance to roots** | Impact within the root protection area to allow construction working space. | Working area to the north of Apartment Block 1 to be only 2.5m. |
| **15T** | Sycamore | **B2** | Low | **Direct disturbance to roots** | Impact within the root protection area to allow construction working space. | Working area to the north of Apartment Block 1 to be only 2.5m. |
| **16T** | Sycamore | **B2** | **High** | **Direct disturbance to roots** | Impact within the root protection area to allow construction working space. New access path will impede within root-zone. | Working area to the north of Apartment Block 1 to be only 2.5m. |
| | | | Low | **Pruning required** | Reduce the southerly lateral branch spread by approximately 2.5m to ensure clearance for working space adjacent Apartment Block 1. | |

| Ref No. | Species | Value | Impact | Impact Cause | Management Options / Comments | Other |
|---|---|---|---|---|---|---|
| **17T** | Sycamore | **B3** | Removal | **To facilitate development** | | |
| **18G** | Ash x 1, sycamore x 1 | **C2** | Removal | **To facilitate development** | | |
| **19T** | Common lime | **B2** | Removal | **To facilitate development** | | |
| **20T** | Sycamore | **C2** | Removal | **To facilitate development** | | |
| **21G** | Ash x 1, sycamore x 1 | **B2** | Removal | **To facilitate development** | | |
| **22T** | Hawthorn | **C2** | Removal | **To facilitate development** | | |
| **23T** | Common lime | **B2** | Low | **Direct disturbance to roots** | Adjacent areas of hard surface to be constructed using a three dimensional cellular confinement system. | |

| Ref No. | Species | Value | Impact | Impact Cause | Management Options / Comments | Other |
|---|---|---|---|---|---|---|
| **24G** | Lime x 1, beech x 2 | **A2** | Removal | **To facilitate development** | | |
| **25G** | Sycamore x 3, lime x 1, Goat willow x 2 | **B2** | Removal | **To facilitate development** | | |
| **26T** | Ash | **U** | Removal | **To facilitate development** | | |
| **27G** | Lime x 4 | **C2** | Removal | **To facilitate development** | | |
| **28G** | Lime x 1, beech x 1 | **B2** | Removal | **To facilitate development** | | |
| **29T** | Turkey oak | **C2** | Removal | **To facilitate development** | | |
| **30T** | Hawthorn | **C2** | Removal | **To facilitate development** | | |

| Ref No. | Species | Value | Impact | Impact Cause | Management Options / Comments | Other |
|---|---|---|---|---|---|---|
| **31T** | Hawthorn | **C2** | Removal | **To facilitate development** | | |
| **32T** | Wild cherry | **B2** | Removal | **To facilitate development** | | |
| **33T** | Sycamore | **B2** | Removal | **To facilitate development** | | |
| **34T** | Hawthorn | **C2** | Removal | **To facilitate development** | | |
| **35T** | Elm | **U** | Removal | **To facilitate development** | | |
| **36T** | Common lime | **B2** | Removal | **To facilitate development** | | |
| **37T** | Sycamore | **B2** | Removal | **To facilitate development** | | |

| Ref No. | Species | Value | Impact | Impact Cause | Management Options / Comments | Other |
|---|---|---|---|---|---|---|
| **38G** | Sycamore x 6, elder, 2 x dead trees | **C2** | Removal | **To facilitate development** | | |
| **39T** | Common lime | **B2** | Moderate | **Direct disturbance to roots** | Tree is presently situated within an area of hard standing. Surrounding hard standing is to be removed in a controlled manner under direct arboricultural supervision, and replaced with top-soil. | New sections of hard surface adjacent the tree are to be constructed using a three dimensional cellular confinement system. |
| **40T** | Horse chestnut | **C2** | Removal | **To facilitate development** | | |

## 4.0 General Issues

### 4.1 Installation of underground services

At the time of considering the layout design, no information was available relating to the proposed location of underground services. By default no services shall be placed within the identified Root Protection Areas of trees being retained. While it is possible in some cases that underground services may be placed within Root Protection Areas, this is best done under arboricultural supervision (at least initially). Where special installation methods are necessary (such as pipe jacking) supplementary method statements must be provided. The proposed location of underground infrastructures must be made available to the local planning authority prior to installation.

### 4.2 Storage of materials, contractor parking and site logistics

Logistically the site has adequate space for the placement of site huts and material storage. By default all compounds and storage areas are to be outside root protection areas/construction exclusion zones.

### 4.3 Level changes on site

**No excavation or raising of ground levels are to occur within the construction exclusion zones within the site demarked by tree protection barrier fencing** (green coloured zones) within the Tree Protection Plan. Where ground level changes are to occur adjacent retained trees, retaining structures are required.

### 4.4 Installation of 'non dig' hard surfaces

It is proposed that non-dig surfaces (car-parking bays, path section & bike store) are constructed using a product called Cellweb; a three dimensional cellular confinement system. The company that supplies Cellweb (Geosynthetics Ltd) will need to supply specifications based on the soil conditions and existing ground topography. Further details are included within the Arboricultural Method Statement Schedule (section 6.0).

4.4.1 The successful installation of Cellweb requires that existing ground levels, where the product is being installed, are not excavated. The installation of Cellweb will result in final raised levels, as the product itself is three dimensional. Additionally, use of a final layer, such as porous tarmac, will also raise the final levels.

### 4.5 Removal of existing hard surface area adjacent 39T (Common Lime)

An area of existing hard surface is to be removed within the vicinity of 39T. This is to be undertaken in a controlled manner under the direct supervision of the project arboriculturalist. Outline specification for these works are included in section 6.0 of this report.

## 4.6 Amelioration measures within the root zones of all retained trees

4.6.1 It is proposed to provide amelioration of the rooting zones of retained trees. The works are to be undertaken by qualified landscapers/arboriculturalists only.

4.6.2 The following steps are to be taken:
1. Where turf is present it is to be carefully removed around trees to the extend shown within the Tree Protection Plan (Sheet 2). The turf is to be removed using hand tools/ hand operated tools only. Removed turf is to be removed from site.

2. The exposed section of soil is to be lightly spiked with a fine spoke fork. This should comprise some 5 insertions per M². The intention is not to tiller soil but improve aeriation and allow some penetration of soil improver. No insertions are to be made within 1m of the tree trunk to avoid larger structural roots.

3. A soil improver is to be applied over the exposed soil are. This is to comprise an enhanced biochar powder at a rate of some 500g per M².

4. Once biochar has been applied, the treated area is to be covered in a woodchip mulch to a thickness no less than 100mm. Care must be taken to ensure clearance of the root-collar of the trees.

5. A knee high rail fence may be installed around the areas of mulch.

## 5.0 Arboricultural Method Statement

5.1 The Arboricultural Method Statement (AMS) specifies all measures to be undertaken to ensure the ongoing health and viability of trees to be retained within the proposed development.

*5.2* This AMS is in compliance with British Standard 5837: 2012**. Accompanying this document is a plan that shows the position of protective fencing and any additional special measures that are required. This plan is referred to as the *Tree Protection Plan*.**

5.3 The AMS must be considered a 'working document'. It must be made available to the developer, site manager, and LPA. A copy of this document and the Tree Protection Plan must be kept on the development site at all times. All site operatives must be briefed on the main contents of this document.

5.4 It is the Site/Project Manager's responsibility to ensure that the detail of this AMS and the TPP and any agreed amendments are known and understood by all site personnel. A copy of this AMS and the TPP will be available for reference on site by the Project and Site Managers, and will form the basis of the management of all works relating to the trees on the site following commencement of the project. The Site Manager shall induct all personnel who could have an impact on trees on the content of this document.

### 5.5 Tree Works –General Issues

5.5.1 All tree works (tree felling and pruning) are to take place prior to any site operations and immediately before the installation of protective fencing.

5.5.2 All works to the existing trees are to be carried out by a fully qualified tree surgeon and in accordance with BS 3998 (2010) *Recommendations for Tree Work*.

5.5.3 The necessary tree surgery works should be carried out **before** any construction work starts and immediately before erection of protective fencing. Any works will include any trees that require removal in order to facilitate construction and access. No tree works must be carried out unless permission is provided by the local planning authority. Tree works to any protected trees (trees within a Conservation Area or subject to a Tree Preservation Order) that do not require works to directly enable the development to proceed will require a notification/application to be made to the Local Planning Authority. Any tree works required in order to directly facilitate the development to proceed (such as tree felling) must not proceed unless full planning consent and written consent is given by the local planning authority.

5.5.4 Wildlife issues and timing of operations. The following must be observed:

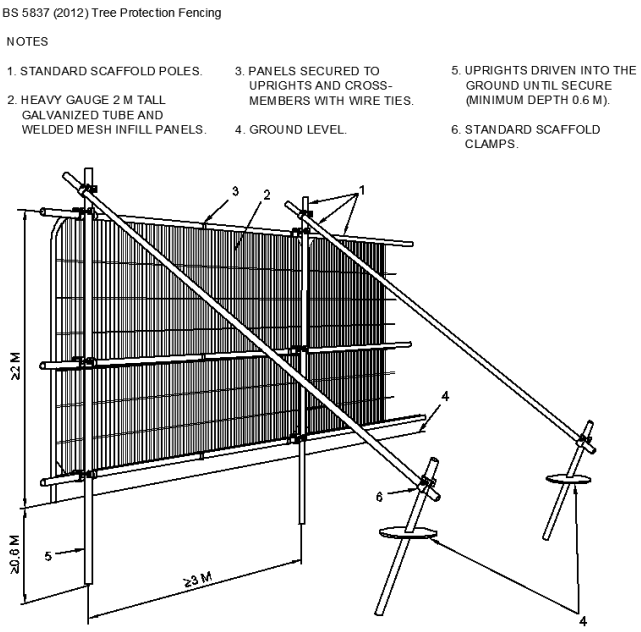
Bats. Under current legislation it is an offence to 'intentionally or recklessly disturb a bat' or 'damage, destroy or block access to the resting place of any bat'. For further details consultation must be made with the Statutory Nature Conservancy Organisation (Natural England, 0300 060 1842 www.naturalengland.org.uk). Where relevant any current ecological surveys for the site will take precedence in this matter.

5.5.5 Birds. It is an offence to kill, injure or take any wild bird; or take, damage or destroy the nest of any wild bird while it is in use or being built. Therefore work likely to disturb nesting birds should be avoided from late March to August.

## 5.6 Tree Protective Barrier Fencing

5.6.1 Protective barriers must be erected prior to any site operations. The protective barriers are essential to prevent root severance or compaction of the soil in the Root Protection Areas, and so give the best chance of continued good health of the retained trees.

5.6.2 Tree protective barriers are to comprise a vertical and horizontal scaffold framework which is braced to withstand impacts, and not easily moved or relocated by site operatives (to prevent opportunistic moving of the barrier fences). The vertical tubes should be spaced at intervals of no more than 3m and driven securely into the ground. Onto this framework welded mesh panels should be securely fixed (such as Heras). The fencing is to be placed accurately as shown within the Tree Protection Plan. A scale copy of the tree protection plan shall be referenced and scale measurements taken to indicate the necessary fencing positions.




Care must be taken when locating vertical poles to avoid underground services and, in the case of bracing poles, also to avoid contact with structural roots. If the presence of underground services prevents the use of driven poles, an alternative specification should be prepared; such alternatives could include the attachment of the panels to a free standing scaffold support framework.

Where fencing is required adjacent the site boundaries it is acceptable to use Hoarding to double as protective fencing but only where the exact location of the protective fencing is adhered to (as per the Tree Protection Plan) and where it is hand installed only.

The accurate placement of fencing is crucial due to the tight tolerances of construction space within the site. Fencing positions should be determined via easting and northing points taken from the CAD drawing (either by the site engineers or project arboriculturalist). The easting and northing points can be used as 'nodes' to ensure the accurate placement of tree protection fencing.

5.6.3 Examples of the correct erection of tree protective barrier fencing



Above: Full specification barrier fencing.

Below: Barrier fencing accurately placed adjacent variable and complex working zones.



## 5.7 General Requirements

5.7.1 Developers must enforce the methods of protection identified within the statement. All contractors must also agree to them. Any failure to comply with them must be dealt with by the developer. Any damage that may occur to trees due to failure to observe the method statement must be reported to the Local Planning Authority and arboricultural advice must be sought.

5.7.2 No pruning, lopping, felling or severance of roots is to take place without prior consent of the local authority or unless in compliance with specifications included within the Method Statement.

5.7.3 **The ground levels within the protected areas, be they fenced or special working areas, must neither be raised nor excavated unless specifically in compliance with requirements within this method statement.**

5.7.4 No ropes, cables, services, or notice boards shall be fixed to existing trees.

5.7.5 Fires should not be permitted, or else not lit where flames could extend to within 10m of the foliage, branches or trunk of any trees (it should be noted that local environmental health authorities may have specific restrictions on fires),

5.7.6 Should temporary access within the Root Protection Area be required that is not included within the method statement, an agreement, in advance, with the consultant and the LPA must be made. The fence may need to be re-aligned and the ground surface protected. For vehicular access this protection will need to be specifically detailed and agreed.

5.7.7 Care must be taken in regards to tall or wide loads, or use of plant with booms, jibs and counterweights. Where machinery may be required to operate in the vicinity of trees a banksman must ensure that no direct physical damage is caused to trees. It must be checked that any materials or vehicles entering the site are able to do so without causing damage to adjacent trees.

5.7.8 Any material that will contaminate soil (e.g. concrete mixings, and vehicle washings) must not be discharged within 10m of any Root Protection Area. In addition it is essential that allowance be made for the slope of the ground so that damaging materials cannot run towards trees, or Root Protection Areas. If diesel and fuel containers are used or stored on site they must be kept within a plastic container bund to prevent any ground contamination and spill kits must be kept available to remediate any spillage.

## 5.8 Arboricultural monitoring

(i) The arboricultural consultant (or local authority Tree Officer) shall be consulted whenever an unexpected issue occurs that involves any retained tree on site including access within the Protection Area.

Mike Gregory (Arboricultural Consultant) 07515827944.

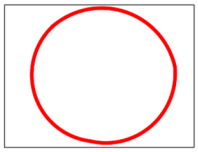
(ii) No amendments shall be made to the methods detailed in this Arboricultural Method Statement without the agreement of the consultant or local planning authority Tree Officer.

(ii) If the site agent is at all unclear about exact compliance with any of the above requirements, or if requested by any other party, then a pre-start meeting shall be arranged with the architect, site agent, local authority tree officer and arboricultural consultant in attendance as necessary.

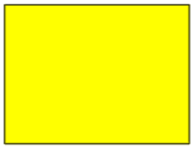
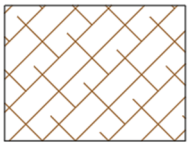
## 5.9 Health and Safety Issues

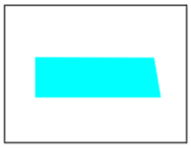
All operations must be carried out with full regard to Health and Safety requirements. Due to the diverse nature of recommendations included (e.g. tree surgery works, construction etc) it is necessary that supervisors of those undertaking recommended operations undertake risk assessments prior to starting the relevant works. It should be the Site Managers/developers responsibility to ensure that risk assessments are submitted prior to undertaking relevant works.

## 6.0 Method Statement Schedule

<table>
<tr><th>Phase</th><th>Requirements</th><th>Method</th></tr>
<tr>
<td>1<br><br>Prior to erection of protective fencing.</td>
<td>Undertake tree and vegetation removal and pruning works<br><br>Trees/vegetation to be removed:<br><br><br><br>Trees/vegetation to be pruned:<br><br></td>
<td>Refer to section 5.5 of AIA/MS report.<br><br>All tree works to be carried out to BS3998: 2010: by suitably qualified and insured professional tree surgeons.<br><br>The following tree felling <u>must</u> be undertaken at this Phase:<br><br>
<table>
<tr><th colspan="2">Items requiring removal:</th></tr>
<tr><td>1T</td><td>Horse chestnut</td></tr>
<tr><td>2T</td><td>Common lime</td></tr>
<tr><td>4T</td><td>Hawthorn</td></tr>
<tr><td>13T</td><td>Tree of heaven</td></tr>
<tr><td>17T</td><td>Sycamore</td></tr>
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<tr><td>22T</td><td>Hawthorn</td></tr>
<tr><td>24G</td><td>Lime x 1, beech x 2</td></tr>
<tr><td>25G</td><td>Sycamore x 3, lime x 1, Goat willow x 2</td></tr>
<tr><td>26T</td><td>Ash</td></tr>
<tr><td>27G</td><td>Lime x 4</td></tr>
<tr><td>28G</td><td>Lime x 1, beech x 1</td></tr>
<tr><td>29T</td><td>Turkey oak</td></tr>
<tr><td>30T</td><td>Hawthorn</td></tr>
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<tr><td>35T</td><td>Elm</td></tr>
<tr><td>36T</td><td>Common lime</td></tr>
<tr><td>37T</td><td>Sycamore</td></tr>
<tr><td>38G</td><td>Sycamore x 6, elder, 2 x dead trees</td></tr>
<tr><td>40T</td><td>Horse chestnut</td></tr>
</table>
<br>The following tree pruning <u>must</u> be undertaken at this Phase:<br><br>
<table>
<tr><th colspan="2">Items requiring pruning:</th></tr>
<tr><td>3T</td><td>Turkey Oak. Reduce the easterly lateral canopy by approximately 1m in length to ensure clearance of scaffolding.</td></tr>
<tr><td>5T</td><td>Beech. Reduce the easterly lateral canopy by approximately 2m in length to ensure clearance of scaffolding.</td></tr>
<tr><td>9T</td><td>Horse Chestnut. Reduce the southerly lateral branch spread by approximately 2m to ensure clearance for working space adjacent Apartment Block 1.</td></tr>
<tr><td>10T</td><td>Sycamore. Reduce the southerly lateral branch spread by approximately 1m to ensure clearance for working space adjacent Apartment Block 1.</td></tr>
<tr><td>14G</td><td>Sycamore x3, Lime x 2. Reduce the southerly lateral branch spread by approximately 2.5m to ensure clearance for working space adjacent Apartment Block 1.</td></tr>
<tr><td>16T</td><td>Sycamore. Reduce the southerly lateral branch spread by approximately 2.5m to ensure clearance for working space adjacent Apartment Block 1.</td></tr>
<tr><td>39T</td><td>Common Lime. Reduce the south-westerly canopy spread by approximately 1m in length to provide clearance for working space.</td></tr>
</table>
</td>
</tr>
</table>

| Phase | Requirements | Method |
|---|---|---|
| **2** Prior to any construction works on site | Erection of protective fencing:<br><br>To retain throughout the duration of the development:<br><br> | Protective fencing is to be erected in accordance with 5.6 of AIA/MS report.<br><br>The fencing **must** comply with the positions shown in the Tree Protection Plan. A scale copy of the Tree Protection Plan must be used as reference and fencing positions measured from the Plan using a scale rule and/or easting and northing points are to be taken from a CAD version of the plan and the fencing positions accurately marked on site to aid fencing installation.<br><br>No works, no storage of materials, no access, or any ground disturbance is to take place within the Tree Protection Barrier Fencing other than works specified within the Arboricultural Method Statement. **Fenced areas are to be treated as Construction Exclusion Zones.**<br><br>Warning signs to be placed on all protective fencing. For large sections of fencing the signs must be placed at 20m intervals.<br><br>Signs must be laminated and securely attached at all corners. Two signs are to be placed side by side; copies of which are attached within **Appendix A**. |
| **3** Verifying quality of protective barriers | Verify that the location and quality of tree protection barriers is adequate prior to onset of main site works. | Site visit with Arboricultural Consultant and Site Manager.<br><br>Tree Officer to be pre-informed of visit.<br><br>In order for set works to proceed the pro-forma in **Appendix B**. of the AIA/AMS report is to be completed and passed on to the local planning authority:<br><br>**If the protective barriers are not adequately, work is not to proceed until rectified.** |
| **4** Ongoing | Maintain protective fencing | The tree protective barrier fencing is to remain in situ during all demolition works construction works unless otherwise specified within the Arboricultural Impact Assessment |
| **5** Removal of hard surface areas | Controlled removal of existing hard surface adjacent T39 (Common Lime)<br><br> | A single panel of the tree protective fencing is to be removed to allow controlled access.<br><br>1, Present during the work must be the project arboriculturalist, site manager and site operatives.<br>2. A panel from the protective fencing is to be removed in order to access the works area.<br>3. Prybars and/or jackhammer to be used to break edges of surface nearest the tree.<br>4. A mechanical digger to be used to 'peel' away surface of existing road.<br>5. Mechanical plant is to operate from the intact surfaces of the road, working back.<br>5. The sub-base of exposed sections of road to be regularly checked by the project arboriculturalist for the presence of roots. If roots are encountered, the project arboriculutralist will advise on whether further excavation shall take place, or how further excavation shall occur.<br><br>A layer of no-more than 150mm depth good quality top soil to be placed over the removed hard surface to allow for subsequent laying of turf. |

| Phase | Requirements | Method |
|---|---|---|
| **6** Installation of geotextile cellular confinement systems | Installation of three dimensional cellular confinement system.  | Installation of non-dig hard surfaces:<br><br>A three dimensional cellular confinement system is to be utilised (Cellweb).<br><br>Guidance for the installation of the Cellweb is attached within **Appendix D**. Cross section details are to be provided (in conjunction with engineer and Cellweb recommendations). Technical specifications required, as well as cross section details relevant to the site can be provided by Cellweb suppliers, Geosynthetic (01455 617139). Email Sales@geosyn.co.uk.<br><br>Tree barrier protective fencing is to be moved only **immediately prior** to the installation of the Cellweb.<br><br>The installation is to be carried out **under Arboricultural Supervision**. The ground layer in which Cellweb is to be installed is to be subject only to removal of exiting turf layer.<br><br>Adjoining levels must marry with the required depth of the Cellweb, not vice versa.<br><br>Once Cellweb is installed the protective fencing is to be relocated immediately adjacent the intalled areas of Cellweb. |
| **7** Completion of main construction and installation of boundary treatments | Garden and perimeter fencing within RPA of retained trees | Within the RPAs of retained trees the wooden fencing shall be installed as follows:<br><br>1. Hand tools only<br>2. Exploratory post holes to be dug. Any roots encountered less than 2.5cm diameter should be cleanly cut back.<br>3. Roots in excess of 2.5cm can only be removed once arboricultural advice has been sought.<br>4. Where roots in excess of 8cm are encountered, an alternative location for the post hole is required.<br>5. Prior to the pouring of concrete a non-permeable membrane must fully line the post hole. |
| **8** Improvement of rooting zones of 1T & 2T | Removal of turf and addition of improved biochar topped with mulch.  | The following steps are to be taken:<br><br>1. An area of existing turf is to be carefully removed around both of the trees to a maximum radius of 3.5m (where space allows). The turf is to be removed using hand tools/ hand operated tools only. Removed turf is to be removed from site.<br><br>2. The exposed section of soil is to be lightly spiked with a fine spoke fork. This should comprise some 5 insertions per M². The intention is not to tiller soil but improve aeriation and allow some penetration of soil improver. No insertions are to be made within 1m of the tree trunk to avoid larger structural roots.<br><br>3. A soil improver is to be applied over the exposed soil are. This is to comprise an enhanced biochar powder at a rate of some 1kg per M².<br><br>4. Once biochar has been applied, the treated area is to be covered in a woodchip mulch to a thickness no less than 75mm. Care must be taken to ensure clearance of the root-collar of the trees.<br><br>5. A knee high rail fence is to be hand installed around the area of mulch. |

| Phase | Requirements | Method |
|---|---|---|
| **9** Completion of main construction and undertaking of landscaping | Landscaping and Dismantling of tree barrier protective fencing & construction of kitchen Garden<br><br>Kitchen Garden raised beds:<br><br> | It is essential that ground levels within the root protection areas are not altered, either by raising or lowering soil levels; even at the landscaping stage.<br><br>Landscaping operations must be undertaken in a manner that will not impact trees.<br><br>Landscaping within the root protection area of trees must be undertaken in the following manner:<br><br>1. Any existing ground flora (grass/weeds/scrub) is to be sprayed with a systemic herbicide and left to die-off.<br>2. Dead flora is to be strimmed as hard as possible with a brush cutter or similar. The bulk of the strimmed material is to be removed by raking.<br>3. A good quality organic topsoil layer may be placed down. Small depressions may be filled (and **lightly** compacted underfoot). Placed topsoil soil layers **must not exceed** 100mm depth.<br>4. No plant machinery operating within the root protection areas to exceed 1 tonne gross weight and must only operate from propriety ground protection boards such as DuraMatt Access Matts (see **Appendix C**).<br>5. Turf and other planting to proceed thereafter.<br><br>Kitchen garden to comprise construction of raised beds. Mini-plant may be used if operating from ground protection boards. No alterations to ground levels, or changes to ground to occur. |

## APPENDIX A - SIGNS TO ATTACH TO PROTECTIVE FENCING



# Construction and Trees



## Why Is Fencing Erected Around Trees?

1. The major cause of damage to trees on construction sites is due to **soil compaction**.
2. Roots use the spaces between soil particles to obtain Oxygen, Water and Nutrients.
3. Heavy plant and machinery compresses (compacts) the soil, squashing out the air spaces and preventing root function.
4. A compacted soil structure will stay compacted.
5. Consequently the tree suffers and will show signs of branch die-back.
6. Symptoms such as die-back may take several years to appear.
7. Soil compaction over roots can be prevented by maintaining a fenced exclusion zone over the tree roots.
8. The exclusion zone distance is calculated using British Standard 5837.
9. Protective Fencing is installed at the calculated distance.
10. Protective Fencing is a condition of planning approval, if it is removed or repositioned the construction firm is in breach of a condition and may be subjected to legal action.

**APPENDIX B – Site Inspection pro-forma**

# SITE INSPECTION - ARBORICULTURAL METHOD STATEMENT (Ref: MG/6765/AIA&AMS/REVD/DEC23)

**Site Address** : **Victoria Park Probation Centre, Manchester**

## Name of Arboricultural Inspector:

## Date of Inspection:

The purpose of this site inspection is to confirm with requirements within the above referenced Arboricultural Method Statement.

The site is to be visited and the placement of tree protection barrier fencing checked for compliance with specifications within the method statement.

Further works on the site shall not proceed until the tree protective fencing is installed in compliance with the method statement and in submitting this document to the Local Planning Authority the inspector is verifying that the necessary specifications have been met.

Notes (continue on separate attachments as necessary):

Photographs: (attach below):

## APPENDIX C – GROUND PROTECTION BOARDS

**(to be used for light plant access when undertaking temporary operations within the root protection areas of trees- such as fencing and landscaping)**

# DuraMatt Single Sided Access Mat - 2400mm x 600mm x 10mm - 17kg

Product Code: DURA-240060017SS




MultiMatts are the market leading provider of temporary access and ground protection solutions. Temporary Access and Ground Protection Mats are now an essential requirement for the construction, civil engineering and groundwork industries, although they're also used extensively within the festival and outdoor event sectors.

Our DuraMatt - Light/Medium Duty Access Mat is manufactured from 100% recycled Low Density Polyethylene (LDPE) and weigh just 17kg. DuraMatt is ideal for both short and long term projects and can be used in a variety of applications.

DuraMatt is capable of taking weights of 15-20 tonnes* depending on the ground conditions, they've also been designed with a connection hole in each corner should the mats need to be connected together.

DuraMatt has a unique diamond pattern "non-slip" surface on one side, the other side has been left smooth for working on hard standing areas and sensitive grass, it also allows contractors to use the mat as a spoil board for construction materials. It's flexible nature allows the mats to follow the contours of the ground to deliver highly effective access over undulating or sloping terrain.

Standard colour option is Grey – Please contact us for other colours or customisation.

### Key Applications

- Ground Work Spoil Boards
- Temporary Roadways and Car Parks
- Pedestrian Walkways
- Heritage sites; Eco-Sensitive areas
- Sports and Leisure Events
- Golf Course and Sports Field Maintenance
- Ground Protection
- Emergency Access Routes
- Utilities
- Infrastructure Maintenance

### Key Features and Benefits

- 2.4m x 0.6m x 10mm - Weight 17kg
- Maximum Weight loading approx. 15-20 tonnes*
- Unique diamond pattern "non-slip" surface for optimal grip
- Avoids health and safety issues
- Avoids property, heritage and environmental damage and reinstatement
- Avoids vehicles becoming bogged down
- Low transportation and handling costs
- Various connection options for different ground conditions and equipment
- Premium 100% recycled (LD) polyethylene which is 100% recyclable

## APPENDIX D – OUTLINE SPECIFICATION FOR INSTALLATION OF CELLWEB

PRODUCT DATA SHEET

Geosynthetics Limited Tel: 01455 617 139 Fax: 01455 617 140 Email: sales@geosyn.co.uk

# Cellweb® TRP Installation Guide



Step 1: Prepare Surface



Step 2: Lay Treetex® T-300



Step 3: Layout Cellweb® TRP

- Cellweb® TRP is a NO DIG tree root protection measure and it is recommended that no excavation be performed without prior approval and guidance from the Local Authority Arboricultural Officer.
- Soil compaction from vehicles, machinery and materials is to be strictly prohibited during construction within Root Protection Areas (RPAs).
- Approval must be obtained from the Local Authority that the design and the method of construction is acceptable.
- Further information is available from the following two documents;
  - British Standard BS5837: 'Trees in Relation to Design, Demolition and Construction' (2012).
  - Arboricultural Advisory and Information Service: Practice note 12 – 'Through the Trees to Development' (APN12).

## Installation Method

**1. Prepare the Surface**

- Remove the surface vegetation using appropriate hand held tools or herbicide (see Note 1).
- Remove any surface rocks, debris and organic material.
- Create a level surface by filling any hollows with clean angular stone or sharp sand.
- Do not level off high spots or compact the soil through rolling.

**2. Lay the Treetex® T-300 Non-Woven Geotextile**

- Lay the Treetex® T-300 over the prepared area, overlaying the edges of the required area by 300mm.
- Overlap any joins by 300mm minimum or more, depending on soil structure (see Note 2).

**3. Lay the Cellweb® TRP Cellular Confinement System**

- Lay the collapsed Cellweb® TRP on-top of the Treetex® T-300.
- Place one of the supplied J pins into the centre cell at the end of the panel and secure into the ground.



DR: 03/01/18.08.14 (Page 1 of 3)

# Cellweb® TRP - Installation Guide



*Step 3: Pinning Cellweb ® TRP*



*Step 3: Stapling Cellweb ® TRP*

- Pull out the Cellweb® TRP to its full 8.1m length and secure its length with another J pin.



- Now measure its width to 2.56m and secure in each of the corners with the J pins.



- Use 10 pins per panel to create a panel measuring 8.1m x 2.56m.
  (3 pins at each end of the panel and 2 pins on each side)



- This will produce a cell size of 259mm x 224mm which is the required cell diameter. Each cell must be fully extended and under tension.
- Staple adjacent panels together at each cell (see Note 3).
- If a curved path or shape is required, this should be cut when the Cellweb® TRP panel is pinned out to 8.1 x 2.56m, ensuring complete cells remain. Do not try to curve or bend the Cellweb® TRP panels into place.
- All cells must be fully opened to the required diameter.

DS: 8/V1/16.08.14 (Page 2 of 3)

# Cellweb® TRP - Installation Guide



*Step 4: Clean Angular Stone*



*Step 5: Edge Restaints*



*Step 6: Surface Options*

**4. Infill the Clean Angular Stone**

- The infill material must be a clean angular stone, Type 4/20mm or Type 20/40mm (see Note 4).
- Do not use M.O.T type 1 or crushed stone with fines for tree root protection.
- Infill the Cellweb® TRP cells with the clean angular stone, working towards the tree and using the infilled panels as a platform.
- No compaction is required of the infill. Do not use a whacker plate or other means of compaction.

**5. Edge restraints**

- Excavations for kerbs and edgings should be avoided within the RPAs.
- Where edging is required for footpath and light structures, a peg and treated timber board edging is acceptable
- Other options include wooden sleepers, kerb edging constructed on-top of the Cellweb® TRP system, plastic and metal edging etc.

**6. Surface options**

- Surfaces can include block paving, asphalt, loose gravel, grass and gravel retention systems (eg Golpla), resin bound gravel, concrete etc.
- For Root Protection Areas this surface must be porous.

**NOTES**

1. **Herbicide:** According to BS5837:2012 "The use of herbicides in the vicinity of existing trees should be appropriate for the type of vegetation to be killed, and all instructions, warnings and other relevant information from the manufacturers should be strictly observed and followed. Care should be taken to avoid any damaging effects upon existing plants and trees to be retained, species to be introduced, and existing sensitive habitats, particularly those associated with aquatic or drainage features."
2. **Geotextile:** We recommend the installation of a Non-Woven Geotextile [illegible] under the sub-base, if installed. The overlapping between adjacent rolls of Geotextile should be: CBR > 3%: 300mm minimum, CBR between 1% and 3%: 500mm minimum. CBR ≤ 1%: 750mm minimum.
3. **Staples:** Number of staples per join: 200mm: 5 staples. 150mm: 4 staples. 100mm: 3 staples. 75mm: 3 staples.
4. **Granular Fill:** Open graded sub-base, clean angular stone Type 4/20 or Type 20/40. Please refer to BS7533-13:2009 and to the Design Manual for Roads and Bridges (DMRB), Volume 4 Geotechnics and Drainage, Section 1 Earthworks, HA44/91, Volume 7 – IAN 73/06 Design Guidance for road pavement foundations and Manual of Contract Documents for Highway Works (MCHW), Volume 1 Specification for Highway Works for the construction and maintenance of the fill material.

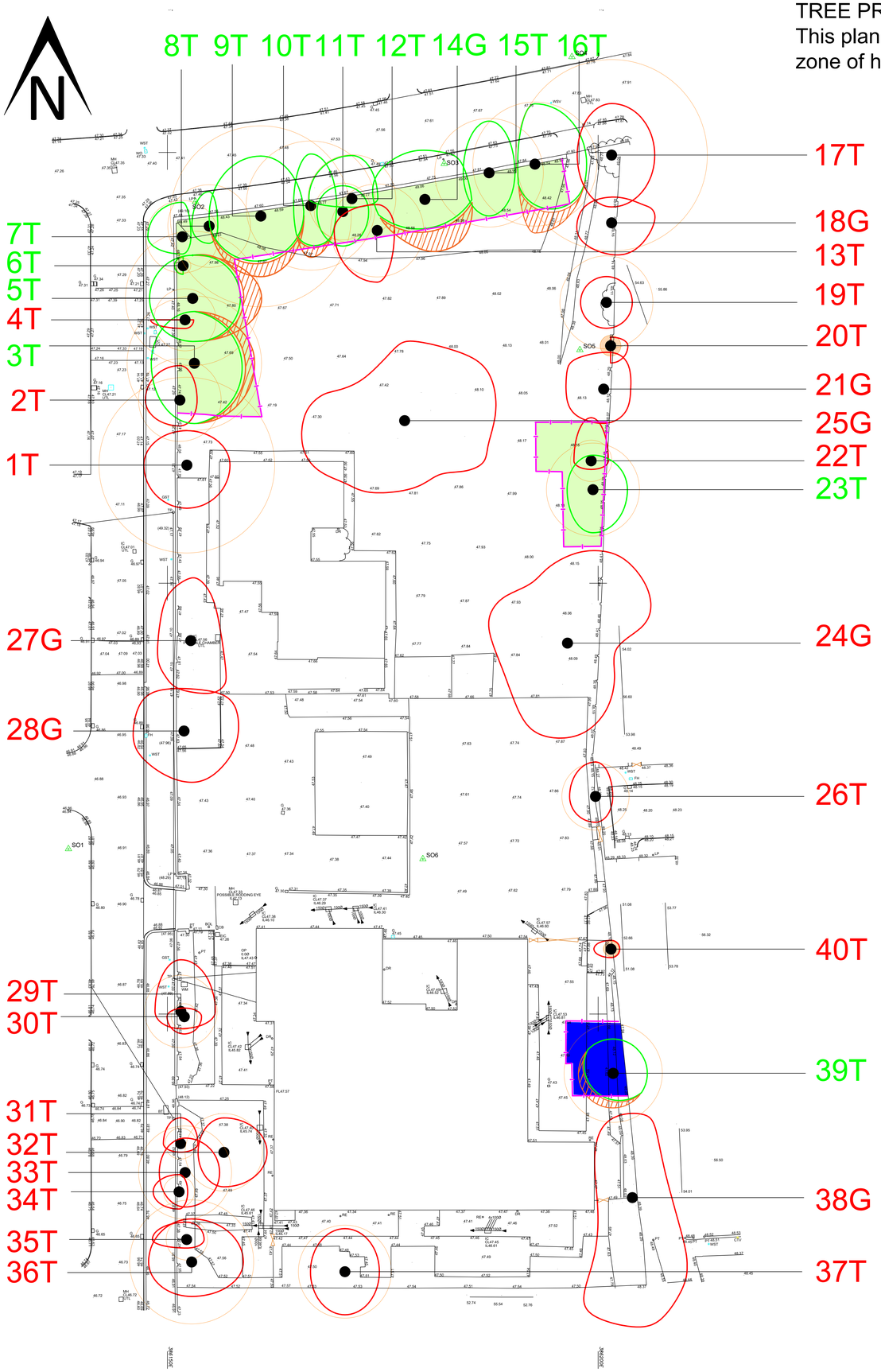
This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentation. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge becomes available. Since we cannot anticipate all variations in actual end use conditions, Geosynthetics Limited makes no warranties and assumes no liabilities in connection with this information. Nothing in this publication is to be considered as a licence to operate under or a recommendation to infringe any patent right.
DR: 01/V1/18.08.14 (Page 3 of 3)

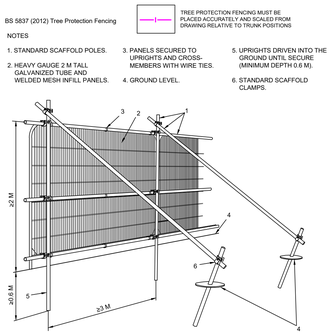
**APPENDIX E – PLANS:**

- **TREE PROTECTION PLAN SHEET 1 OF 2 (DEMOLITION PHASE). DRG. NO. 6765.04 REV D.**
- **TREE PROTECTION PLAN SHEET 2 OF 2 (CONSTRUCTION PHASE). DRG. NO. 6765.05. REV D.**

# TREE PROTECTION PLAN. SHEET 1 OF 2 (DEMOLITION PHASE)

This plan shows trees to be removed. Pruning required. location of tree protection fencing and zone of hard surface to be removed. For construction specifications refer to SHEET 2.




| Phase | Requirements | Method |
|---|---|---|
| **1** Prior to erection of protective fencing. | Undertake tree and vegetation removal and pruning works<br><br>**Trees/vegetation to be removed:** | **Refer to section 5.5 of AIA/MS report.**<br><br>All tree works to be carried out to BS3998: 2010: by suitably qualified and insured professional tree surgeons.<br><br>**The following tree felling must be undertaken at this Phase:**<br><br>**Items requiring removal:**<br>1T Horse chestnut<br>2T Common lime<br>4T Hawthorn<br>13T Tree of heaven<br>17T Sycamore<br>18G Ash x 1, sycamore x 1<br>19T Common lime<br>20T Sycamore<br>21G Ash x 1, sycamore x 1<br>22T Hawthorn<br>24G Lime x 1, beech x 2<br>25G Sycamore x 3, lime x 1, Goat willow x 2<br>26T Ash<br>27G Lime x 4<br>28G Lime x 1, beech x 1<br>29T Turkey oak<br>30T Hawthorn<br>31T Hawthorn<br>32T Wild cherry<br>33T Sycamore<br>34T Hawthorn<br>35T Elm<br>36T Common lime<br>37T Sycamore<br>38G Sycamore x 6, elder, 2 x dead trees<br>40T Horse chestnut<br><br>**Trees/vegetation to be pruned:**<br><br>**The following tree pruning must be undertaken at this Phase:**<br><br>**Items requiring pruning:**<br>3T Turkey Oak. Reduce the easterly lateral canopy by approximately 1m in length to ensure clearance of scaffolding.<br>5T Beech. Reduce the easterly lateral canopy by approximately 2m in length to ensure clearance of scaffolding.<br>9T Horse Chestnut. Reduce the southerly lateral branch spread by approximately 2m to ensure clearance for working space adjacent Apartment Block 1.<br>10T Sycamore. Reduce the southerly lateral branch spread by approximately 1m to ensure clearance for working space adjacent Apartment Block 1.<br>14G Sycamore x3, Lime x 2. Reduce the southerly lateral branch spread by approximately 2.5m to ensure clearance for working space adjacent Apartment Block 1.<br>16T Sycamore. Reduce the southerly lateral branch spread by approximately 2.5m to ensure clearance for working space adjacent Apartment Block 1.<br>39T Common Lime. Reduce the south-westerly canopy spread by approximately 1m in length to provide clearance for working space. |

| Phase | Requirements | Method |
|---|---|---|
| **2** Prior to any construction works on site | Erection of protective fencing:<br><br>To retain throughout the duration of the development: | Protective fencing is to be erected in accordance with 5.6 of AIA/MS report.<br><br>The fencing **must** comply with the positions shown in the Tree Protection Plan. A scale copy of the Tree Protection Plan must be used as reference and fencing positions measured from the Plan using a scale rule and/or easting and northing points are to be taken from a CAD version of the plan and the fencing positions accurately marked on site to aid fencing installation.<br><br>No works, no storage of materials, no access, or any ground disturbance is to take place within the Tree Protection Barrier Fencing other than works specified within the Arboricultural Method Statement. **Fenced areas are to be treated as Construction Exclusion Zones.**<br><br>Warning signs to be placed on all protective fencing. For large sections of fencing the signs must be placed at 20m intervals.<br><br>Signs must be laminated and securely attached at all corners. Two signs are to be placed side by side; copies of which are attached within **Appendix A**. |
| **3** Verifying quality of protective barriers | Verify that the location and quality of tree protection barriers is adequate prior to onset of main site works. | Site visit with Arboricultural Consultant and Site Manager.<br><br>Tree Officer to be pre-informed of visit.<br><br>In order for set works to proceed the pro-forma in **Appendix B**. of the AIA/AMS report is to be completed and passed on to the local planning authority:<br><br>**If the protective barriers are not adequately, work is not to proceed until rectified.** |
| **4** Ongoing | Maintain protective fencing | The tree protective barrier fencing is to remain in situ during all demolition works construction works unless otherwise specified within the Arboricultural Impact Assessment |
| **5** Removal of hard surface areas | Controlled removal of existing hard surface adjacent T39 (Common Lime) | A single panel of the tree protective fencing is to be removed to allow controlled access.<br><br>1, Present during the work must be the project arboriculturalist, site manager and site operatives.<br>2. A panel from the protective fencing is to be removed in order to access the works area.<br>3. Prybars and/or jackhammer to be used to break edges of surface nearest the tree.<br>4. A mechanical digger to be used to 'peel' away surface of existing road.<br>5. Mechanical plant is to operate from the intact surfaces of the road, working back.<br>5. The sub-base of exposed sections of road to be regularly checked by the project arboriculturalist for the presence of roots. If roots are encountered, the project arboriculturalist will advise on whether further excavation shall take place, or how further excavation shall occur.<br><br>A layer of no-more than 150mm depth good quality top soil to be placed over the removed hard surface to allow for subsequent laying of turf. |

KEY

- ROOT PROTECTION AREAS
- TREES/GROUPS TO BE RETAINED
- TREES/GROUPS TO BE REMOVED
- PRUNING REQUIRED
- TREE PROTECTION FENCING
- CONSTRUCTION EXCLUSION ZONES
- CONTROLLED REMOVAL OF EXISTING HARD SURFACE IN VICINITY OF 39T

## Tree Schedule

| Tree Number | Species | RPA Radius | Category |
|---|---|---|---|
| 1T | Horse chestnut | 10.2m | B2 |
| 2T | Common lime | 4.8m | B2 |
| 3T | Turkey oak | 7.8m | A2 |
| 4T | Hawthorn | 3.6m | U |
| 5T | Beech | 7.8m | A2 |
| 6T | Hawthorn | 0.9m | C2 |
| 7T | Common lime | 4.2m | B2 |
| 8T | Common lime | 4.8m | B2 |
| 9T | Horse chestnut | 10.5m | B2 |
| 10T | Sycamore | 7.5m | B2 |
| 11T | Common lime | 3.3m | C2 |
| 12T | Sycamore | 5.1m | B2 |
| 13T | Tree of heaven | 5.4m | B2 |
| 14G | Sycamore x 3, lime x 2 | | B2 |
| 15T | Sycamore | 6.3m | B2 |
| 16T | Sycamore | 7.2m | B2 |
| 17T | Sycamore | 11.1m | B3 |
| 18G | Ash x 1, sycamore x 1 | | C2 |
| 19T | Common lime | 5.4m | B2 |
| 20T | Sycamore | 1.2m | C2 |
| 21G | Ash x 1, sycamore x 1 | | B2 |
| 22T | Hawthorn | 2.4m | C2 |
| 23T | Common lime | 5.4m | B2 |
| 24G | Lime x 1, beech x 2 | | A2 |
| 25G | Sycamore x 3, lime x 1, Goat willow x 2 | | B2 |
| 26T | Ash | 3.9m | U |
| 27G | Lime x 4 | | C2 |
| 28G | Lime x 1, beech x 1 | | B2 |
| 29T | Turkey oak | 4.2m | C2 |
| 30T | Hawthorn | 1.5m | C2 |
| 31T | Hawthorn | 1.8m | C2 |
| 32T | Wild cherry | 4.5m | B2 |
| 33T | Sycamore | 5.4m | B2 |
| 34T | Hawthorn | 1.8m | C2 |
| 35T | Elm | 2.4m | U |
| 36T | Common lime | 7.2m | B2 |
| 37T | Sycamore | 5.4m | B2 |
| 38G | Sycamore x 6, elder, 2 x dead trees | | C2 |
| 39T | Common lime | 5.7m | B2 |
| 40T | Horse chestnut | 0.9m | C2 |

THIS DRAWING MUST BE VIEWED IN COLOUR AND READ IN CONJUNCTION WITH ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

| Rev | Date | Drwn | Amendment |
|---|---|---|---|
| D | 02.06.23 | MG | Amend to latest layout |
| C | 16.12.22 | MG | Amend to latest layout |
| B | 02.11.22 | MD | Amend to latest layout |
| A | 24.10.22 | NC | Amend to latest layout |

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Arboriculture

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FORMER VICTORIA PROBATION CENTRE, MANCHESTER
BRITTANIA GROUP

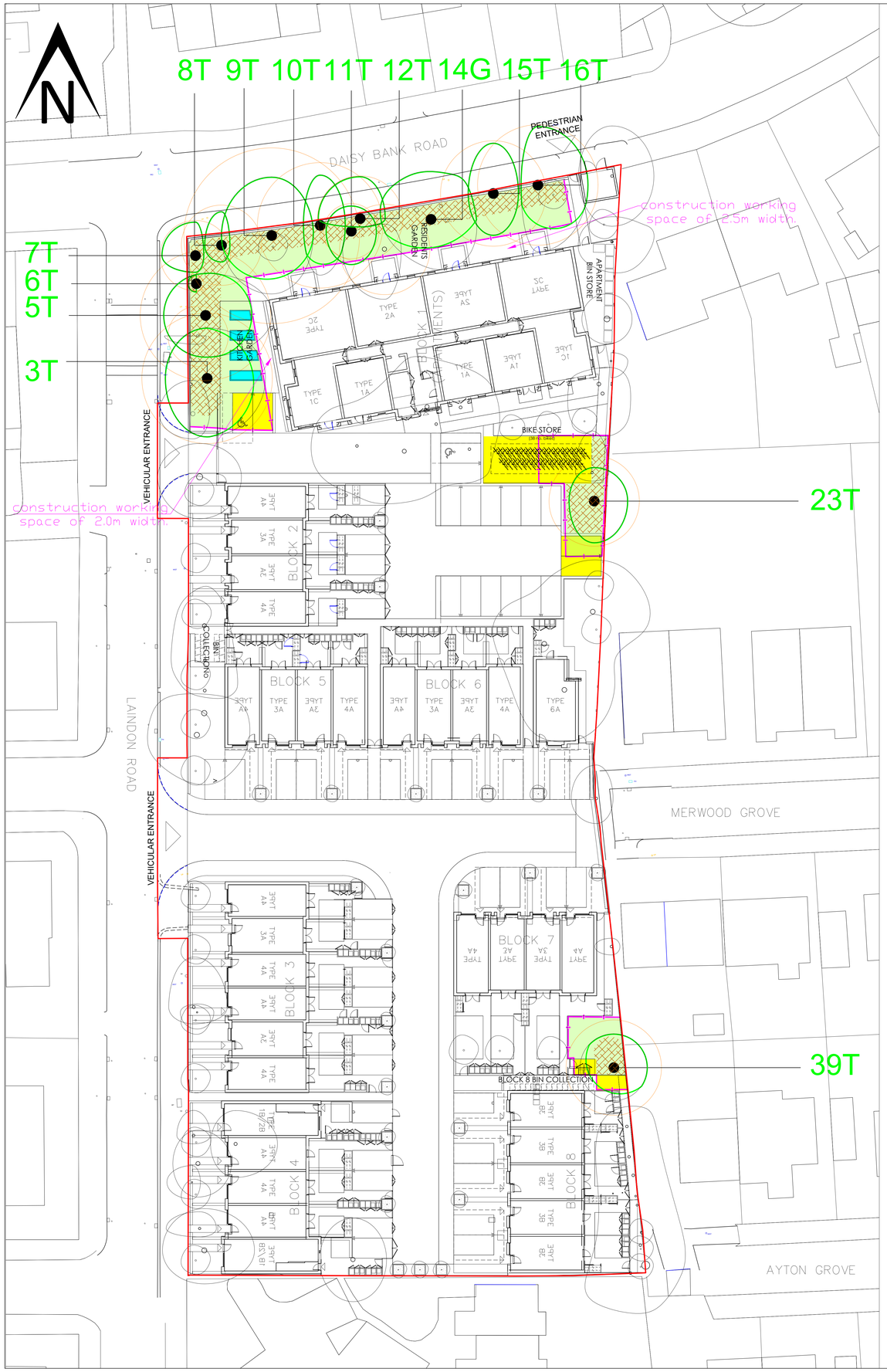
Title
TREE PROTECTION PLAN
SHEET 1 OF 2 (DEMOLITION PHASE)

| Date | Scale(s) | Dwg no | Rev |
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# TREE PROTECTION PLAN. SHEET 2 OF 2 (CONSTRUCTION PHASE)

This plan shows construction exclusion zones, location of areas for installation of cellular confinement systems, location of raised garden beds and location of root zone amelioration.

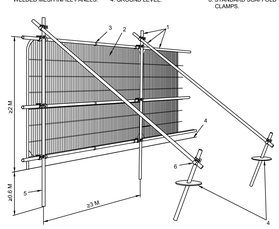



BS 5837 (2012) Tree Protection Fencing

TREE PROTECTION FENCING MUST BE PLACED ACCURATELY AND SCALED FROM DRAWING RELATIVE TO TRUNK POSITIONS

NOTES

1. STANDARD SCAFFOLD POLES.
2. HEAVY GAUGE 2 M TALL GALVANIZED TUBE AND WELDED MESH INFILL PANELS.
3. PANELS SECURED TO UPRIGHTS AND CROSS-MEMBERS WITH WIRE TIES.
4. GROUND LEVEL.
5. UPRIGHTS DRIVEN INTO THE GROUND UNTIL SECURE (MINIMUM DEPTH 0.6 M).
6. STANDARD SCAFFOLD CLAMPS.




KEY

- ROOT PROTECTION AREAS
- TREE PROTECTION FENCING
- CONSTRUCTION EXCLUSION ZONES
- GEOTEXTILE CELLUAR CONFINEMENT SYSTEM (CELLWEB) FOR INSTALLATION OF PERMENANT HARD SURFACE
- CONSTRUCTION OF RAISED BEDS. CONTROLLED CONSTRUCTION. MINI-PLANT MAY BE USED IF OPERATING ON GROUND PROTECTION BOARDS.
- ZONES OF AMELIORATION. INCORPORATION OF IMPROVED BIO-CHAR AND MULCH COVER.

| Phase | Requirements | Method |
|---|---|---|
| **6** Installation of geotextile cellular confinement systems | Installation of three dimensional cellular confinement system. | Installation of non-dig hard surfaces:<br><br>A three dimensional cellular confinement system is to be utilised (Cellweb).<br><br>Guidance for the installation of the Cellweb is attached within **Appendix D**. Cross section details are to be provided (in conjunction with engineer and Cellweb recommendations). Technical specifications required, as well as cross section details relevant to the site can be provided by Cellweb suppliers, Geosynthetic (01455 617139). Email Sales@geosyn.co.uk.<br><br>Tree barrier protective fencing is to be moved only **immediately prior** to the installation of the Cellweb.<br><br>The installation is to be carried out **under Arboricultural Supervision**. The ground layer in which Cellweb is to be installed is to be subject only to removal of exiting turf layer.<br><br>Adjoining levels must marry with the required depth of the Cellweb, not vice versa.<br><br>Once Cellweb is installed the protective fencing is to be relocated immediately adjacent the intalled areas of Cellweb. |
| **7** Completion of main construction and installation of boundary treatments | Garden and perimeter fencing within RPA of retained trees | Within the RPAs of retained trees the wooden fencing shall be installed as follows:<br><br>1. Hand tools only<br>2. Exploratory post holes to be dug. Any roots encountered less than 2.5cm diameter should be cleanly cut back.<br>3. Roots in excess of 2.5cm can only be removed once arboricultural advice has been sought.<br>4. Where roots in excess of 8cm are encountered, an alternative location for the post hole is required.<br>5. Prior to the pouring of concrete a non-permeable membrane must fully line the post hole. |
| **8** Improvement of rooting zones of 1T & 2T | Removal of turf and addition of improved biochar topped with mulch. | The following steps are to be taken:<br><br>1. An area of existing turf is to be carefully removed around both of the trees to a maximum radius of 3.5m (where space allows). The turf is to be removed using hand tools/ hand operated tools only. Removed turf is to be removed from site.<br><br>2. The exposed section of soil is to be lightly spiked with a fine spoke fork. This should comprise some 5 insertions per M². The intention is not to tiller soil but improve aeriation and allow some penetration of soil improver. No insertions are to be made within 1m of the tree trunk to avoid larger structural roots.<br><br>3. A soil improver is to be applied over the exposed soil are. This is to comprise an enhanced biochar powder at a rate of some 1kg per M².<br><br>4. Once biochar has been applied, the treated area is to be covered in a woodchip mulch to a thickness no less than 75mm. Care must be taken to ensure clearance of the root-collar of the trees.<br><br>5. A knee high rail fence is to be hand installed around the area of mulch. |

| Phase | Requirements | Method |
|---|---|---|
| **9** Completion of main construction and undertaking of landscaping | Landscaping and Dismantling of tree barrier protective fencing & construction of kitchen Garden<br><br>Kitchen Garden raised beds: | It is essential that ground levels within the root protection areas are not altered, either by raising or lowering soil levels; even at the landscaping stage.<br><br>Landscaping operations must be undertaken in a manner that will not impact trees.<br><br>Landscaping within the root protection area of trees must be undertaken in the following manner:<br><br>1. Any existing ground flora (grass/weeds/scrub) is to be sprayed with a systemic herbicide and left to die-off.<br>2. Dead flora is to be strimmed as hard as possible with a brush cutter or similar. The bulk of the strimmed material is to be removed by raking.<br>3. A good quality organic topsoil layer may be placed down. Small depressions may be filled (and **lightly** compacted underfoot). Placed topsoil soil layers **must not exceed** 100mm depth.<br>4. No plant machinery operating within the root protection areas to exceed 1 tonne gross weight and must only operate from propriety ground protection boards such as DuraMatt Access Matts (see **Appendix C**).<br>5. Turf and other planting to proceed thereafter.<br><br>Kitchen garden to comprise construction of raised beds. Mini-plant may be used if operating from ground protection boards. No alterations to ground levels, or changes to ground to occur. |

Tree Schedule

| Tree Number | Species | RPA Radius | Category |
|---|---|---|---|
| 3T | Turkey oak | 7.8m | A2 |
| 5T | Beech | 7.8m | A2 |
| 6T | Hawthorn | 0.9m | C2 |
| 7T | Common lime | 4.2m | B2 |
| 8T | Common lime | 4.8m | B2 |
| 9T | Horse chestnut | 10.5m | B2 |
| 10T | Sycamore | 7.5m | B2 |
| 11T | Common lime | 3.3m | C2 |
| 12T | Sycamore | 5.1m | B2 |
| 14G | Sycamore x 3, lime x 2 | | B2 |
| 15T | Sycamore | 6.3m | B2 |
| 16T | Sycamore | 7.2m | B2 |
| 23T | Common lime | 5.4m | B2 |
| 39T | Common lime | 5.7m | B2 |

THIS DRAWING MUST BE VIEWED IN COLOUR AND READ IN CONJUNCTION WITH ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

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|---|---|---|---|
| Amend to latest layout | 02.06.23 | MG | D |
| Amend to latest layout | 16.12.22 | MG | C |
| Amend to latest layout | 02.11.22 | MD | B |
| Amend to latest layout | 24.10.22 | NC | A |
| | Date | Drwn | Rev |

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