Winvic

2020/0999

Parkside - Hoyland

Arboricultural Method Statement

August 2021

FPCR Environment and Design Ltd
Registered Office: Lockington Hall, Lockington, Derby DE74 2RH
Company No. 07128076. [T] 01509 672772 [F] 01509 674565 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk

This report is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without the written consent of FPCR Environment and Design Ltd. Ordnance Survey material is used with permission of The Controller of HMSO, Crown copyright 100018896.

Rev	Issue Status	Prepared / Date	Approved/Date
-	Final	AZS / 14.07.21	HR / 29.07.21
A	Final	AZS / 04.08.21	HR / 04.08.21

CONTENTS

1.0 INTRODUCTION 2

2.0 CONDITION REQUIREMENTS 4

3.0 TREE PROTECTION METHODOLOGY 5

4.0 ARBORICULTURAL MONITORING AND TREE MANAGEMENT 11

5.0 CONCLUSIONS 12

TABLES

Table 1: Condition Requirements and Evidence of Action

Table 2: Timelines of Tree Protection for Construction Works

PLANS

Tree Protection Plan (Drawing no. 9295-TPP-10)

APPENDICES

Appendix A: Tree Schedule

Appendix B: Protective Fencing Signage

Appendix C1: Tree Contractor - Tree Work Methodology

Appendix C2: Fencing Contractor – Working Methodology

Appendix D: What you need to know about working near trees

1.0 INTRODUCTION

1.1 This Arboricultural Method Statement (AMS) has been prepared by FPCR Environment and Design Limited on behalf of Winvic to provide the methods of protection and pruning requirements for retained trees located at the Sheffield Road, Hoyland, Barnsley (hereafter referred to as 'the site').

1.2 This AMS outlines the methodology by which construction will be undertaken in order to safeguard trees in a satisfactory condition during the construction of the approved Earthworks to create plateaus for the creation of football pitches and an archery range and associated changing facilities, vehicular access, car parking, drainage works and boundary treatments. This method statement sets out a definitive account for the treatment of retained trees during construction and specifies industry approved construction methods.

1.3 The detail and requirements of this Method Statement comprise commitments to complete the construction phase of the development in a specific manner and will inform the production of all relevant tender documents and instructions to contractors.

1.4 **Failure to adhere to the correct sequence, manner and timing of operations detailed in this Method Statement may result in irremediable damage to trees or disturbance to retained tree cover. Retained trees are protected by planning law and reckless damage or tree removal could result in the serving of a stop notice or prosecution by the Local Planning Authority.**

Planning Consent

1.5 Planning consent for Earthworks to create plateaus for the creation of football pitches and an archery range and associated changing facilities, vehicular access, car parking, drainage works and boundary treatments was granted by Barnsley Metropolitan Borough Council (Planning Reference 2020/0999) on 15th September 2020.

1.6 This AMS has provided details to discharge Condition 4 of the outline planning consent granted as detailed below.

Condition 4:

'No development or other operations being undertaken on site shall take place until the following documents in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction - Recommendations have been submitted to and approved in writing by the Local Planning Authority: Tree protective barrier details Tree protection plan Arboricultural method statement'

Reason: To ensure the continued wellbeing of the trees in the interests of the amenity of the locality.

1.7 This AMS sets out the methodology for all proposed works that affect trees on the site. Compliance with this AMS, once approved by the Local Planning Authorities (LPA) Arboricultural Officer, will be a requirement of all relevant contractors associated with the development proposals.

Overview of Trees on Site

1.8 A total of eleven individual trees, nine groups of trees and five hedgerows were surveyed as part of the Arboricultural Assessment, some of which were considered to be off-site. All detailed information on individual trees, groups and hedgerows can be found in Appendix A – Tree Schedule and identified on the Tree Survey Plan provided as part of the Arboricultural Assessment / AMS (drawing no. 9295-T-10).

1.9 Located to the south east of Hoyland common, the site which lies off Sheffield Road consists of two field parcels. At the time of the assessment the northern most field parcel was being used as common ground with the southern field parcel being used as arable farmland. Due to the land use the trees and hedgerows were situated either on the boundaries of the fields or off-site within the gardens of neighboring properties. Trees were considered to be moderate to low quality predominantly due to their positions either within the boundary hedgerows or adjacent to fences.

Statutory Constraints

1.10 Local authorities reserve the right to create Tree Preservation Orders (TPO) in order to protect specific trees and woodlands in the interests of preserving the amenity value of a particular site or location. A TPO prohibits cutting down, topping, lopping uprooting or willful damage caused to trees covered by the TPO and such actions, if carried out without the prior written consent of the acting LPA, may be prosecuted and incur an unlimited fine.

1.11 No direct consultation with the Local Planning Authority has taken place, however, it is understood having used the online search facility on the website for the Local Planning Authority, Barnsley Metropolitan Borough Council that there are no Tree Preservation Orders and Conservation Areas that would apply to any trees present on, or in close proximity to the assessment site and therefore no statutory constraints would apply to the development in respect of trees. Before any tree works are undertaken confirmation of the online information should be sought from the Local Authority.

Limitations

1.12 The Method Statement is concerned solely with arboricultural issues related to the site referenced only.

1.13 Any changes in ground level, or excavations near to tree roots not detailed within this AMS has the potential of adversely affecting the stability and physical condition of the retained trees and as such further examinations would be required.

1.14 The timescales for the construction program are not absolute. The timescales set out in this AMS are based on all supplied preliminary information available at the time of writing and is subject to change. A such the processes set out in the AMS may need to be reviewed and amended to suit as required.

2.0 CONDITION REQUIREMENTS

Specific Condition Requirements

2.1 To satisfy planning Condition 4 the following table provides a summary of the specific requirements of the AMS and how evidence of its action shall be provided.

Table 1: Condition Requirements and Evidence of Action

Condition Reference	Evidence of Action
Condition 4 Updated Tree Schedule, Tree Survey Plans and Retention Plans	A tabulated Tree Schedule has been provided as Appendix A of this AMS and details species; height; canopy spread; stem diameter; age class and overall condition / health. This has been used to formulate positioning of fencing and to assess the need for any facilitation pruning. An updated Tree Survey and Retention plan/s have been provided in the Impact Assessment which has been supplied alongside this AMS.
Condition 4 Tree Protection details in the form of a Tree Protection Plan (TPP)	A series of Tree Protection Plans have been produced and accompany the AMS. The plans show: • Trees to be retained (green) • Tree Groups to be retained (green stripe hatch) • Hedgerow to be retained (solid green line) • Hedgerow to be removed (solid red line) • Trees and Tree Groups to be removed to facilitate the development (red criss-cross hatch) • Extent of calculated Root Protection Areas (blue circle) • Overlaid development proposals for reference • The position of Temporary Tree Protection fencing (orange line) • The position of Primary / Fixed Tree Protection fencing (pink line) • Measurements and Annotations for ease of interpretation (pink text) The Tree Protection Plans have been annotated for ease of interpretation.
Condition 4 Tree protection prior to / during construction as indicated on TPP	Specific Tree Protection Plans produced for the Demolition works (drwg.no. 9295-TPP-10). Tree Protection erected to specification – dimensions shown on plans and specification shown in Appendix C2. Protective Fencing Signage (Appendix B) to be firmly affixed to fencing. Arboricultural supervision shall be conducted for demolition works within RPA of retained trees – as indicated on the Tree Protection Plans. Pre-commencement site meeting, tool box talks, periodic site supervision and reporting shall be carried out to ensure compliance.

Condition Reference	Evidence of Action
Condition 4 *'Arboricultural Method Statement and Tree Protection Plan assessing any impacts that arise and demonstrating that any retained trees can be protected'*	Site supervision requirements provided. This shall also include supervision of all works within the RPA's of retained trees. Task Specific Arboricultural Method Statements (Appendices C) have been provided for each of the relevant stages of the development. These are provided in the form of 'pull out' sheets to be shared with each of the relevant contractors. These 'pull out sheets are to be kept on file in the site office for reference and shared with relevant contractors as part of the site induction. The pull-out sheets are edged as per the contents page of this AMS for ease of identification.

General Condition Requirements

2.2 This AMS, the appended Task Specific Method Statements and accompanying Tree Protection Plans should be reproduced in their entirety in colour and copies should be kept on file in the site office for reference.

2.3 The relevant contractors should be provided any Task Specific Method Statements appended as part of this AMS, where relevant to their work.

2.4 The Site Manager will read this AMS. It will be the responsibility of the Site Manager to ensure its compliance throughout the construction processes.

2.5 All operations will be monitored by the Site Manager and they will be responsible for ensuring that any sub-contractors do not carry out any process or operation which is likely to impact adversely upon any retained tree or hedge.

2.6 The contractor carrying out each task specific to their work shall be responsible for ensuring the AMS is adhered to at all times, The Site Manager is to ensure there is a monitoring regime for the maintenance of tree protection adopted on site.

3.0 TREE PROTECTION METHODOLOGY

Pre-commencement Tree Work

3.1 All agreed works will need to be undertaken prior to the main construction activities commencing and so that tree protection fencing can be erected in the positions demonstrated on the Tree Protection Plans.

3.2 Appendix C1 outlines all the required pre-commencement tree work. Those trees which will be removed to facilitate the approved development layout are not detailed within the appendix.

3.3 All tree works undertaken will comply with *British Standard 3998 'Tree Work - Recommendations' (2010)* and be carried out by skilled tree surgeons preferably those approved by the Arboricultural Association (AA). The AA is the recognised authority for certification of tree work contractors. To

become an Approved Contractor a company must satisfy the Associations Professional Committee of its consistently high standard of tree work.

3.4 All vegetation and, particularly, woody vegetation proposed for clearance should be removed outside of the bird-breeding season (March - September inclusive) as all birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. Where this is not possible, vegetation should be checked for the presence of nesting birds prior to removal by an experienced ecologist.

Tree Protection Programme – Construction Phase

3.5 The key stages where tree protection are to be implemented along with the requirements for site supervision have been outlined in the following sections and within the relevant tables.

3.6 The timing of these stages may be subject to alteration in line with any future amendments of the construction program and as such, it is important to emphasise that the timeframe is designed to be flexible to accommodate these alterations whilst ensuring the protection of the trees on site.

Table 2: Timelines of Tree Protection for Construction Works

Timetable	Actions	Arboricultural Clerk of Works (ACoW) requirements	Task Specific Method Statement / Appendix reference
Pre-commencement site meeting	Pre-commencement site meeting prior to the start of construction works on site following demolition of existing buildings and removal of areas of hardstanding. Timeline of construction processes to be shared with ACoW and changes made to the AMS as required.	Site meeting / Tool box talk by ACoW (refer to Section 3.7) to ensure that the AMS has been read by the relevant person, including the Site Manager and Tree Surgeon. Site Manager to provide working Gantt Chart or Timetable of construction processes and to ensure that Tree Protection measures have been included. ACoW to check that copies of Task Specific Arboricultural Method Statements (located in Appendix C) are present.	Appendix C and AMS. Appendices C
During Pre-commencement site meeting	Temporary and Permanent Tree Protection Fencing positions to be marked out and pegged (where applicable) by the ACoW to ensure that all fencing is erected in the correct positions.	ACoW to assist with measuring out distances from trees in accordance with the Tree Protection Plans. Photos of evidence to be taken for auditing purposes.	Appendix C2 and relevant Tree Protection plans

Timetable	Actions	Arboricultural Clerk of Works (ACoW) requirements	Task Specific Method Statement / Appendix reference
Commence Earthworks			
Permanent Tree Protective Fencing installed **Dates TBC during Pre-commencement site meeting and in line with construction program)**	Check fencing has been erected.	ACoW to check that all Tree Protective Fencing has been erected and is of the required type and specification (as per Appendix C2 and as specified in Section 3.0 of the AMS). Any contingencies or action points required shall be outlined.	Appendix C2
	Supervision of Earthworks where required	Exact supervision requirements to be determined during Pre-commencement site meeting	Appendix C Tablet based Auditing App (Arboricultural Clerk of Works use only)
	Tree Protective Fencing position and suitability checked by ACoW. Compliance with AMS checked and recorded.	Record of visit to be completed by ACoW and a copy is to be handed to Site Manager and LPA upon request.	
Earthworks Completed			

Timetable	Actions	Arboricultural Clerk of Works (ACoW) requirements	Task Specific Method Statement / Appendix reference
Supervision of Construction Works for Primary Road Layout within the RPA of T5 **(Date TBC)**	Reporting and evidence of site visit. Supervision of the roads installation to be carried out where these works occur within the RPA of tree T5. The cutting of roots shall not entirely be avoidable during these works. As such any roots located / identified during these works shall be pruned back to the face of the trench as they became exposed. Roots shall be wrapped with hessian material, which is to be kept damp, until the area can be back filled with topsoil.	ACoW to be present to supervise installation of the system/s once an engineer has approved the specification. Details of supervision shall be recorded and photographic evidence shall be collected during the installation. This can be shared with the LPA upon request. Record of visit to be completed by ACoW and a copy is to be handed to Site Manager. Continuous checks that the Tree Protection Induction Record has been completed shall be made. ACoW to be present to ensure that no major / structural roots are severed or unnecessarily damaged. An assessment shall be made prior to any decision on cutting toots is made. Supervision and inspections accompanied by robust auditing.	Refer to engineer's drawings and specifications provided by the supplier Appendices C2 Tablet based Auditing App (Arboricultural Clerk of Works use only)
Construction Works Commence			
Date TBC during Pre-commencement site meeting and in line with construction program)	Periodic compliance inspections accompanied by robust auditing of visits. Tree Protective Fencing position and suitability checked by ACoW. Compliance with AMS checked and recorded.	Record of visit to be completed by ACoW and a copy is to be handed to Site Manager and LPA upon request.	Appendix C Tablet based Auditing App (Arboricultural Clerk of Works use only) Refer to relevant plans
Construction Works Completed			
Post Construction			

Timetable	Actions	Arboricultural Clerk of Works (ACoW) requirements	Task Specific Method Statement / Appendix reference
Date TBC during Pre-commencement site meeting and in line with construction program	Removal of Tree Protective Fencing	ACoW to check if all Tree Protective Fencing has been removed and in doing so no damage has occurred to retained trees and hedgerows.	
Tree Protection Program Completed			

Arboricultural Supervision

Appointment of Arboricultural Clerk of Works

3.7 The Site Manager / Project Manager will be responsible for appointing the Arboricultural Clerk of Works in advance of any operations detailed in this Method Statement and in any instance where full compliance cannot be guaranteed i.e. where construction works within areas fenced off to protect trees may be required.

FPCR Arboricultural Consultant Contact Details

FPCR Arboricultural Consultant: Aaron Shearer

Contact Email: aaron.shearer@fpcr.co.uk

Contact Number: 01509 672772

3.8 An overview of the specific involvement of the Arboricultural Clerk of Works has been provided in Table 2.

3.9 An initial site meeting prior to starting any construction works, implementing tree surgery and erection of tree protection fencing, shall be a requirement of this AMS. At the meeting the Site Manager and Arboricultural Clerk of Works will discuss the methodology and various tree protection measures to be implemented subject to approval by the LPA.

3.10 A toolbox talk will also be given to the Site Manager and any on site operatives on the day of the meeting. The purpose of this toolbox talk will be to inform the Site Manager and Operatives of how to protect all retained trees. The toolbox talk shall then be repeated by the Site Manager when new external trades / Contractors commence work on site.

3.11 The toolbox talk shall focus on informing Contractors on the following topics:

- The protection of trees is a requirement of planning approval and failure to comply could result in in stop notices being applied or fines;
- How trees can be harmed on development sites;
- How the trees on this site will be protected by tree protection fencing and ground protection;
- Discussion on particular methods of working near the trees as outlined in this Method Statement;
- How to report an issue before it becomes a problem;

3.12 Evidence of the toolbox being carried out shall be collected. This evidence can be viewed at any time by the Arboricultural Clerk of Works and shared with both the client and the LPA upon request. A periodic review shall be conducted to ensure continued compliance.

3.13 The Arboricultural Clerk of Works will periodically verify compliance with this AMS and sign-off elements of the work as various stages of the development commence. This shall be recorded using an online form which the Arboricultural Clerk of Works can share with the client and LPA.

3.14 The Arboricultural Clerk of Works will be responsible for specifying any tree work requirements and shall assist in, where required, the appointment of a suitably qualified Arboricultural Contractor to undertake the removal and pruning of trees.

Key Appointment, Supervision and Monitoring Stages of the Arboricultural Clerk of Works

3.15 The following stages of supervision shall be required:

- Pre-commencement site meeting and Tool box talk to be carried out.
- Marking trees to be removed and to be pruned with the appointed tree contractor where relevant **(pre-commencement meeting)**
- Walking the site with the Site Manager / Fencing Contractor to measure out the locations of the fencing **(pre-commencement meeting)**
- Arboricultural Clerk of Works to be present to supervise construction of Primary Road Layout within the RPA of tree T5 **(to follow pre-commencement meeting)**
- Full auditing of these visits / supervision requirements to be carried out **(ongoing)**
- Ongoing visits in accordance with Table 2 to inspect the tree protection fencing and compliance with the AMS. Any other arboricultural matters arising which are unforeseen will need to be discussed with the Arboricultural Clerk of Works during these visits to decide the most appropriate course of action.
- After each site visit a short report/record will be compiled which will be sent to the client and local authority upon request as a record of evidence.

Specific Tree Protection Measures

3.16 For each of the works required a Task Specific Method Statement has been provided outlining the action required. These Method Statements have been provided in chronological order and have been produced as ‘pull out’ sheets to be kept on record in the site office and handed to the appropriate contractors during site inductions.

3.17 The methodologies accompanying this AMS have been provided as separately titled appendices for ease of identification. These include:

- Appendix C1: Tree Contractor - Tree Work Methodology
- Appendix C2: Fencing Contractor – Working Methodology

General Tree Protection Measures

3.18 This section details non-specific precautionary measures to be applied at all times.

3.19 No trees will be removed or pruned during construction other than those detailed within this method statement. Any proposed deviation from the tree removal and retention presented in this document must be discussed with the project Arboricultural Consultant prior to implementation.

3.20 All the retained trees will need to be adequately protected during works. Measures to protect these trees should follow the best practice principles set out in *BS5837: Trees in Relation to Construction Recommendations (2012).* These have been broadly summarised below.

3.21 No Root Protection Areas will be affected by excavation works, storage of materials, plant or machine access, other than as described by this Method Statement.

3.22 Site compounds, Portakabins, Containers and other temporary buildings can in some cases be used in root protection area if prior consent is agreed by the acting local planning authority. The method for installing the buildings and an assessment of whether temporary ground protection is required is to be agreed with the project Arboriculturalist and specified prior to installation.

3.23 No materials or soils are to be stored within the Root Protection Area of the retained trees.

3.24 Oil, bitumen, cement or other material that is potentially injurious to trees will not be stacked or discharged within 10m of a tree stem. No concrete mixing will be done within 10m of a tree. Allowance will be made for the slope of ground to prevent materials running towards the tree.

3.25 Wide or tall loads etc. should not come into contact with retained trees. Banks man should supervise transit of vehicles where they are in close proximity to retained trees.

3.26 No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire.

3.27 Notice boards, telephone cables or other services will not be attached to any part of a retained tree.

3.28 If unexpected large roots (>25mm diameter) are encountered during excavation for construction works the arboricultural consultant should be contacted immediately. No exposed roots will be left uncovered. They will be covered over as soon as possible to minimise the risk of drying out and dying.

3.29 As recommended within section 8.8.3 of BS5837 Post Development Management of Existing Trees, all retained trees should be subjected to sound arboricultural management where there is public access in order to satisfy the landowner's duty of care.

Removal of Tree Protection Measures and Protective Fencing

3.30 Following the completion of all construction works and in agreement with the project arboriculturalist the tree protection fencing will be removed carefully as to avoid causing root disturbance.

4.0 ARBORICULTURAL MONITORING AND TREE MANAGEMENT

4.1 Trees will require several years to adjust to environmental changes that occur during construction. Stressed trees are more prone to health problems, such as disease and insect infestations. Despite the enforcement of the recommendations continued within this AMS and the

best intentions of the developer, including the implementation of the most stringent tree protection measures across the site, injury to trees may still occur.

5.0 CONCLUSIONS

5.1 Provided that the protection methods in this AMS are followed on site, there shall be no unnecessary or adverse Arboricultural impacts.

5.2 Subject to the finalising a precise timeline of construction works and further information being provided on all demolition and earthworks required to facilitate the development; to be confirmed during the pre-commencement site meeting, the AMS is sufficient to satisfy the requirements of the planning condition 4.



KEY

- Tree/Group to be Retained
- Hedgerow Proposed to be Retained and Incorporated into the New Development
- Root Protection Area (Shown for retained trees only)
- T1 (A) G1 (A) — Individual / Group Number and BS5837:2012 Category
- 6.0m — Line of Protective Barriers (and distance from tree or retained structure)
- 6.0m — Temporary Line of Protective Barriers (and distance from tree or retained structure)

Scale 1:1000 @ A3

0 25 50m

NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

This drawing is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without written consent of FPCR Environment and Design Ltd. FPCR Environment and Design Ltd accept no liability for third party use.

Ordnance Survey material is used with the permission of The Controller of HMSO, Crown copyright 100018896.

rev	date	description	by
-	14.07.21	First Issue	AZS

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

FPCR Environment and Design Ltd
Lockington Hall
Lockington
Derby DE74 2RH

t: 01509 672772
e: mail@fpcr.co.uk
w: www.fpcr.co.uk

client
Winvic

project
Land for Sports Facilities
Hoyland

drawing title
TREE PROTECTION PLAN

scale	drawn/checked	date
1:1000 @ A3	AZS / HR	July 2021

drawing number
9295-TPP-10 -

rev

CAD file: K:\9200\9295\ARB\Sperate Application for Sports Facilities\AMS\Plans\Tree Retention Plan.dwg

Appendix A - Tree Schedule

Measurements	Age Classes	Quality Assessment of BS Category	ULE (relates to BS Category)
Height - Measured using a digital laser clinometer (m)	**YNG**: Establishing, typically with good vigour and fast growth rates and strong apical dominance; c. less than 1/3 life expectancy	**Category U -** Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.	<10 years
Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837	**SM:** Semi-mature trees less than 1/3 life expectancy	**Category A -** Trees of high quality with an estimated remaining life expectancy of at least 40 years.	40+ years
Crown Radius - Measured using a digital laser clinometer radially from the main stem (m)	**EM:** Established, typically vigorous and increasing in apical height and lateral spread; 1/3 - 2/3 life expectancy. Offers landscape significance	**Category B -** Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	20-40 years
Abbreviations est - Estimated stem diameter avg - Average stem diameter for multiple stems upto - Maximum stem diameter of a group	**M:** Fully established over 2/3 life expectancy, generally good vigour and achieving full height potential with crown still spreading	**Category C -** Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.	10-20 years
	OM: Fully mature, at the extremes of expected life expectancy, vigour decreasing, declining or moribund	Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value	
	V: biological, cultural or aesthetic value comprising niche saproxylic habitat. Individuals of large proportions (stem girth) in comparison to trees of the same species/surviving beyond the typical age range for their species.	**The BS category particular consideration has been given to the following:** • The presence of any structural defects in each tree/group and its future life expectancy • The size and form of each tree/group and its suitability within the context of a proposed development • The location of each tree relative to existing site features e.g. its screening value or landscape features • Age class and life expectancy	

Structural Condition	Physiological Condition
Good - No significant structural defects	**Good -** No significant health problems
Fair - Structural defects that can be remediated	**Fair -** Symptoms of ill-health that can be remediated
Poor - Significant defects beyond remediation, present a risk of failure in the foreseeable future	**Poor -** Significant ill-health. Unlikely the tree will recover in the long term
Dead - Dead tree with structural integrity of tree severely compromised	**Advanced Decline / Dead -** Advanced state of decline and unlikely to recover or Dead

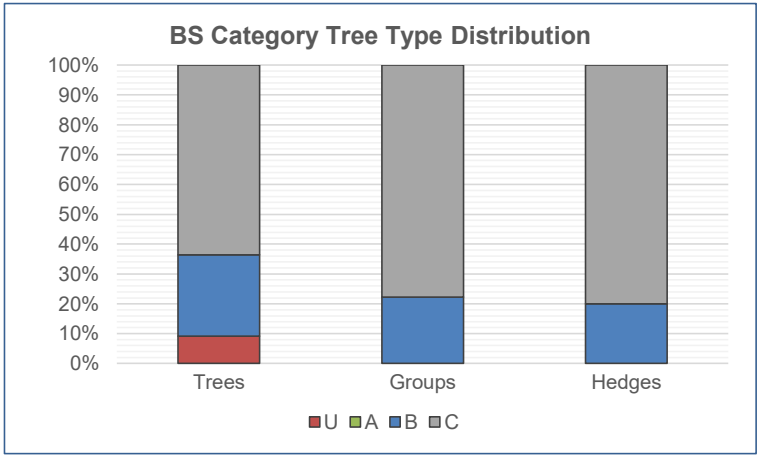
Root Protection Area (RPA)
• The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m). • The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the rooting area required for a tree to be successfully retained. Tree roots extend beyond the calculated RPA in many cases and where possible a greater distance should be protected. • Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter, uncapped.

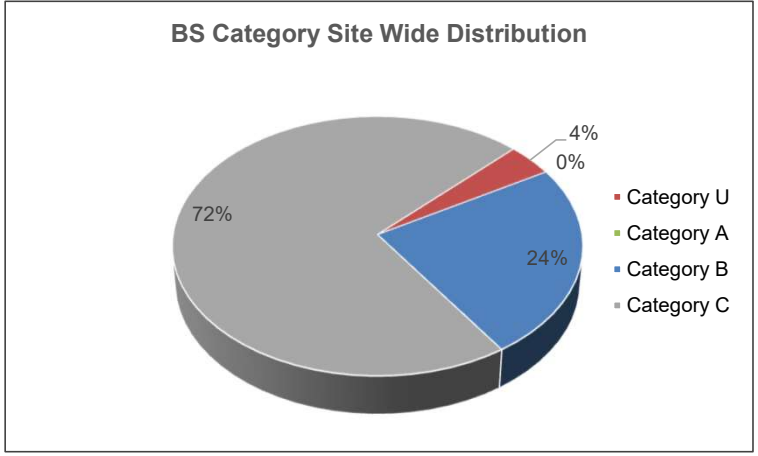
Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U	T11	1		0
Category A		0		0
Category B	T4, T8, T9	3	G2, G7, H4	3
Category C	T1, T2, T3, T5, T6, T7, T10	7	G1, G3, G4, G5, G6, G8, G9, H1, H2, H3, H5	11
	Total	11	Total	14

BS Category Tree Type Distribution displays the proportion of trees assessed in each type to enable a better understanding of the category distribution.

BS Category Site Wide Distribution shows the proportion of trees assessed in each category across the whole site which allows an interpretation of the site's overall quality.





Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
INDIVIDUAL TREES										
T1	Ash Fraxinus excelsior	10	320 250 310	N - 1 S - 4 E - 3 W - 3	SM	F	Bark wounds noted Branch socket cavities observed Crown had been topped Included bark union Low crown form Minor dead wood evident in the crown (<75mm) Multi stemmed from base Overhead cables Canopy has been heavily reduced back from power lines	118	6.1	C (i)
T2	Sycamore Acer pseudoplatanus	9	350	2.5	SM	F	Basal suckers present Characteristic for species Minor dead wood evident in the crown (<75mm) Pruning wounds noted	55	4.2	C (i)
T3	Silver Birch Betula pendula	8	270	3	SM	P	Bark wounds noted Broken branches evident Characteristic for species Multi leadered form Sparse / thinning crown	33	3.2	C (i)
T4	Ash Fraxinus excelsior	12	460	3.5	EM	F	Characteristic for species Minor dead wood evident in the crown (<75mm)	96	5.5	B (ii)
T5	Sycamore Acer pseudoplatanus	9	6x 200	N - 2 S - 2 E - 3 W - 3	SM	F	Close cultivation of the soil Compacted ground at the base Minor dead wood evident in the crown (<75mm) Multi leadered form Ownership undetermined Pruning wounds noted	109	5.9	C (i)
T6	English Oak Quercus robur	6	300	N - 3 S - 3 E - 1 W - 1	SM	F	Barbed Wire attached to stem/s Crown had been topped Epicormic growth evident within the crown Pruning wounds noted	41	3.6	C (i)

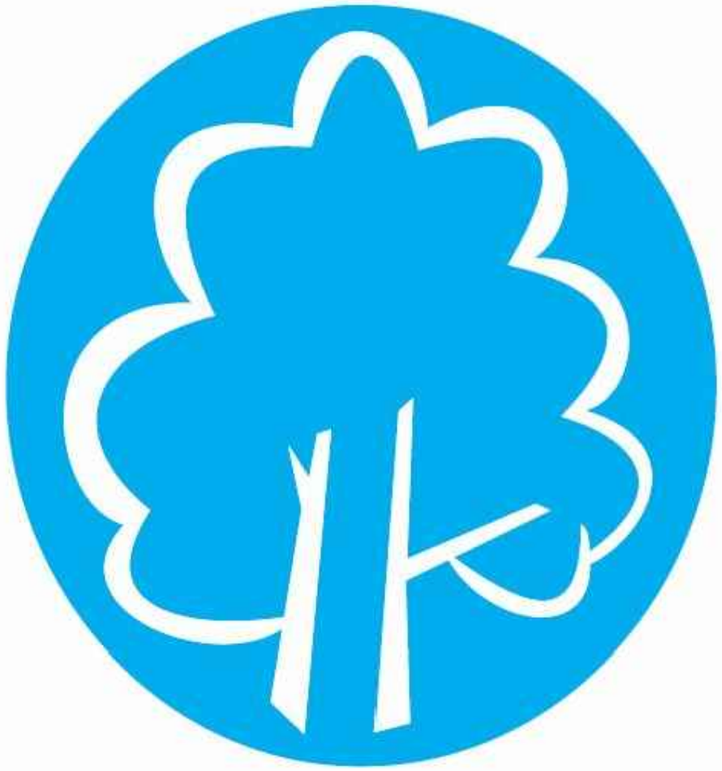
Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T7	Sycamore Acer pseudoplatanus	11	6x 200	3	EM	F	Characteristic for species Close cultivation of the soil Dense undergrowth at the base Included bark union	109	5.9	C (i)
T8	English Oak Quercus robur	12	est 750	N - 6 S - 4 E - 7 W - 4	M	F	Basal cavity observed Base obscured Branch socket cavities observed Branch stubs evident Broken branches evident Crown had been topped Dense ivy cover on main stem Dense undergrowth at the base Epicormic growth evident within the crown Lateral lever arm observed Minor dead wood evident in the crown (<75mm) Pruning wounds noted Large stem removed to north at 4.5m leaving large opening in canopy Monitor large limb to east due to adverse loading and already present lateral lever arm	254	9.0	B (ii)
T9	English Oak Quercus robur	9	est 600	5.5	M	F	Bark wounds noted Base obscured Branch socket cavities observed Branch stubs evident Broken branches evident Crown had been topped Dense ivy cover on main stem Dense undergrowth at the base Epicormic growth evident within the crown Flail damage evident Included bark union Minor dead wood evident in the crown (<75mm) Pruning wounds noted	163	7.2	B (ii)
T10	Silver Birch Betula pendula	10	250 270	N - 3.5 S - 1 E - 3 W - 3	EM	F	Base obscured Branch socket cavities observed Branch stubs evident Dense undergrowth at the base Suppressed crown form	61	4.4	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T11	Sycamore Acer pseudoplatanus	8	300	3	EM	D / P	Bark wounds noted Delaminating bark on main stem Dieback of the crown observed Limited future potential Major dead wood evident in the crown (>75mm) Muribund	N/A	N/A	U

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
GROUPS OF TREES										
G1	Wild Cherry Prunus avium	4	avg 110	1	Yng	F	Characteristic for species No major defects were noted	5	1.3	C (i)
G2	Ash Fraxinus excelsior Common Lime Tilia x europaea Hawthorn Crataegus monogyna	11	avg 400	4	EM	F	Basal suckers present Branch stubs evident Characteristic for species Dense ivy cover on main stem Dense undergrowth at the base Epicormic growth evident within the crown Understorey of hawthorn	72	4.8	B (ii)
G3	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna Leyland Cypress Cupressocyparis leylandii	6	avg 250	2.5	SM	F	Dense undergrowth at the base Flail damage evident Outgrown hedgerow Ownership undetermined	28	3.0	C (i)
G4	Hawthorn Crataegus monogyna Wild Cherry Prunus avium	6	avg 120	2	Yng / SM	P / F	Characteristic for species Sparse / thinning crown	7	1.4	C (i)
G5	Elder Sambucus nigra Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra	6	avg 190	2	Yng / SM	P / F	Characteristic for species Crossing and rubbing branches Dead trees noted Gaps present in hedgerow Outgrown hedgerow	16	2.3	C (i)
G6	English Oak Quercus robur Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	5	avg 150	2	Yng / SM	F	Barbed Wire attached to stem/s Crossing and rubbing branches Crown had been topped Trees growing into boundary fence some occluding fence	10	1.8	C (i)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G7	Ash Fraxinus excelsior Elder Sambucus nigra English Oak Quercus robur Field Maple Acer campestre Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	10	avg 300	4	SM / EM	F / G	Bark wounds noted Branch stubs evident Broken branches evident Characteristic for species Compacted ground at the base Dense ivy cover on main stem Dense undergrowth at the base Outgrown hedgerow	41	3.6	B (ii)
G8	Ash Fraxinus excelsior	9	avg 250	3.5	SM	P	Basal suckers present Compacted ground at the base Dense ivy cover on main stem Dense undergrowth at the base Dieback of the crown observed Major dead wood evident in the crown (>75mm) Minor dead wood evident in the crown (<75mm) Ownership undetermined	28	3.0	C (i)
G9	Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus Leyland Cypress Cupressocyparis leylandii	8	avg 180	2	Yng / SM	F	Characteristic for species Outgrown hedgerow Ownership undetermined	15	2.2	C (i)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
HEDGEROWS										
H1	Hawthorn Crataegus monogyna	2	avg 80	1	SM	F	Flail damage evident Maintained hedgerow	3	1.0	C (i)
H2	Hawthorn Crataegus monogyna	2	avg 80	1	SM	F	Flail damage evident Maintained hedgerow	3	1.0	C (i)
H3	Elder Sambucus nigra Hawthorn Crataegus monogyna Wych Elm Ulmus glabra Lawson Cypress Chamaecyparis lawsoniana	2	avg 80	1	SM	F	Flail damage evident Maintained hedgerow	3	1.0	C (i)
H4	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus Apple Malus domestica Holly Ilex aquifolium	6	avg 160	2	EM / M	F	Maintained hedgerow Old laid forms	12	1.9	B (i)
H5	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna Hazel Corylus avellana	3	avg 80	1	SM	F	Compacted ground at the base Maintained hedgerow	3	1.0	C (i)



PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.



TREE PROTECTION AREA
KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

The following points are to be considered at all times:

1. Protective fencing has been installed at the extent of the calculated root protection area (RPA) - **DO NOT USE OR ACCESS** the ground within the fenced area. This is particularly the case for placement of site offices, stockpiles of soil or fuel and material storage, storing machinery or parking vehicles, debris or building materials or fires.

2. **AVOID** excavations, changes in ground levels or tracking machinery within the fenced area at ALL TIMES. These activities can seriously compromise the long term survival of trees due to the impact on a trees roots.

3. **REPORT** any instances where the fencing has been removed, repositioned, damaged or is not fit for purpose to the Site Manager. This shall help the Site Manager to ensure that the fencing is maintained throughout the construction process. It will also reduce the risk of any staff and contractors accidentally and inadvertently causing damage to trees as a result.

Retained trees are protected by planning law and reckless damage or non consented tree removal could result in the serving of a stop notice or prosecution by the LPA

For more information on Tree Protection please visit the website link https://goo.gl/hpBkTv or scan the QR code on a Smartphone or Tablet.

NOTES: This sign is the property of FPCR Environment and Design ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part with written consent of FPCR Environment and Design Ltd.

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

FPCR Environment and Design Ltd
Lockington Hall
Lockington
Derby DE74 2RH

t: 01509 672772
f: 01509 674565
e: mail@fpcr.co.uk
w: www.fpcr.co.uk

Appendix C1: Tree Surgery Contractors – Tree Work Methodology

Table 1: Related Reference Material

Plan Name	Drawing Number
Tree Protection Plans	9295-TPP-10
Appendices	**Appendix Title**
Appendix A	Tree Schedule

The Site Manager and tree surgery contractor must ensure that any necessary consent has been received from the local authority and that no protected species are harmed whilst carrying out site clearance or tree surgery works.

The trees to be removed to facilitate the development will be marked up by the Arboricultural Clerk of Works during the pre-commencement site meeting and, where required, with the tree surgeon present. Highly visible fluorescent paint will be used to assist in identification. A pre-commencement tool box talk will be given and the works will only be carried out once the project ecologist is satisfied that there are no ecological constraints.

The trees to be removed are shown on the Tree Retention Plans (referenced above) as red circles hatched with red criss-crossing lines. A key has been provided on each of the plans to assist with identification.

Works on all trees cannot commence until all pre-commencement conditions have been discharged.

GENERARL TREE PRUNING RECOMMENDATIONS

All works shall be in accordance with BS 3998:2010 '*Tree work. Recommendations'*. Any competent arboriculturist will be aware of this publication and will be able to carry out work to the required standard. Therefore, the use of a competent tree surgery contractor is necessary to comply with this.

Prior to any pruning operations occurring, the tree and its surroundings should be assessed for the presence of any protected species and the timing of works should best avoid the potential for any adverse impact on wildlife. Consideration should be made for the seasonal cycles of species of fauna and flora e.g. nesting birds.

Minor pruning can be carried out at any time of the year however, it is recommended that pruning is avoided when deciduous trees, particularly maples, lime and birch are coming into leaf (Spring). Equally, pruning should be avoided in the autumn months when the trees ability to seal wounds is reduced and thus vulnerability to pathogenic decay fungi is much higher. Pruning in the Autumn depletes valuable energy reserves. This is particularly important if it is necessary to carry out heavy pruning or work on older trees. Pruning should also be avoided during or soon after drought.

Before any tree work operations commence, the method of disposal, utilization or retention of arisings should be prior agreed. Disposal of arising should not involve burning unless other options of disposal are impracticable or, as in the case of Ash Dieback, the material is affected by a diseases or pest for which industry guidance on sanitation dictates.

Appendix C2 Tree Protection – Working Methodology

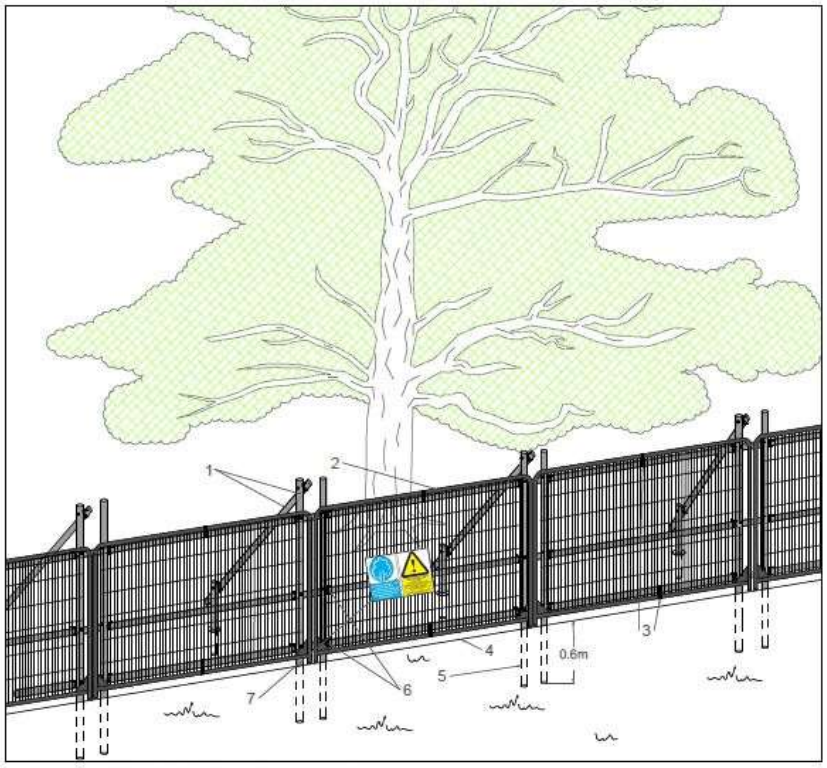
Table 1: Related Reference Material

Plan Name	Drawing Number
Tree Protection Plans	9295-TPP-10
Appendices	**Appendix Title**
Appendix A	Tree Schedule
Appendix B	Protective Fencing Signage

Tree Protection Fencing will be installed as detailed in Tree Protection Plans (referenced above) at, where possible, the extent of the root protection areas of retained trees using the dimensions indicated on the relevant plans. The positioning of the Tree Protective Fencing shall be measured out with assistance from the Arboricultural Clerk of Works and, where deemed necessary, with the Site Manager present. Highly visible fluorescent paint and / or marker pegs / stakes will be used to assist in identification.

STANDARD FENCING SPECIFICATION

Unless stated below, Protective Fencing will comprise a Heras HSG151 panel framework supported by scaffold poles driven into the ground. An example of this has been illustrated below.



Standard specification for High Intensity Protective Barrier

1. Standard scaffold poles
2. Heavy gauge 2m tall galvanized tube and welded mesh infill panels
3. Panels secured to scaffold frame with wire ties
4. Ground level
5. Uprights driven into the ground until secure (min depth of 0.6m)
6. Standard scaffold clamps
7. Construction Exclusion Zone signs

FPCR Environment and Design Limited.
Registered in England No: 7128076. Registered Office: Lockington Hall, Lockington, Derby DE74 2RH

Details of Directors and Associates are available on our website.

Offices also at
Addlepool Business Centre, Clyst St George, Exeter, Devon EX3 0NR Tel: 01392 874499
Studio 2 Dunley Hill Court, Dunley Hill Farm, Ranmore, Dorking, Surrey RH5 6SX Tel: 01483 282523
and The National Agri-Food Innovation Campus, Sand Hutton, York YO41 1LZ Tel: 01904 406112

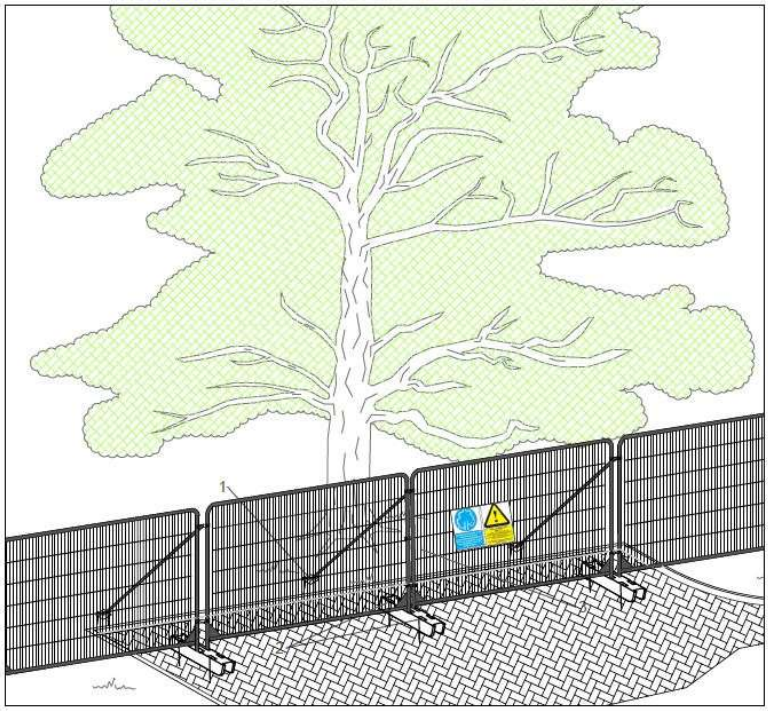
FS 567386.

Installation Guide

- The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights.
- The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with clamps to each joint.
- The diagonal scaffold pole struts shall be clamped to the top rail of the scaffold framework at a 45º angle and extend back into the root protection area and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
- No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.

TEMPORARY FENCING SPECIFICATION

This fencing specification shall only be used where specified on the relevant Tree Protection Plans as is not to be used as an alternative to the standard specification unless determined by the Arboricultural Clerk of Works.



Standard Specification for Above Ground Stabilizing Systems
1. Stabiliser strut with base plate secured with ground pins
2. Feet blocks secured with ground pins
3. Construction Exclusion Zone signs

Heras Fence Panel to be supported by rubberised stabiliser blocks with a base plate which is secured to the ground using ground pins (as shown above).

TIMBER TREE BOX SPECIFICATION

FPCR Environment and Design Limited.
Registered in England No: 7128076. Registered Office: Lockington Hall, Lockington, Derby DE74 2RH

Details of Directors and Associates are available on our website.

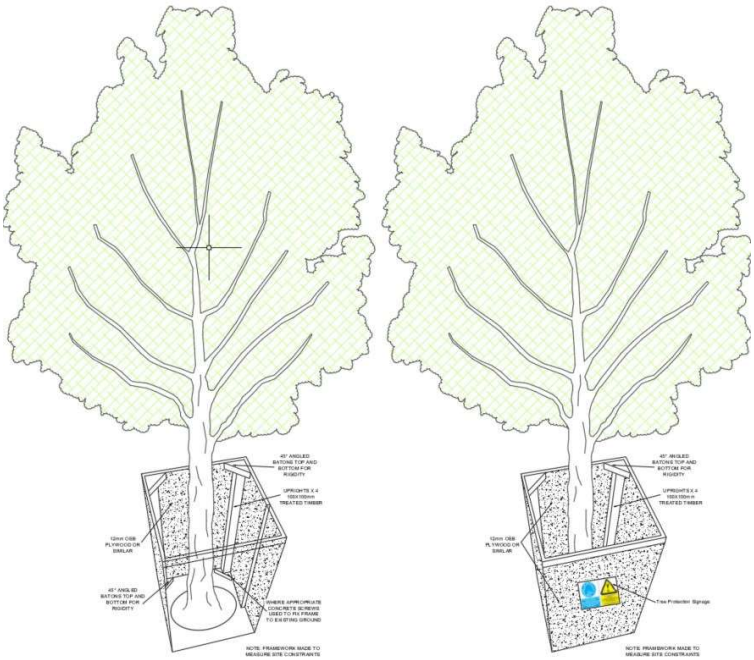
Offices also at
Addlepool Business Centre, Clyst St George, Exeter, Devon EX3 0NR Tel: 01392 874499
Studio 2 Dunley Hill Court, Dunley Hill Farm, Ranmore, Dorking, Surrey RH5 6SX Tel: 01483 282523
and The National Agri-Food Innovation Campus, Sand Hutton, York YO41 1LZ Tel: 01904 406112

FS 567386.

Protective barriers are not considered practical for the protection of offsite street trees G1, G. To prevent damage during the proposed works associated with the Basin G outfall to the main stem of each tree, a hollow constructed close-board timber cube ("Tree Box") will be built.

Tree Box

1. The tree Box will be constructed prior to the commencement of any construction works.
2. The Tree Box will remain intact until all hard landscaping works are complete.
3. No part of the Tree Box must come into contact with the stem or any part of the canopy of a tree at any time.
4. The Tree Box will stand to a height of no less than 1.8m above the ground surface.
5. The Tree Box will be constructed of OSB and treated timber.
6. The OSB board timber will be fitted to a timber frame to act as a brace, that will be constructed around the outside of the stem.
7. The Tree Box will be constructed to rest on the ground.
8. No digging/trenching must occur to construct the Tree Box.
9. If it is necessary to secure the Tree Box in place, then it is considered acceptable to use narrow ground pins, driven into the ground or screws and fastened to the exterior of the box.



FPCR Environment and Design Limited.
Registered in England No: 7128076. Registered Office: Lockington Hall, Lockington, Derby DE74 2RH

Details of Directors and Associates are available on our website.

Offices also at
Addlepool Business Centre, Clyst St George, Exeter, Devon EX3 0NR Tel: 01392 874499
Studio 2 Dunley Hill Court, Dunley Hill Farm, Ranmore, Dorking, Surrey RH5 6SX Tel: 01483 282523
and The National Agri-Food Innovation Campus, Sand Hutton, York YO41 1LZ Tel: 01904 406112

FS 567386.

GENERAL TREE PROTECTIVE FENCING METHODOLOGY

The fencing will be strong and suitable for the location, type and proximity of construction activity and prevent access of machinery, plant or operative beyond the area required to construct the development.

Tree Protection Fencing and work exclusion zones will be clearly marked using appropriate signage, an example of which has been included as Appendix B. These signs shall be laminated to ensure they last the duration of the construction works and shall be fixed to the fencing panels every 10 metres along its length.

All Tree Protective Fencing will remain rigid and in place for the duration of the development and should be inspected at weekly intervals by the Site Manager alongside regular inspections to be carried out by the Arboricultural Clerk of Works.

Following the completion of construction works and in agreement with the Arboricultural Clerk of Works, the Tree Protection Fencing will be removed carefully as to avoid causing root disturbance or leaving in situ any lengths of scaffold framework. This operation can be carried out prior to soft landscaping works such as new planting, mulching grass sowing etc.

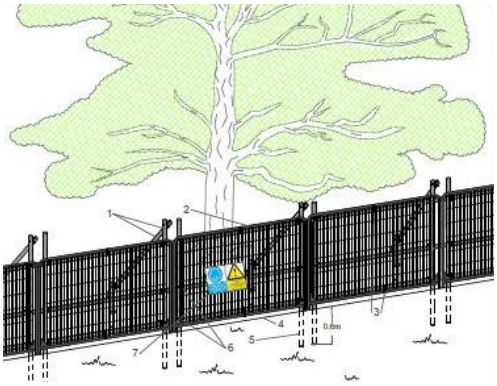
WHAT YOU NEED TO KNOW ABOUT WORKING NEAR TREES

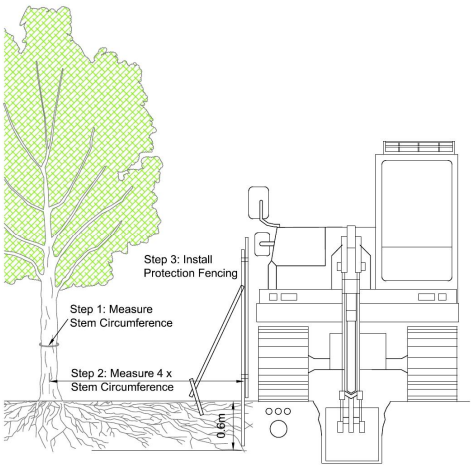
This advice note provides a brief overview of the methods of protection for trees located across the site. Compliance with these guidelines will be a requirement of all contractors working near retained trees.

Any construction works which are to be carried out near to or within the fenced off areas should be carried out in accordance with the Arboricultural Method Statement and as explained by the Site Manager during the site induction. Failure to adhere to the correct sequence, manner and timing of operations detailed in the Arboricultural Method Statement may result in irremediable damage to trees or disturbance to retained tree cover.

Retained trees are protected by planning law and reckless damage or non consented tree removal could result in the serving of a stop notice or prosecution by the LPA.

Trees make a significant contribution to the landscape character of the development and they are to be treated as important assets. To protect these assets, tree protective fencing has been installed where required across the site.





The following points are to be considered at all times.

1. Protective fencing has been installed at the extent of the calculated root protection area (RPA) - **Do not use or access** the ground within the fenced area. This is particularly the case for placement of site offices, stockpiles of soil or fuel and material storage, storing machinery or parking of vehicles, debris or building materials or fires.
2. **Avoid** excavations, changes in ground levels or tracking of machinery within the fenced area at **all times.** These activities can seriously compromise the long term survival of trees due to the impact on a trees roots.
3. **Report** any instances where the fencing has been removed, repositioned, damaged or is not fit for purpose (see images below) to the Site Manager. This shall help the Site Manager to ensure that the fencing is maintained throughout the construction process. It will also reduce the risk of any staff and contractors accidently and inadvertently causing damage to trees as a result.



Unacceptable example of tree protection due to a lack of adequate fencing and poor site management. Note mounds of soil have been placed within the Root Protection Area.



Tree Protection Fencing which has been erected prior to the commencement of any site works and the correct signage has been provided to clearly highlight that this is a protected zone.

Please acknowledge you have read and understand this document by visiting the website http://bit.ly/2EprKu8 or scanning the QR Code on a Smartphone or Tablet.

fpcr