

## Arboricultural Method Statement

Best Asset Ltd

Rectory Farm Buildings

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## DOCUMENT CONTROL SHEET

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## REVISION HISTORY

Rev	Description of change	Date	Initials
1	Original draft	25.03.2021	FM

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**Attachments**

Description	Reference	Version
Tree Schedule	20-5227	1
Tree Protection Plan	20-5228	1



## PURPOSE OF DOCUMENT

This report has been commissioned to provide details on how the retained trees will be protected and managed during the development process at Rectory Farm Buildings, Lower Benefield. This includes a Tree Protection Plan (TPP) that provides illustrative guidance on the tree protection measures that are required for the development of the site.

This document is prepared to assist in the discharge of planning conditions that have been attached to the consented application (Ref: 18/02408/FUL), and in particular, with condition 4 which states:

**“Before development commences, an arboricultural method statement shall be submitted to and approved in writing by the local planning authority. This should include, but not be limited to identification of trees to be retained/felled, details of tree protection, and construction methods. Development shall only take place in accordance with the approved details.**

**Reason: In the interests of biodiversity, visual amenity and to ensure that protected trees are not harmed during the construction phase of development.”**

The following explanations relate specifically to this site and they should be read in conjunction with the TPP.

A copy of this report must be kept on site and be permanently available for the duration of the development. It can be:

- Included in the tender documents to identify and quantify the tree protection and management requirements;
- Used to plan the timing of site operations to minimise the impact of trees; and
- Reference on site for practical guidance on how to protect trees.

## 1. SCOPE OF WORKS

- 1.1 The approved construction is for the conversion of listed farm buildings to create 3 dwellings together with demolition of modern agricultural buildings and construction of 2 new build dwellings.
- 1.2 In order to discharge condition 4 the following arboricultural protection measures are required:
  - Arboricultural Clerk of Works (ACoW) supervision
  - Tree Protection Fencing (TPF)
  - Permanent ground protection
- 1.3 A total of two trees, a section of one group and a section of one hedgerow will require removal (H1, G2, T12 and T14).
- 1.4 Additionally category 'U' trees should be removed due to poor quality, but their removal is not required to enable the development.
- 1.5 A total of 2 trees and one group will require remedial pruning (G2, T10 and T13).
- 1.6 There is no requirement for any of the following within Root Protection Areas (RPAs) of retained trees:
  - Site gradient changes
  - Contractors' parking
  - Storage of materials
  - Landscaping
  - Fires
  - Herbicide use



## 2. ARBORICULTURAL ACTIVITIES & SEQUENCE

It is recommended that this sheet is removed from this report, laminated and displayed within the main site office at a visible location to all site staff.

**Table 1: Arboricultural Activities and Sequence**

Arboricultural Requirements	Timing & Importance	Details	AMS Report Section	Appendix No.
ACoW Supervision	Level of ACoW supervision will be determined at the pre-commencement meeting.	<ol style="list-style-type: none"> <li>1. Pre-commencement meeting.</li> <li>2. Installation of barriers.</li> <li>3. Installation of permanent ground protection.</li> <li>4. Removal of barriers.</li> </ol>	3	N/A
Tree Removals	Pre-construction/demolition.	Trees H1 (section of), G2 (section of), T12 and T14 will require removal pre-construction/demolition.	4	N/A
Tree Pruning	Pre-construction/demolition.	Trees G2, T10 and T13 will require pruning pre-construction/demolition.	4	N/A
Tree Protective Fencing	Fencing MUST be erected and inspected by ACoW before site works can start.	Heras 151 fencing.	5	4
Permanent Ground Protection	Permanent ground protection must be installed under ACoW supervision.	Cellular Confinement System, permanent ground protection will be required for trees T3, T7 and T10.	6	6

### Key Responsibilities:

- It is the responsibility of the main works contractor to ensure that tree protection measures are adhered to all at times.
- It is the responsibility of the main works contractor to ensure that all site personnel fully understand the protection measures of the site.
- It is the responsibility of the main works contractor to ensure that the project arboriculturist is contacted if there are any issues related to trees.



### 3. ARBORICULTURAL SUPERVISION

3.1 An ACoW will be appointed by the main works contractor (MWC) to advise on the tree management for the site and to attend:

- The pre-commencement meeting before any works start;
- Regular supervision visits; and
- As needed to oversee specific works that could affect trees.

3.2 Additionally, the ACoW will have a supervisory input into the following operations:

- Site preparation, including tree works;
- Installation, maintenance and removal of barriers;
- Installation of permanent ground protection; and
- Installation of new structures.

#### Sequencing and Timing

3.3 Effective tree protection relies upon following a local sequence of events and arboricultural inspection/supervision. **Table 2** provides an indication to the likely sequencing and supervision requirements of the retained ACoW.

**Table 2: Sequencing and Supervision**

Stage	Action	Arboricultural Input Required
1	Pre-commencement meeting	Attend
2	Tree works	Inspect
3	Tree protective fencing	Inspect
4	Construction of special surfaces	Supervise
5	Demolition	Supervise
6	Development phase	Inspect
7	Remove tree protective fencing	Inspect

3.4 The retained ACoW's initial role is to liaise with the MWC and Local Planning Authority (LPA) to ensure the tree protection measures are fit for purpose and in place before any works commence on site. Once the site is working that role will switch to monitoring compliance with arboricultural planning conditions and advising on any tree problems that arise or modifications that become necessary.

3.5 It is the MWC's responsibility to ensure that details of this Arboricultural Method Statement (AMS) and any agreed amendments are known and understood by all site personnel. An AMS Briefing Statement has been prepared and attached to this document, see **Appendix 1**. This document provides summarised details of the key protection measures contained within this document. A copy of this should be made available to all staff and used in any site inductions.

3.6 The final details of supervision and the frequency of inspection visits will be agreed at the pre-commencement meeting. The supervision arrangement will be sufficiently flexible to allow the supervision of all sensitive works as they occur.

- 3.7 The ACoW will make a record of the visits and these will be attached to the site copy of the AMS for inspection. A further copy will be sent to the LPA. The purpose of these written records is firstly to provide proof of compliance that will allow the MWC to robustly demonstrate adherence to best practice in the event of any dispute. Secondly it will help the LPA efficiently discharge the relevant planning conditions.

#### **Pre-commencement Meeting**

- 3.8 A pre-commencement site meeting involving the land owner, representative of the development company, ACoW, contractors and engineers (as appropriate), the relevant LPA officers will be held to ensure that all aspects of the tree protection processes are understood and agreed.
- 3.9 The meeting is where the details of the programme of tree protection will be agreed and finalised, which will then form the basis of any supervision arrangements between the ACoW and the MWC.
- 3.10 The ACoW will send a record of the meeting to all parties.
- 3.11 The ACoW will request that the contractor signs a Statement of Undertaking (SoU). This document confirms that the contractor fully understands the tree protection measures required throughout the construction process and accepts full responsibility for the protection of retained trees. A copy of the signed document will be kept onsite throughout the duration of the project. A copy will also be sent to the LPA officer for reference.
- 3.12 An example of this document can be found in **Appendix 2**.



## 4. TREE REMOVAL & PRUNING

### Tree Removals

4.1 Trees for removal have been noted on the TPP with a dashed red circle around each location. **Table 3** provides details of trees required for removal.

**Table 3: Tree Removals**

	Category A	Category B	Category C	Category U	Total
<b>Trees</b>	0	0	T12 and T14.	T9 and T16.	4
<b>Hedges</b>	0	0	H1 (approximately 18m)	0	1
<b>Groups</b>	0	0	G2 (approximately 4m).	0	1
<b>Total</b>	0	0	4	2	6

4.2 Great care should be taken during the tree removal process to ensure that retained trees are not adversely impacted. The following methodology should be adhered to at all times:

- Any machinery used during the tree removal process will track and be sited outside the root protection area (RPA) of retained trees.
- The felling of trees will be undertaken to avoid damaging retained trees.
- The removal of stumps of felled trees will be undertaken to ensure any retained trees in close proximity remain free from harm.
- All works will be conducted in accordance with BS3998:2010 *Tree Work – Recommendations*.

### Tree Works

4.3 The details of tree works have been set out in **Table 4** below.

**Table 4: Tree Works**

Tree No	Details of Works
G2	Trim back lower foliage of eastern crown to a height of 3m to clear visibility splay.
T10	Crown raise southern crown to 5m to facilitate demolition of outbuilding.
T13	Crown raise southern crown to 5m to facilitate demolition of outbuilding.

4.4 Obvious pruning to allow the installation of the structures/demolition has been listed, but additional minor pruning may be necessary to address unanticipated local problems with individual branches. Any additional works will be assessed and authorised as necessary by the retained ACoW. Where necessary, the LPA tree officer will be notified of any additional tree works.



- 4.5 All pruning works will be conducted in accordance with BS3998:2010 *Tree Works – Recommendations*.

## 5. BARRIERS AND GROUND PROTECTION

### The Construction Exclusion Zone

- 5.1 The primary means of protecting the RPA of trees is through the use of barriers formed by protective fencing. The enclosed area is the Construction Exclusion Zone (CEZ).
- 5.2 The CEZs are to be afforded protection at all times and will be protected by fencing. The type of fencing is detailed below.
- 5.3 No works will be undertaken within any CEZ that causes compaction to the soil or severance of tree roots.

### Tree Protection Fencing

- 5.4 A protective fence will be erected around the trees, prior to the commencement of any site works. This includes any materials or machinery brought onto site, development or the stripping of soil.
- 5.5 The fence is to be sited in accordance with the TPP enclosed with this method statement. This is shown as a black dashed line. Details of minimum distances for the barriers from the trees can be seen in **Appendix 3**. The figures are based on a perfect circle for the RPA around the tree.
- 5.6 The precise form of fencing can vary provided it is fit for purpose and prevents damaging activities within the CEZ. For a proposal of this nature, the Heras 151 system of fencing will provide the necessary protection to the CEZ. Details of this fencing can be seen in **Appendix 4**.
- 5.7 All Heras fence panels will be joined using a coupling system such as the Heraslock Anti-tamper coupler, using a minimum of two clamps per panel side. Each panel will be fitted securely to a rubberised foot that will in turn be pinned to the ground using metal stakes driven a minimum of 500mm into the ground.
- 5.8 The fence will have signs attached to it stating that it defines a CEZ and that no works are permitted within the fence. No notice boards, cables or other services will be attached to any tree. An example of a fencing sign is provided in **Appendix 5**.
- 5.9 After the protective fencing has been erected, the retained ACoW will visit the site. The purpose of the visit will be to check that the fencing has been correctly installed so as to provide protection to the trees. The LPA tree officer may also be invited to inspect the tree protection measures prior to any works commencing.
- 5.10 The retained ACoW will provide a written report confirming satisfactory completion of this task. A copy of this report will be sent to the LPA.
- 5.11 The protective fencing may only be removed following completion of all construction works.



## 6. CONSTRUCTION OF SPECIAL SURFACES

- 6.1 Where, due to site constraints, construction activity cannot be excluded through the use of fencing, appropriate ground protection must be installed to protect the rooting environment during the construction process.

### Permanent Ground Protection

- 6.2 Where permanent hard surfaces are required within the RPA, there must be no excavation into the soil, either through the lowering of levels and/or scraping, other than the removal of turf or other surface vegetation. All such works shall be carried out using hand tools only.
- 6.3 In order to protect the RPA of three trees (T3, T7 and T10) a three-dimensional cellular confinement system (CCS) will be installed. This is a load bearing system which protects roots from the effects of compaction from regular vehicular movement. A range of systems are available, but whatever system is used, the end result must be that the underlying soil (rooting environment) remains undisturbed and retains the capacity to support existing and new roots.
- 6.4 The dimensions for the area protected by the CCS have been marked on the TPP, which can be identified by the purple cross-hatch on the plan.
- 6.5 The CSS will be pinned in place and backfilled with no fines angular granular fill (typically 4-20mm) and finished with a permeable wearing surface. The edgings of the drive are to be installed on top of the CCS and will comprise of timber boards staked in place and backfilled with the wearing layer as previously described.
- 6.6 Once the system has been installed and backfilled correctly machinery can work from on top of the system.
- 6.7 An example of a CCS is included in **Appendix 6**, and a methodology for installation given in **Appendix 7**. This methodology has been provided by the manufacturer and it will be the responsibility of the contractor to ensure that whatever system is used, it is installed in accordance with the latest guidelines provided by the manufacturer.

### Temporary Ground Protection

- 6.8 Where it is not practical to protect the RPA by use of fencing barriers, BS5837 allows for the fencing to be set back and the soil shielded by ground protection. A range of methods can be used including retaining existing hard surfaces or structures that already protect the soil, installing new materials, or a combination of both. Whatever the choice of method, the end result must be that the underlying soil (rooting environment) remains undisturbed and retains the capacity to support existing and new roots.
- 6.9 No trees on this site require temporary protective ground protection measures. However, if temporary access is required to a CEZ then access may only be gained after consultation with the LPA and following placement of materials that will spread the weight of any vehicular load and prevent compaction to the soil.
- 6.10 An example of temporary ground protection measures can be found in **Appendix 8**.



#### **Additional precautions outside the exclusion zone**

- 6.11 Any risk from activities outside RPAs but close enough to have an impact will be assessed during the day-to-day running of the site, and appropriate precautions put in place to reduce that risk.
- 6.12 It is a presumption of this report that all RPAs that have been identified for protection but which lie outside of the protective fencing, will be protected from soil degradation at all times during construction activity.
- 6.13 Further details for working within the RPA are also provided in **Appendix 9**.

## 7. DEMOLITION

7.1 All demolition works will be undertaken in accordance with the following methodology:

- Demolition works will be undertaken using a 'top down, pull back' technique. This will minimise the potential of physical harm to retained trees.
- Care must be taken to avoid physical contact with the canopies of trees during the demolition works. A banksman should be used where such conflicts could occur and the retained ACoW will advise if localised pruning can be undertaken to facilitate the demolition works.
- All machinery used to undertake demolition works will be sited outside the RPAs of existing trees or working from on top of existing hard standing.
- Debris may be removed from the RPAs of retained trees by using machinery with a long reach or through pedestrian access. Care must be taken to avoid damage to the existing ground surface to ensure the rooting environment remains sustainable post demolition.
- The removal of existing hardstanding or foundations within the RPAs of retained trees will be undertaken using hand tools only. Appropriate tools for manually removing debris may include a pneumatic breaker, crow bar, sledgehammer, pick, mattock, shovel, trowel and fork.
- Severance of roots over 25mm diameter should be avoided unless advised by the retained ACoW. Secateurs and a handsaw must be available to deal with any roots that are exposed. Where roots will remain exposed for any period of time the roots must be wrapped in hessian sacking for protection.



## **8. DEVELOPMENT**

- 8.1 Once all tree works and protective fencing have been completed, the MWC can commence the on-site preparation works and construction can begin.

### **Site Storage, Cement Mixing and Washing Points**

- 8.2 No storage of materials will take place within a CEZ.
- 8.3 No mixing or storage of materials will take place up a slope where they may leak into a CEZ. Where contours of the site create a risk of polluted water running into RPAs, precautionary measures of using heavy duty plastic sheeting and sandbags with the ability to contain accidental spillage will be put in place to prevent contamination.
- 8.4 Water will be kept readily available on site and will be used to flush spilt materials through the soil and avoid contamination of tree roots.
- 8.5 At the time of any spillage the main contractor will contact the retained ACoW for advice.

### **Contractors Parking**

- 8.6 Contractors parking will not be within or in close proximity to a CEZ.

### **Utility Services**

- 8.7 No details of proposed services have been provided, but it is assumed that existing services will be utilised or will enter the site through existing access routes avoiding the RPAs of retained trees.

### **Fires**

- 8.8 No fires will be lit on this site.

### **Site Gradient**

- 8.9 There will be no changes to any levels on this site within or in close proximity to the RPA of any retained tree on this site.

### **Use of Herbicides**

- 8.10 There is no requirement of any herbicide to be used on this site.

## 9. POST DEVELOPMENT

### Completion Meeting

- 9.1 Upon completion of all works specified above and all procedures detailed, the ACoW will visit the site and may invite the LPA tree officer to meet on site to discuss the process and agree any final remedial works which may be required.

### Landscaping Within the Tree Canopies

- 9.2 The final tidying up and reinstatement can only be carried out when all the protective measures have been removed. This means great care is required by the contractors to observe tree protection measures.
- 9.3 No machines can be used within the RPAs. The use of rotavators is specifically prohibited.
- 9.4 All soil level variations required within the RPAs of retained trees to enable the agreed landscaping works must be agreed by the retained ACoW.



## **10. RESPONSIBILITIES**

- 10.1 It is the responsibility of the MWC to ensure that the planning conditions attached to planning consent area adhered to at all times and that a monitoring regime in regard to tree protection is adopted on site.
- 10.2 The MWC will be responsible for contacting the LPA at any time issues are raised related to the trees on site.
- 10.3 If at any time pruning works are required advice must be sought from the ACoW first, and if required permission obtained from the LPA and then carried out in accordance with BS3998:2010 Tree Works – Recommendations and industry best practice.
- 10.4 The MWC will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site.
- 10.5 The fencing and signs must be maintained in position at all times and checked on a regular basis by an on-site person designed that responsibility.
- 10.6 The MWC will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

## 11. CONTACTS

11.1 **Table 5** shows a list of all relevant contacts for this development. This table will be completed once the pre-commencement meeting has been undertaken.

**Table 5: Development Contacts**

Title	Name	Position	Contact
Main Works Contractor			
Agent/Architect			
LPA Tree Officer			
Site Manager/Foreman			
ACoW			
Tree Surgeon			

**THIS AMS IS NOT A CONTRACT. THE RETENTION OF A QUALIFIED ARBORICULTURALIST FOR SUPERVISION AND MONITORING MUST BE AGREED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY.**



## 12. APPENDICES

## Appendix 1: AMS Briefing Statement

### Arboricultural Method Statement – Briefing Statement

#### Rectory Farm Buildings

##### Purpose

The purpose of this briefing document is to ensure that all contractors, sub-contractors and any other personnel working on the Rectory Farm Buildings project are fully aware of the purpose of the tree protection measures that have been implemented on site.

##### Key Messages

- The protection of the retained trees and hedges on site is a critical requirement of both the client and the Local Planning Authority.
- The site has been designed with key green features being retained and protected. Any breach of the protection measures has the potential to damage those features and therefore disrupt the overall vision for the site.
- A detailed Arboricultural Method Statement has been prepared. This details the requirements for ensuring that retained trees are protected. This document is available on site at the site office and should be read and understood by all personnel working on the site.
- A Tree Protection Plan has been prepared to provide graphical illustration as to the extent of tree protection measures.
- The approved Tree Protection Fencing is Heras panels to protect areas that are being actively worked.
- All Tree Protection Fencing will have a sign attached at regular intervals to state that it is Tree Protective Fencing.
- No Tree Protection Fencing can be moved, opened, or breached in any way without the prior written approval of the project Arboriculturist.
- The area within the Tree Protective Fencing is a Construction Exclusion Zone. This means that there must be no machinery, no materials, and no personnel within the area. Unauthorised access will be a breach of planning conditions and could lead to enforcement notices from the Local Planning Authority.
- All Permanent Ground Protection will be installed under the supervision of the project Arboriculturist and constructed prior to demolition/construction vehicles accessing the site.
- No works to any tree or hedge can be undertaken by any person that has not been approved by the project Arboriculturist.
- Where additional tree works are required, there may be a requirement to obtain input and approval from: the client; the Local Planning Authority; the project Ecologist; and/or the project Landscape Consultant. If any additional works are



required, as much notice as possible must be given to ensure that there are no delays to the works programme while the necessary approvals are obtained.

Project Arboriculturist:

Contact:

**Appendix 2: Statement of Undertaking**

**STATEMENT OF UNDERTAKING**

I confirm that I have read and fully understood the tree protection measures that have been detailed in the Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) that have been provided for Rectory Farm Buildings. These documents have been provided to ensure that retained trees on the site are protected at all times during the construction process, and to assist the MWC/construction company maintain compliance with the planning conditions.

I will ensure that tree protection measures are in accordance with the AMS and TPP throughout the construction process. I will also ensure that all site personnel are aware of the tree protection measures that are required throughout the site.

Where issues arise from tree related matters I will consult the retained Arboricultural Clerk of Works (ACoW) before undertaking any activities that may cause damage to the protected trees.

Position: .....

Name: .....

Signature: .....

Company: .....

Date: .....

**Approved by:**

Position: .....

Name: .....

Signature: .....

Company: .....

Date: .....

Enc: Arboricultural Method Statement: 20-5226

Tree Protection Plan: 20-5227



### Appendix 3: Tree Constraints Data

Tree No	Species	Stem Diameter (mm)	Circle Radius (m)	RPA (m <sup>2</sup> )	Length of sides of a square (m)	Minimum barrier distance (m)
H1	Blackthorn (Prunus spinosa)	80	0.90	3	1.60	0.90
G2	Western Red Cedar (Thuja plicata)	300	3.60	41	6.38	3.60
T3	Sycamore (Acer pseudoplatanus)	370	4.50	64	7.98	4.50
T4	Ash, Common (Fraxinus excelsior)	270	3.30	34	5.85	3.30
T5	Pine (Pinus sp.)	210	2.40	18	4.25	2.40
T6	Pine (Pinus sp.)	260	3.00	28	5.32	3.00
T7	Sycamore (Acer pseudoplatanus)	470	5.70	102	10.10	5.70
T8	Pine (Pinus sp.)	230	2.70	23	4.79	2.70
T10	Sycamore (Acer pseudoplatanus)	561	6.60	137	11.70	6.60
T11	Pine (Pinus sp.)	250	3.00	28	5.32	3.00
T13	Pine (Pinus sp.)	340	4.20	55	7.44	4.20
H15	Honeysuckle, Shrubby (Lonicera nitida)	50	0.60	1	1.06	0.60
T17	Apple (Malus sp.)	280	3.30	34	5.85	3.30
T18	Walnut (Juglans sp.)	600	7.20	163	12.76	7.20
G19	Mixed Species (Mixed species)	250	3.00	28	5.32	3.00



# heras® 151 and 151steadfast system

Having invented the original concept of temporary fencing back in the 80's, Heras is proud of its reputation as a true innovator.

Our latest solution for securing site perimeters and protecting the public has been phenomenally successful since its launch, and offers the ultimate market leading temporary fencing system.

Our safest, most stable and most secure system ever offers you total peace of mind, and unrivalled performance.

You can be sure that by installing the Heras® 151 Steadfast System (patent pending), you are conforming fully to the latest HSE Guidelines on "Protecting the Public" from the dangers of construction sites.

Heras has campaigned widely over recent years against falling product standards, and has consulted closely with senior figures across the construction industry to ensure our products meet and exceed your expectations. This latest innovative system means you should never again need to compromise on:

- Value for money
- Quality
- Performance
- Design
- Ease of installation.

All backed up with unbeatable service from our nationwide branch network – deal direct with Heras – your safety first fencing supplier.

## Fully Tested and Certified

- Extensive independent testing by Sheffield Hallam University has proved the performance of the system, resisting wind speeds well in excess of gale force.
- The HSE has confirmed that the system meets all of the guidelines in the HSG 151 Publication "Protecting the Public - 'four need move'".
- In turn, therefore, we can offer customers a certificate of compliance when they purchase this system from Heras.
- It is your responsibility to ensure the system is correctly installed and fixed. For help and advice, contact your nearest branch.

## 151 system

The key components of the Heras 151 system are as listed.

### Round Top Panel with Anti-Climb Mesh

- The strongest panel on the market, with 3 sides formed from a continuous length of tube, eliminating the top corner weld, often the weakest point in traditional panel design.

### High Visibility Orange Block

- Permanently coloured with a durable UV stabilised "3-in-1" coating and filled with solid high density concrete.
- Effectively highlights any potential trip hazard.
- Beware of cheap imitations – painted coatings will chip and peel.

### Heraslock® Anti-Tamper Coupler

- Providing additional security, these couplers can only be removed with the use of the specialist tool.

## 151steadfast system

The Heras 151steadfast system incorporates all the benefits of the 151 system, with the addition of the patented...

### Heras® Steadfast Strut

- The unique design of this clever strut dramatically increases the stability of the fence.
- The strut fits neatly within the high visibility block allowing a neat and compact solution, and acts as an integrated anti-lift device.
- 3 additional fixing holes incorporated into the design allow for soil pins and tunderbolts, dependent on ground conditions.

### Optional Extras

- Heras® Steadfast Safety Strips with reflective coating can be fitted in minutes to highlight site dangers.
- Front support brackets allow vastly improved performance on softer ground conditions and fit quickly and easily into the high visibility blocks.



round top panel with anti-climb mesh  
high visibility orange blocks  
steadfast strut  
anti-tamper coupler  
fully tested and certificated  
health and safety compliant (HSG 151)



1. Front stabiliser
2. High visibility footblocks
3. Round top panel
4. Steadfast strut
5. Anti-tamper coupler
6. Optional steadfast safety strips
7. Anti-climb round top panel with steadfast struts to increase stability

Our latest solution for securing site perimeters and protecting the public has been phenomenally successful since its launch, and offers the ultimate market leading temporary fencing system.

ROUND TOP PANELS WITH ANTI-CRIMB MESH



## Appendix 5: Example of Protective Fencing Signage



(Lockhart Garratt is able to provide useable, weather-proof copies of this sign if required, for attaching to the protective fencing. If required, please contact us for further details).



## Appendix 6: Permanent Ground Protection



# Cellweb<sup>®</sup>TRP

## Why protect trees?

*Trees provide a wealth of benefits within the urban environment including cleaning the air, prevention of flooding and moderation of the climate.*

*As a result, within the UK it is an offence to cut down, lop, uproot, top, wilfully damage or destroy a protected tree without authorisation. Fines, if the defendant is found guilty in a Crown Court, are unlimited.*

*To minimise the environmental impact and avoid legal proceedings, we offer the independently tested Cellweb<sup>®</sup>TRP system.*



## What is Cellweb<sup>®</sup>TRP?

*Cellweb<sup>®</sup>TRP is a cellular confinement system specifically designed for tree root protection. The system creates a stable, load-bearing surface for traffic or footfall whilst eliminating damage to roots through compaction and desiccation.*

The Cellweb<sup>®</sup>TRP system comprises of three specific elements, Cellweb<sup>®</sup>TRP, Treetex<sup>™</sup> pollution control geotextile and an infill of clean angular stone. The system has been designed to create an unparalleled solution to tree root protection applications.

Cellweb<sup>®</sup>TRP is a no-dig solution that ensures that the load placed upon it is laterally dissipated rather than transferred to the soil and roots below. The use of Treetex<sup>™</sup> pollution control geotextile allows for drainage and separation whilst preventing contaminants from reaching the roots.

The walls of the cells are perforated and when combined with the infill of clean angular stone, enables free movement of water and oxygen, ensuring that supplies to the tree roots are maintained.



**Geosynthetics**  
Engineered Solutions

**“Creating Innovative Solutions with Outstanding Products”**





## What makes Cellweb®TRP different?

*With over 15 years of captured data and thousands of installations, the Cellweb®TRP system has developed a reputation for excellence.*

We are so confident in our system, we offer a guarantee that covers the replacement of the trees and of the system itself. With Cellweb®TRP being quick to install and having a 100% success rate it is clear to see why the Cellweb®TRP is regularly specified by tree officers and arboriculturalists across the country.

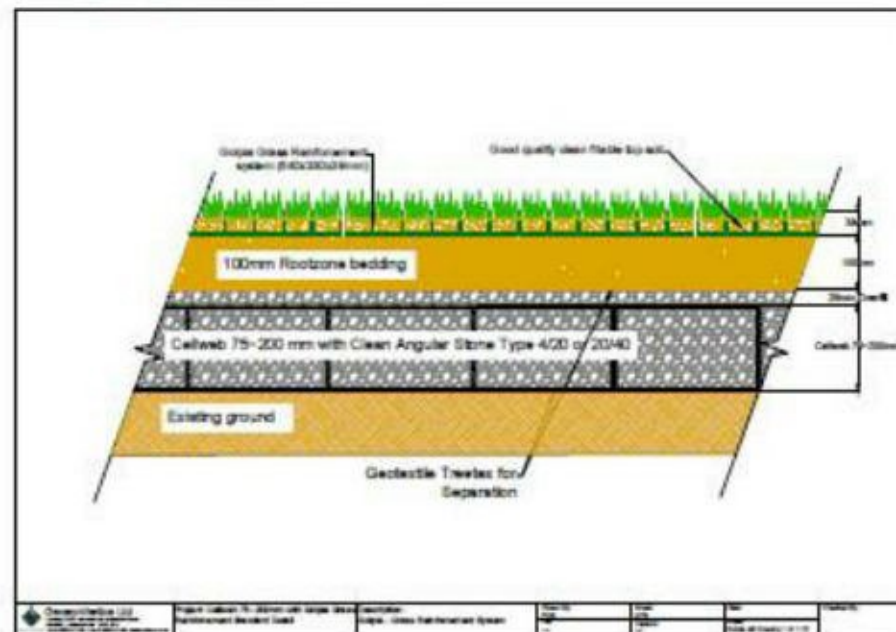
## From the drawing board to installation, we are here to help.

We have been supplying the Cellweb®TRP system since 1998 and our technical team have vast experience with tree root protection and the associated legislation.

Delivering complete peace of mind to customers is our number one priority. As part of this customer care package we offer free on site consultations, technical recommendations and on site installation guidance on all projects.

Our in-house engineering team provide site specific recommendations to ensure the solution used is cost effective and environmentally sound.

*For more information on Cellweb®TRP or Geosynthetics Limited please contact our sales office on 01455 617139 or visit [www.geosyn.co.uk](http://www.geosyn.co.uk).*



Geosynthetics Limited | Fleming Road | Harrowbrook Ind Est | Hinckley | Leicestershire | LE10 3DU  
[sales@geosyn.co.uk](mailto:sales@geosyn.co.uk) | Tel: 01455 617 139 | Fax: 01455 617 140 | [www.geosyn.co.uk](http://www.geosyn.co.uk)



## Appendix 7: Example Methodology for Construction of Surface

(This document has been produced by Geosynthetics Ltd for the installation of the Cellweb Tree Root Protection System – it does not apply to other products which may serve a similar purpose).



When considering damage to tree roots, in applications of vehicular access and parking, the risk of oxygen depletion caused by compaction of subsoil's, site clearance damaging the root source and type of reinforcement are areas which need to be given due consideration.

Other risk factors are:

Creating an impermeable surface	
Causing a rise in the water table due to construction	
Increasing ground level	
Contamination of subsoil's	
1. Compaction	
When looking at site conditions and use, the following information should be considered to enable a load bearing structure capable of supporting traffic to be proposed:	
Californian Bearing ratio (CBR) – Standard test method for measuring soil strength	
Soil types	
Water table	
Maximum load (vehicles)	
Acceptable rut depth	



Reinforcement type	Cellweb Cellular Confinement 150mm deep
Type and Depth of engineered infill material	Clean, angular. Usually 40mm to 20mm.
2. Dig (site strip)	
Site stripping does damage some root structure prior to construction; however, the use of no-dig construction elevates the access road requiring edge protection.	
3. No dig	
3.1. Remove surface vegetation	Use a suitable herbicide suitable for the specific vegetation and not harmful to the tree root system
3.2. Place geotextile separation filtration layer	Use a Treetex T300 non-woven Geotextile over the prepared sub-grade. Overlap dry joints by 300mm.
	The three dimensional cell structure, is formed by ultrasonically welding polyethylene (perforated) strips / panels together to create a three dimensional network of interconnecting cells. A high degree of frictional interaction is developed between infill and the cell wall, increasing the stiffness of the system
3.4. Edge restraint	A treated timber edging is usually acceptable.

#### 4. Cellular Confinement and Backfill Material.

Expand the Cellweb 2.56m wide panels to the full 8.1 metre length. Pin the Cellweb panels with staking pins to anchor open the cells and staple adjacent panels together to create a continuous mattress. Infill the Cellweb with a no fines angular granular fill (typically 4-20mm) within each open cell. The use of cellular confinement reduces the bearing pressure on the subsoil by stabilising aggregate surfaces against rutting under wheel loads. Comparisons between cellular confinement and traditional aggregate and geogrid-reinforced structures demonstrate a 50% reduction in construction thickness of the granular material.



#### 5. Surfacing Options

##### Block Paving:

- 5.1. Lay second layer of Treetex T300 Geotextile separation fabric over the infilled Cellweb sections
- 5.2. Lay sharp sand bedding layer compacted with a vibro compaction plate to recommended depth.
- 5.3. Place block pavers as per manufacturers instructions.

##### Tarmac:

Place 25mm surcharge of the granular material above the Cellweb system and lay the bitumen base and wearing courses.

##### Loose Gravel:

- 5.4. Ensure Cellweb is completely filled.
- 5.5. Place decorative aggregate to required depth

NOTE: A treated timber edge should be provided to restrict gravel movement.



Grass Blocks:

5.6. Place second layer of Treetex T300 Geotextile separation fabric over the infilled Cellweb sections

5.7. Place 50/50 rootzone bedding layer to the required depth

5.8. Lay recycled Duo Block 500 Grass Protection System infilled with 50/50 rootzone mix.

5.9. Seed as per architects instructions.

(Alternatively the Grass Blocks may be infilled with gravel.)

Concrete Slab

6.0 Lay Cellweb as previous and place second layer of Treetex Geotextile directly over the filled panels.  
Pour concrete base as specified.

If you have any queries about installation please contact Geosynthetics Ltd on 01455 617139.

## Appendix 8: Temporary Ground Protection Measures



**Traction Surface:** Double-traction tread design includes two parallel traction treads positioned at 90 degrees to adjacent double traction tread sets.

**Module Size:** **Length:** 8' / 2.44 m  
**Width:** 4' / 1.22 m  
**Module Size:** 32 sq/ft / 2.973 sq/meters  
**Thickness:** 1/2" thick mat + 3/8" cleat

**Module Weight:** 86 lbs. / 39.01 kg.  
**Per Square Foot:** 2.69 lbs. / 43 oz. / 1.22 kg. / 1219 grams  
**Per Square Meter:** 28.60 lbs. / 12.97 kg.

**Colors:** Black, White.  
 Custom colors available (minimum order required).

**Material:** Black High-Density Polyethylene (HDPE) post-industrial recycled plastic, naturally UV resistant due to the carbon black used for color. White mats available.

Test Results:	ASTM	Units	Typical Values
<b>Melt Index</b>	D 1238	g/10min	4.9
<b>Density</b>	D 792	g/cm <sup>3</sup>	.960
<b>Tensile Strength</b> @ Yield 50mm/min	D 638	mpa (psi)	30 (4,350)
<b>Elongation @ Break</b> 50mm/min	D 638	%	1 500
<b>Flexural Modulus</b>	D 790	mpa (psi)	1 240 (180,000)
<b>Hardness, Shore D</b>	D 2240	--	70
<b>Compressive Strength:</b>		D695-02a	psi 2,843
<b>Flammability Resistance:</b>	UL-94 HB		Passed

**Tread Pattern:** **DD1:** Rugged double-traction tread on both sides

**Support Structure:** Matting incorporates multi-directional structural support (cleat design) allowing for distribution or dispersion of PSI weight factors. Not intended for bridging.

**Weight Loading:** Varies, depending on sub-surface, up to 80 tons capacity.

**Ground Surface:** DuraDeck mats are designed to be used with no ground preparation over grass, gravel, soil, concrete, asphalt, mud and sandy soil conditions.

**Connection System:** DuraDeck mats have eight holes: one in each corner and four in the center line (two on each 8ft side) to create multi-directional roadways of nearly any size or shape. Mats can be connected using metal DuraLink connectors. DuraLinks do not require tools to install.

**Shipping:** Pallet maximum is 50 units (4' x 8')  
 20' Ocean Container: 250 – 4' x 8' unit order and/or equal to 29,240 lbs.  
 40' Ocean Container: 500 – 4' x 8' unit order and/or equal to 43,000 lbs.

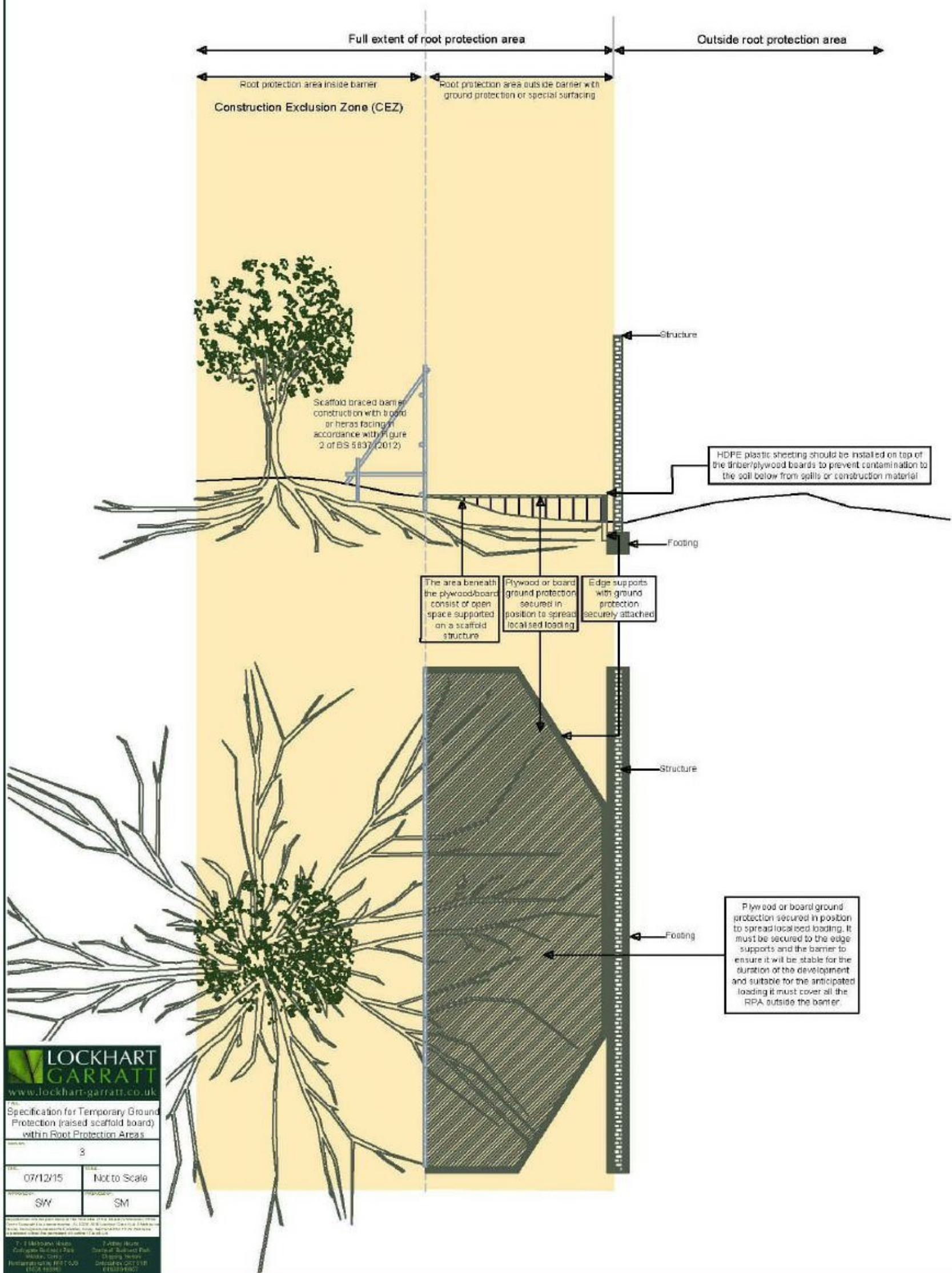
**Warranty:** 7 years against cracking and breaking under normal use.



Signature Systems Group, LLC  
 18 N. J. 677 Road • 10th Floor  
 New York, NY 10017  
 Tel: Fax: 800-864-1313 • 212-863-1114 • Fax: 212-863-1117  
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**Illustrative** specification for ground protection in root protection areas using woodchips as a compressible layer beneath the ground protection surface.  
**Note:** The final design must be site specific and detailed by an engineer.



**LOCKHART  
GARRATT**  
 www.lockhart-garratt.co.uk

Specification for Temporary Ground Protection (raised scaffold board) within Root Protection Areas

3

07/12/15	Not to Scale
SW	SM

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7, Lillington Road Colgate Bedfordshire MK43 7JF Tel: 01462 752222 Fax: 01462 752223	7, Lillington Road Colgate Bedfordshire MK43 7JF Tel: 01462 752222 Fax: 01462 752223
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## **Appendix 9: Site Guidance for working in the RPA**

### **a) What is the purpose of this guidance?**

This guidance sets out the general principle that must be followed when working in the RPA. Where more detail is required, it will be supplemented by illustrative specifications in other appendices to this document. Before work starts on site, the purpose of this guidance is to demonstrate to the LPA that tree protection issues have been properly considered and to provide a written record of how they will be implemented.

Once the site work has started, this guidance is specifically for the site personnel to help them understand what has been agreed and explain what is required to fully meet their obligations to protect trees. All personnel working in the RPA must be properly briefed about their responsibilities towards important trees based on this guidance.

### **b) What are the RPAs?**

RPAs are the areas surrounding important trees where disturbance must be minimised if they are to be successfully retained. All RPAs close to the construction area are identified on the Tree Protection Plan attached to this report. Damage to roots re degradation of the soil through compaction and/or excavation within the RPA will damage the tree. Any work operations within the RPA must be carried out with great care if trees are to be successfully retained.

### **c) When should this guidance be followed?**

Anyone entering a RPA must follow this guidance if the trees are to be retained unharmed. Anyone working in a RPA must take care to minimise excavation into existing soil levels and limit any fill or covering that may affect soil permeability. There are two main scenarios where this guidance must be followed when entering and working within a RPA:

- i. Removal of existing surfaces/structures and replacement with new surfaces, structures or landscaping.
- ii. Preparation and installation of new surfacing structures and/or landscaping.

### **d) Where does this guidance apply?**

This guidance should always be read in conjunction with the site plans illustrating the areas where specific precautions are necessary. Each area where precautions are required is annotated on the plans as identified on their keys. All plans are illustrative and are intended to be interpreted in the context of the site conditions when the work commences. All protective measures should be installed according to the prevailing site conditions and agreed as satisfactory by the appropriate supervising officer before any demolition or construction works commence.

### **e) What references is this guidance based on?**

This guidance is based in the assumption that the minimum general standards for development issues are those set out in BS5837 (2012): Trees in relation to design, demolition and construction – Recommendations, and the NJUG Vol.4 Issue 1: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees.



**f) Preventing adverse impact to the RPA beyond the immediate work area**

Any part of the RPA beyond the agreed work area must be isolated from the work operations by protective barriers or ground protection to at least the minimum standard described in BS5837 for the duration of the work.

**g) Excavation and dealing with roots**

All excavation must be carried out carefully using spades, forks and trowels, taking care not to damage the bark and wood of any roots. Specialist tools for removing soil around roots using compressed air may be an appropriate alternative to hand digging, if available. All soil removal must be undertaken with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of small roots, including fibrous roots, should be retained if they can be displaced temporarily or permanently beyond the excavation without damage.

If digging by hand, a fork should be used to loosen the soil and help locate any substantial roots. Once the roots have been located the trowel should be used to clear the soil away from them without damaging the bark. Exposed roots that are to be removed should be cut cleanly with a sharp saw or secateurs 10-20cm behind the final face of the excavation.

Roots temporarily exposed must be protected from direct sunlight, drying out and extreme temperatures by appropriate covering. Roots 2.5-10cm in diameter should only be cut in exceptional circumstances. Roots greater than 10cm in diameter should only be cut after consultation with the appropriate supervisory officer.

**h) Arboricultural supervision**

Any work within the RPA requires a high level of care. Qualified arboricultural supervision is essential to minimise the risk of misunderstanding and misinterpretation. Site personnel must be properly briefed before any works commence.

Ongoing work must be inspected regularly, and on completion, the work must be signed off by the arboriculturist to confirm compliance by the contractor. In the context of this guidance, an appropriate supervising officer would be an arboriculturist.

**Installation of new surfaces in RPAs**

**a) Basic Principles**

New surfacing is potentially damaging to trees because it may require changes to existing ground levels. This can result in damage to the soil structure affect the efficient exchange of water and gases in and out of the soil. Mature and over mature trees are much more likely to suffer as a result of these changes. These impacts can be minimised by reducing the extent of changes within the RPA. The most suitable surface will be one that is permeable (allowing the movement of water and gas), load bearing (to avoid compaction) and requires little or no excavation (to limit root damage). The actual specification is an engineering issue that needs to be addressed by a suitably qualified professional, and is beyond the scope of this report.



**b) Establish the depth of excavation and surface gradient**

The precise location and depth of roots within the soil is unpredictable and can only be established once digging has commenced. Ideally, all RPAs should be no-dig, but this is often not possible on undulating surfaces. New surfacing normally requires an evenly graded sub-base layer, which can be made up to high points with granular, permeable fills such as crushed stone or sharp sand. This sub-base must not be compacted. Some limited excavation may be required to achieve this, and this is not necessarily damaging to trees if it is done carefully and no large roots are cut. The top 5mm of soil on grass surfaces is unlikely to contain any tree roots and therefore the removal of this will not impact the tree. It may be possible to dig deeper than this depending on local conditions, but this would need to be assessed by the retained ACoW.

On undulating surfaces, finished gradients/levels must be planned with sufficient flexibility so as to allow changes to occur if the excavation of high points reveals unexpected large roots. If roots are less than 25mm in diameter, it would normally be acceptable to cut these. However, for roots over 25mm diameter, cutting them may cause damage to the tree and further excavation may not be possible. In this case, the surrounding levels must be adjusted to take account of these high points, by filling with suitable material. If this is not possible and it is necessary to cut larger roots, discussions should be held with the retained ACoW before any final decision is made.

**c) Base and finish layer**

Once the sub-base layer is finished, the load-spreading surface is installed on top, without compaction. Generally, the load-spreading surface will normally be cellular and filled with crushed stone – care must be taken as different products produce different results, and the detail must be confirmed prior to installation. Suitable finishes included washed gravel, permeable tarmac or permeable block paving. For lightly loaded surfaces such as pedestrian footpaths, preformed concrete slabs may be appropriate if the sub base is prepared as detailed above.

**d) Edge Retention**

Conventional kerb retention set in concrete trenches is likely to cause damage to the roots and should be avoided. Effective edge retention within the RPA must be custom designed to avoid significant excavation in to existing soil surfaces. Generally, the use of pre-formed edging secured by metal pins or wooden pegs will be sufficient to ensure minimal impact on the trees.

**e) Installing new surfacing on top of existing surfacing**

It may be possible/preferable in some instances to use existing surfaces as the base for a new surface. This will not normally result in any significant excavation that could damage the roots, so no special precautions are required. However, if large roots appear above the existing surface, then the precautions and procedures detailed above must be followed.



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## DIGITAL MAPPING & GRAPHIC DESIGN

DIGITAL REPRESENTATION AND GIS ANALYSIS | GRAPHIC DESIGN

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& HABITAT DESIGN | SOIL SURVEY & ADVICE | RESTORATION & AFTERCARE MANAGEMENT PLAN (RAMP) | IMPLEMENTATION  
MANAGEMENT & CLERK OF WORKS



<b>Client:</b>	Best Asset Ltd			<b>Reference:</b>	20-5227
<b>Site:</b>	Rectory Farm Buildings	<b>Surveyor(s):</b>	Freddy McCreery FdSc Arb, MA ArborA		
				<b>Date of survey:</b>	10 <sup>th</sup> March 2021
<b>Key to Notations</b>					
	<b>Age Class</b>		<b>Definition</b>	<b>Category Grading</b>	<b>ERC</b>
<b>Stem Dia:</b>	Stem diameter (mm) at 1.5m above ground level	Y	Young	Trees that have not yet reached 1/3 of their expected mature height	40+
<b>C.C.</b>	Height of crown clearance above ground level	EM	Early Mature	The stage in the life cycle of a tree between youth and maturity	20+
<b>L.B.</b>	Lowest branch height in meters	M	Mature	Close to full height and crown size	10+
<b>D.L.B.</b>	Direction of Lowest Branch	OM	Over Mature	Close to full height and crown size while main-stem diameter increases more slowly	<10
<b>E.R.C.</b>	Estimated Remaining Contribution (in years)	V	Veteran	A tree that has survived the rigours of life and shows signs of ancientness	Unsuitable for retention
<b>Physiological condition (PC)</b>	Good - No significant health problems	Fair - Symptoms of health that can be remediated	Poor - Significant ill health		
<b>Structural condition (SC)</b>	Good - No significant defects	Fair - Significant defects that can be remediated	Poor - Significant defects with no remedy	<b>NOTES:</b>	If a tree is designated as veteran, the RPA calculation is determined as 15x the stem diameter for greater protection

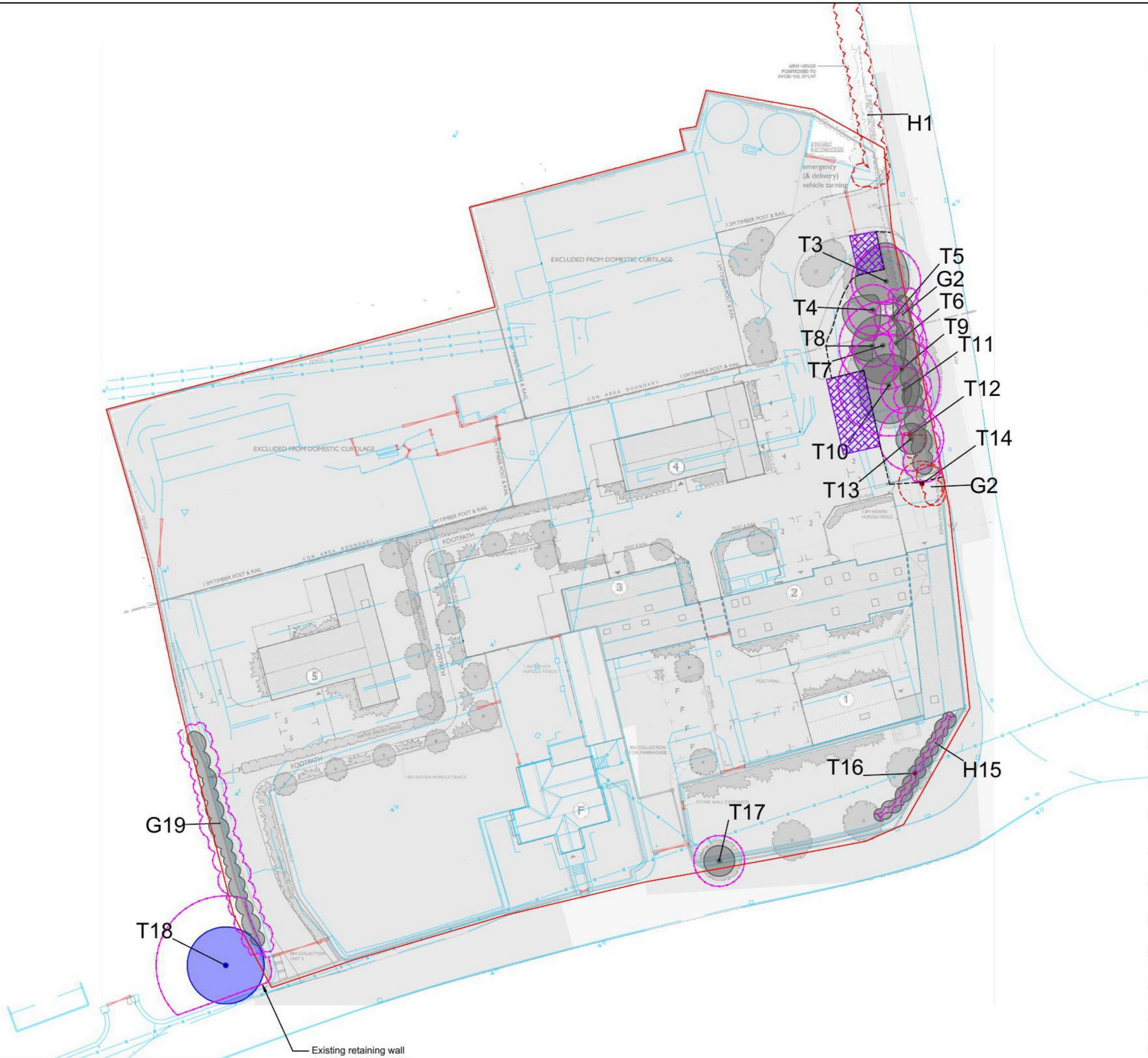
Tree No.	Species	H (m)	Stem Dia.	No of Stems	Canopy (m)	CC (m)	LB (m)	DLB (m)	Age	Condition	Observations	Recommendations	ERC	Cat.	Sub Cat	RPA (m2)	RPA Radial distance (m)
H1	Blackthorn (Prunus spinosa)	2	80	200	N - 1 E - 1 S - 1 W - 1	0	0	N	Mature	PC - Good SC - Good	Well maintained blackthorn hedgerow.	No action required.	10+	C	2	3	0.90
G2	Western Red Cedar (Thuja plicata)	10	300	11	N - 2 E - 2 S - 2 W - 2	0	0	N	Early Mature	PC - Good SC - Good	Linear group of 11 western red cedar trees.	No action required.	10+	C	2	41	3.60
T3	Sycamore (Acer pseudoplatanus)	8	370	1	N - 5 E - 3 S - 3 W - 4	2	1.5	N	Early Mature	PC - Good SC - Fair	Stem branches into five at 1.5m.	No action required.	10+	C	2	64	4.50
T4	Ash, Common (Fraxinus excelsior)	10	270	1	N - 2 E - 1 S - 4 W - 4	3	3	S	Semi Mature	PC - Good SC - Fair	Stem branches into two at 2m. Asymmetric crown due to suppression from adjacent trees.	No action required.	10+	C	2	34	3.30
T5	Pine (Pinus sp.)	6	210	1	N - 3 E - 0 S - 0 W - 0	4	4	N	Young	PC - Fair SC - Fair	Asymmetric crown due to suppression from adjacent trees.	No action required.	10+	C	2	18	2.40
T6	Pine (Pinus sp.)	8	260	1	N - 3 E - 0 S - 0 W - 0	4	4	N	Young	PC - Fair SC - Fair	Asymmetric crown due to suppression from adjacent trees.	No action required.	10+	C	2	28	3.00
T7	Sycamore (Acer pseudoplatanus)	10	470	1	N - 4 E - 3 S - 5 W - 4	2	2.5	N	Early Mature	PC - Good SC - Fair	Not plotted on topographical survey, location indicative. Stem branches into two at 2m.	No action required.	10+	C	2	102	5.70
T8	Pine (Pinus sp.)	8	230	1	N - 0 E - 0 S - 2 W - 3	2	3	W	Semi Mature	PC - Good SC - Fair	Asymmetric crown due to suppression from adjacent trees.	No action required.	10+	C	2	23	2.70
T9	Pine (Pinus sp.)	8	220	1	N - 1 E - 0 S - 0 W - 0	0	0	N	Dead	PC - Dead SC - Poor	Standing dead tree.	Remove to ground level.	Dead	U	U	23	2.70
T10	Sycamore (Acer pseudoplatanus)	10	561	2	N - 4 E - 4 S - 5 W - 4	2.5	2.5	S	Early Mature	PC - Good SC - Fair	Stem branches into two at 0.5m.	Crown raise southern crown to 5m to facilitate demolition of outbuilding.	10+	C	2	137	6.60
T11	Pine (Pinus sp.)	10	250	1	N - 1 E - 1 S - 2 W - 0	4	4	SE	Semi Mature	PC - Fair SC - Good	Asymmetric crown due to suppression from adjacent trees.	No action required.	10+	C	2	28	3.00
T12	Pine (Pinus sp.)	5	290	1	N - 0 E - 2 S - 3 W - 1	4	4	S	Semi Mature	PC - Good SC - Fair	Previously lost crown at 4m. Asymmetric crown due to suppression from adjacent trees. Majority of crown over and touching outbuilding.	May require removal to facilitate demolition of outbuilding.	10+	C	2	41	3.60
T13	Pine (Pinus sp.)	8	340	1	N - 2 E - 2 S - 2 W - 2	3.5	3.5	S	Semi Mature	PC - Good SC - Good	Branches touching outbuilding.	Crown raise to southern crown to 5m to facilitate demolition of outbuilding.	10+	C	2	55	4.20
T14	Western Red Cedar (Thuja plicata)	10	530	1	N - 3 E - 3 S - 3 W - 3	0	0	S	Early Mature	PC - Good SC - Good	Not plotted on topographical survey, location indicative. Good form and condition.	No action required.	10+	C	2	125	6.30
H15	Honeysuckle, Shrubby (Lonicera nitida)	2	50	100	N - 1 E - 1 S - 1 W - 1	0	0	S	Mature	PC - Good SC - Good	Unmanaged shrubby honeysuckle hedgerow.	No action required.	10+	C	2	1	0.60
T16	Laburnum (Laburnum sp.)	5	313	3	N - 3 E - 3 S - 3 W - 2	3	2	N	Over Mature	PC - Fair SC - Poor	Stem branches into three at 0.5m. Previous major branch failure at 0.5m. Evidence of decay within stem.	Remove to ground level.	<10	U	U	48	3.90
T17	Apple (Malus sp.)	5	280	1	N - 2 E - 2 S - 2 W - 2	2	2	N	Early Mature	PC - Good SC - Fair	Stem branches into two at 2m. Growing against outside of boundary wall.	May require removal to prevent damage to boundary wall.	10+	C	2	34	3.30











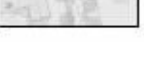


Key to Notations																													
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<b>Physiological condition (PC)</b>	<b>Good</b> - No significant health problems	<b>Fair</b> - Symptoms of health that can be remediated	<b>Poor</b> - Significant ill health																										
<b>Structural condition (SC)</b>	<b>Good</b> - No significant defects	<b>Fair</b> - Significant defects that can be remediated	<b>Poor</b> - Significant defects with no remedy																										
<b>Category Grading</b> <table border="1"> <thead> <tr> <th>Category</th> <th>Quality &amp; Value</th> <th>ERC</th> <th>Sub category</th> </tr> </thead> <tbody> <tr> <td><b>A</b></td> <td>High Quality &amp; Value</td> <td>40+</td> <td><b>1 - Mainly Arboricultural</b></td> </tr> <tr> <td><b>B</b></td> <td>Moderate Quality &amp; Value</td> <td>20+</td> <td><b>2 - Mainly Landscape</b></td> </tr> <tr> <td><b>C</b></td> <td>Low Quality &amp; Value</td> <td>10+</td> <td><b>3 - Mainly Cultural</b></td> </tr> <tr> <td><b>U</b></td> <td>Unsuitable for retention</td> <td>&lt;10</td> <td></td> </tr> </tbody> </table>										Category	Quality & Value	ERC	Sub category	<b>A</b>	High Quality & Value	40+	<b>1 - Mainly Arboricultural</b>	<b>B</b>	Moderate Quality & Value	20+	<b>2 - Mainly Landscape</b>	<b>C</b>	Low Quality & Value	10+	<b>3 - Mainly Cultural</b>	<b>U</b>	Unsuitable for retention	<10	
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<b>NOTES:</b> If a tree is designated as veteran, the RPA calculation is determined as 15x the stem diameter for greater protection																													

Tree No.	Species	H (m)	Stem Dia.	No of Stems	Canopy (m)	CC (m)	LB (m)	DLB (m)	Age	Condition	Observations	Recommendations	ERC	Cat.	Sub Cat	RPA (m2)	RPA Radial distance (m)
T18	Walnut (Juglans sp.)	12	600	1	N - 5 E - 5 S - 5 W - 5	2	3	E	Mature	PC - Good SC - Good	Not plotted on topographical survey, location indicative. Off-site tree, access restricted, measurements estimated. Tree on soil at higher level to development site. Good form and condition.	No action required.	10+	B	1	163	7.20
G19	Mixed Species (Mixed species)	8	250	10	N - 2 E - 2 S - 2 W - 2	0	0	N	Early Mature	PC - Good SC - Good	Mixed linear group of leyland cypress, blackthorn and hawthorn straddling boundary wall.	No action required.	10+	C	2	28	3.00





- Legend:**
-  Site Boundary
  -  Category A Trees (Stem and Canopy Spread)
  -  Category B Trees (Stem and Canopy Spread)
  -  Category C Trees (Stem and Canopy Spread)
  -  Category U Trees (Stem and Canopy Spread)
  -  Root Protection Area
  -  Trees to be Removed
  -  Tree Protection Fencing
  -  Permanent Ground Protection
  -  Existing Layout
  -  Proposed Layout



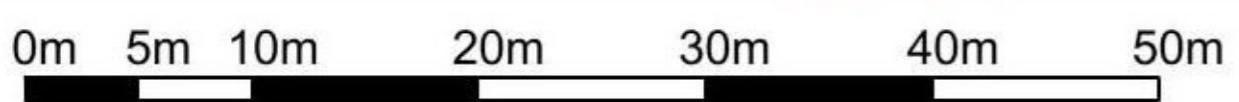
TITLE: Tree Protection Plan	
LAYOUT: Overview	
PROJECT/SITE: Rectory Farm Buildings	
CLIENT: Best Asset Ltd	
MAP REF: 20-5228	
REVISION: v1	
DATE: 24/03/2021	SCALE: 1:500@A3
APPROVED BY: FM	PRODUCED BY: AN

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Existing retaining wall to act as tree protection