

**APPENDIX 6**  
**(Arboricultural Impact Assessment -**  
**Ramsay & Co)**

# Arboriculture Impact Assessment & Method Statement

Wilkie Landform

Knepp Castle Estate, West Grinstead, Nr Horsham RH13 8L



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## **PLANNING ISSUE**

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## 1.0 INTRODUCTION

### 1.1 The Brief and Scope of the Report

1.1.1 Ramsay & Co has been commissioned by the Mathews Group to provide a Tree Retention / Protection package in relation to a proposed landform scheme at Knepp Castle Estate, West Grinstead, West Sussex.

1.1.2 This report has been prepared by Andrew Ramsay (BA Hons) MALA who is a Landscape Architect and a chartered member of the Landscape Institute (CMLI).

1.1.3 This report should be read in conjunction with the following Drawings:

- *RCo201 / 07 - 11 / Tree Protection Drawing (5 no. Sheets);*
- *RCo201 / Tree Schedule;*
- *RCo201 / Figure 01 / Masterplan.*

1.1.4 The purpose of this report is to assist in the planning process with regard to the protection of existing trees / vegetation and the impact of the proposed development scheme. The report has been prepared in line with the guidelines laid out within *BS5837-2012: Trees in Relation to Design, Demolition and Construction – Recommendations*. Where appropriate, the impact on existing trees has been considered with regard to the following:

- *The direct and indirect effects of the proposed scheme on the surveyed trees in relation to the scheme layout;*
- *General activities including the importation of spoil and general groundwork activities.*

1.1.5 This Arboriculture Report and Tree Survey is intended for planning purposes only and is not intended as a safety survey / audit or a long-term management plan and should not be used as such. All trees should undergo a regular and full safety inspection as defined by both civil law and the Occupiers' Liability Acts of 1957 & 1984.

#### ***Method Statement: Introduction***

1.1.6 The Method Statement (Refer to Section 04) provides guidance as to how the retained woodland edges, tree specimens and shrubs are to be protected throughout the construction phase of the proposed landform scheme in line with the recommendations contained within *BS5837-2012: Trees in Relation to Design, Demolition and Construction – Recommendations*.

1.1.7 Tree protection measures required to be implemented before the start of any construction activities include:

- *Tree and shrub removal;*
- *Positioning and installation of tree protection fencing.*

1.1.8 Measures to be addressed during the construction phase of the proposed development include:

- *Access to the proposed construction site area;*
- *Importation of spoil and subsequent landform construction.*

1.1.9 The following drawing and schedule are relevant to this report:

- *RCo201 / 07 / Tree Protection Drawing (Sheet 01 of 05);*
- *RCo201 / 08 / Tree Protection Drawing (Sheet 02 of 05);*
- *RCo201 / 09 / Tree Protection Drawing (Sheet 03 of 05);*
- *RCo201 / 10 / Tree Protection Drawing (Sheet 04 of 05);*
- *RCo201 / 11 / Tree Protection Drawing (Sheet 05 of 05);*
- *RCo201 / Tree Schedule;*
- *RCo201 / Figure 01 / Masterplan.*

## 1.2 Knepp Castle Estate: Site Appraisal

1.2.1 For the last 17 years Knepp Castle Estate has undergone extensive rewilding - conventional farming practice has been largely abandoned and the estate has been given over to natural process with the long-term aim of creating a landscape which is rich in biodiversity and ecologically sustainable.

1.2.2 The proposed landform area lies immediately south of the A272 and west of the A24. The existing topography has been altered with the importation of spoil to reduce the impact of the A24 highway corridor and the junction between the A272 and A24 immediately east of Buck Barn Cottages.

1.2.3 Although the topography has changed, existing woodland and boundary vegetation (to the western edge of the A24) has been retained. To the south, buildings which form Hill House Farm, a small light engineering works and Floodgates Farm all lie to the western edge of the A24. The landscape is characterised by grassland fields with mature isolated tree specimens, hedgerows, shaws and woodland blocks to the edges.

1.2.4 To the south-west is Knepp Castle which overlooks Kneppmill Pond once considered the largest waterbody in the south-east of England. Knepp Castle is the ancestral seat of the Burrell family and for approximately twenty years the current owners have been engaged in an extensive process of rewilding the estate, allowing nature to take over and introducing free roaming deer, pigs and Exmoor ponies creating a mosaic of diverse habitats.

## 1.3 Proposed Development

### ***Background***

1.3.1 In the early nineteenth century, the architect John Nash placed the gothic revival Knepp Castle at the perfect mid-point of the Kneppmill hammer pond. The vista to

the south-east looked down the water to the historic eleventh century castle raised on its sculptural mound (cnaep). The corresponding view up the water to the north-east disappeared into distant hills. The ha-ha surrounding the castle took full advantage of these views up and down the lake.

- 1.3.2 The south-east vista to the historic, ruined castle is open and framed by trees and the lake is currently being dredged to reopen the water. The corresponding north-east view was compromised by the A24 highway corridor, A272 and associated lights and traffic noise. The lake had become truncated and the vista petered out into traffic and development.
- 1.3.3 The proposal is to terminate the NE vista with a sculptural, grass landform that has been informed by the historic castle and mound to the south-east. The land would be raised into a sculpted amphitheatre that would look down through the trees and across the water back to the nineteenth century Knepp Castle with long distance views of the South Downs beyond. In addition, the existing landforms to the western edge of the A24 would be remodelled with a new pedestrian path connecting a new car park at Floodgates Farm with the A272 in the north via the high spot to the new, sculpted landform. This would allow members of the public the opportunity to take full advantage of the spectacular views north and south.
- 1.3.4 In addition to the main landform to the north, additional works would be undertaken to the western edge of the A24 highway corridor to limit the effects of traffic and noise on the rural landscape to the west. These works would require additional spoil importation and new landforms which would improve the existing works and well as new work to the north and Floodgates Farm.
- 1.3.5 The proposed scheme includes extensive areas of new woodland and native tree planting which would continue and expand the ecology focused work which Knepp Castle Estate has undertaken over the course of the last twenty years. It would also create an extensive new area of parkland landscape which would enhance and extend the existing Repton parkland around Knepp Castle.

## **2.0 TREE SURVEY SUMMARY**

- 2.1.1 The tree survey was carried out on the 21<sup>st</sup> November 2019. A total of 33 no. tree specimens, tree / shrub lines and tree groups were surveyed – information regarding the trees and shrubs is contained within the accompanying Tree Schedule.
- 2.1.2 A total of 29 tree specimens were assessed as being category ‘A’ trees along with 4 woodland edges / tree groups:

<b>Table 01: Tree / Woodland Edge / Hedgerow Categorisation Summary</b>			
Cat.	Tree/Shrub Specimens	Woodland Edges / Tree Groups	Formal / Informal Hedgerows / Shrub Groups
<b>A</b>	29	4	
<b>B</b>	4	3	3
<b>C</b>			1
<b>U</b>	1		

## 3.0 ARBORICULTURE IMPACT ASSESSMENT

### 3.1 Trees / Shrubs / Hedgerows to be Removed

3.1.1 To the north of the site area, a hedgerow which lies to the west and south of the Bucks Barn Service Station is proposed to be removed (H 04). To the north-west of Hill House Farm, 4 mature Oak trees (T 13 / T 14 / T 15 / T 16) and field edge shrubs (SG11 / SG 12) are proposed to be removed to accommodate the proposed changes in topography. Further south to the east of Hill House Farm, a single Oak tree is dead and is scheduled to be removed with a standing monolith retained in line with Knepp Castle Estate policy. A number of Ash trees were in the process of being removed to this area at the time of the survey as a result of Ash dieback.

3.1.2 To the north of Floodgates Farm, a single mature Oak tree (T 32) is proposed to be removed to facilitate the proposed landform to the west of the A24. In addition the row of conifers (TG 33) to the western edge of the A24 are proposed to be removed as they are considered to detract from the Knepp Castle Estate and not appropriate to the rural landscape setting – these would be replaced with native tree and shrub planting.

### 3.2 Tree Protection Measures

#### **Tree Protection Fencing**

3.2.1 The trees designated for retention are to be retained and protected with tree protection fencing in accordance with 'BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations'. Refer to *RCo201 / 07-11 Tree Protection Drawings* for the proposed tree protection fencing locations. The setting out of the tree protection fencing is to be supervised by a suitably qualified / experienced arboriculture professional.

#### **Construction Site Access**

3.2.2 Access would be provided by an existing temporary haul route which extends south from the A272 and runs adjacent to the A24 highway corridor.

#### ***Underground Services***

- 3.2.3 All proposed underground service routes should be located outwith of the existing tree root protection areas.

#### ***Hazardous Materials***

- 3.2.4 All hazardous materials should be strictly controlled in order to ensure that the risk of accidental spillage and thus risk of damage to existing tree root systems is minimised.

#### ***Inspections***

- 3.2.5 It is recommended that a suitably qualified / experienced arboriculture professional is appointed to oversee the setting out of all tree protection measures prior to any construction activities and to supervise any activities which may be damaging to the existing trees. Regular inspections should be conducted in order to ensure the tree protection measures remain in place as per the guidelines laid out within this report and illustrated on *RCo201 / 07-11 / Tree Protection Drawings*.

### **3.3 Summary**

- 3.3.1 5 no. mature tree specimens, a hedgerow, section of informal field edge hedgerow and an evergreen tree line are proposed to be removed to facilitate the proposed landform scheme.

#### ***Proposed Planting***

- 3.3.2 There would be extensive tree and shrub planting proposed to the northern face of the proposed sculpted landform as well as strategic tree specimen planting to the southern slopes which would enhance the parkland landscape character. Additional native tree and shrub planting to the new landforms immediately west of the A27 would also be undertaken – softening the new earthworks and enhancing the highway corridor character.
- 3.3.3 Refer to *RCo201 / Figure 01 / Masterplan* for an indicative illustration of the proposed scheme and associated planting.

## **4.0 METHOD STATEMENT**

### **4.1 Phasing of Operations and Contractors Compound**

- 4.1.1 All the measures described in this section are intended to ensure existing trees are protected during the construction phase of the proposed development. All construction personnel, including sub-contractors and delivery drivers should be made aware of this method statement. (For all details refer to *RCo201 / 07-11 / Tree Protection Drawings* and the accompanying *Tree Schedule*).

### ***Phasing of Tree Protection Measures***

- 4.1.2 The phasing of the tree protection measures are to be as follows;
- *Phase 01– Removal of designated shrubs and trees (Refer to RCo201 / 07-11 Tree Protection Drawings and Tree Schedule);*
  - *Phase 02– Installation of Tree Protection Fencing (To be supervised by Arboriculture Consultant);*
  - *Phase 03 - Removal of Tree Protection Fencing following the completion of groundwork activities;*
  - *Phase 04 – Landscaping and associated works.*

### ***Contractor Movements / Site Access and Egress / Site Office, Facilities and Storage Areas***

- 4.1.3 The contractor site compound is to be located outwith of any existing tree root protection areas and will be located so as to avoid damage to any trees or canopies which are located within, or adjacent to the site boundaries. All operations which are associated with the construction / installation and use of the site compound will be undertaken so as to avoid any damage to existing trees and vegetation.
- 4.1.4 All access to and from the construction site will be via the existing works entrance to the southern edge of the A272. No vehicular movements are to be permitted over unmade ground within the existing tree root protection areas of trees to be retained.
- 4.1.5 All site operations and construction activities will be conducted with due regard for the protection and long-term viability of the existing trees and vegetation which are to be retained according to the guidelines laid out within *BS5837: 2012 Trees in Relation to Demolition, Design and Construction – Recommendations*.

## **4.2 Tree Removal**

- 4.2.1 The trees and shrubs to be removed are indicated on *RCo201 / 07-11 / Tree Protection Drawings*. All tree / shrub works are to be carried out prior to the erection of tree protection fencing and construction site activities and great care should be taken to avoid any damage to existing trees / shrubs which are scheduled to be retained. Trees and shrubs should not be felled during the bird nesting season. (Normally considered to be 1<sup>st</sup> March – 31<sup>st</sup> July however depending on seasonal temperatures, some birds may continue breeding into August and September).
- 4.2.2 Stumps are to be removed and cut away so that the top of the stump is at least 450 mm below the final topsoil level in order that the site can be reinstated in accordance with the existing site levels. Stumps are to be treated with an approved herbicide to be agreed with the Landscape Architect. Where the depth is greater than 450 mm the areas are to be backfilled with topsoil to the required level.



## 4.3 Tree Surgery

- 4.3.1 Any significant tree defects discovered during the scheduled tree works are to be reported to the project Landscape Architect / Arboriculture Consultant. All scheduled and arising tree work will be undertaken by an approved and appropriately qualified tree surgeon in accordance with BS 3998: 2010 *Tree Work: Recommendations*. Branches in confined spaces to be removed and taken down in sections and all arisings are to be transported and disposed of away from site unless advised otherwise.

## 4.4 Protection and Retention of Existing Trees and Vegetation

- 4.4.1 Where construction works are to be carried out below tree canopies and / or within tree root protection areas, the contractor is to exercise extreme caution in order to avoid any damage to the existing tree roots and / or tree architecture.
- 4.4.2 Any excavation, cultivation and grading scheduled within the designated tree root protection areas or under tree canopies are to be carried out manually using hand tools only, with extreme care exercised at all times to avoid damaging existing tree roots / architecture.
- 4.4.3 Trees scheduled to be retained within the development site are to be protected with tree protection fencing as detailed on *RCo201 / 07-11 / Tree Protection Drawings* and in accordance with the guidance laid out within *BS5837-2012: Trees in Relation to Design, Demolition and Construction – Recommendations*. The fencing is to be installed prior to any construction activities. The contractor is to be responsible for the installation, protection and maintenance of the tree protection fencing as well as the areas below the tree canopies and within the tree root protection areas.
- 4.4.4 The tree protection fencing is to be 2.0m height Herras welded wire mesh fencing secured to a scaffolding framework, set into the existing ground and positioned to the outside edge of the designated Tree Root Protection Areas. The fencing should be strained and fixed to appropriate fences, walls, knee rails etc. where possible to provide a robust and completely protected area (*refer to Figures 1 and Figure 2, Section 5.0*). All tree protection fencing to be in accordance with *BS 5837-2012: 'Trees in Relation to Design, Demolition and Construction - Recommendations'* set out as specified within *RCo201 / 07-11 / Tree Protection Drawings*.
- 4.4.5 Day-Glo ribbons should be attached to the top of the fencing to ensure the fencing can be seen. The fencing should have all weather signs attached (*Refer to Figure 3 - Section 5.0 for example*).
- 4.4.6 All tree root protection fencing will be maintained for the full construction period and inspected and approved by a nominated individual prior to the commencement of any construction site activities. If the tree root protection

fencing requires repositioning during the course of the construction programme, prior notification and agreement must be sought by the contractor with the landscape architect / Arboriculture Consultant.

4.4.7 Within the designated tree root protection areas:

- *No vehicles / machinery are to be used;*
- *No materials / chemicals are to be stockpiled / stored;*
- *No excavation activities. Ground levels to be maintained;*
- *No fires are to be lit.*

4.4.8 At the end of the contract period the contractor shall remove all protective fencing from the development site. All existing vegetation is to be healthy and thriving at handover.

## 4.5 Localised Regrading

4.5.1 Any localised regarding within tree root protection areas is to be carried out by hand with any disparity in ground levels to be made good with topsoil and subsequently grass seeded.

## 4.6 Proposed Acoustic Fencing

4.6.1 All proposed acoustic /standard fencing within designated Tree Root Protection Areas is to be installed by hand digging with manual tools only. All fencing is to be positioned a minimum of 1.0m from any existing tree stems. No machinery and no tracked vehicles are to be used within designated Tree Root Protection areas.

## 4.7 Herbicides

4.7.1 Any herbicides which are to be used within the vicinity of existing trees and particularly within designated RPAs should be an appropriate product for the vegetation which is intended to be removed and all instructions and guidance from the manufacturers are to be strictly observed. The following guidance / legislation may be pertinent;

- *Control of Pesticides Regulations 1986;*
- *The Control of Pesticides Regulations (Amended 2012);*
- *Control of Substances Hazardous to Health Regulations 1994;*
- *HSE Publication 257 (2013);*
- *Pesticides Safety Directive ([www.pesticides.gov.uk](http://www.pesticides.gov.uk)).*

## 4.8 General Notes

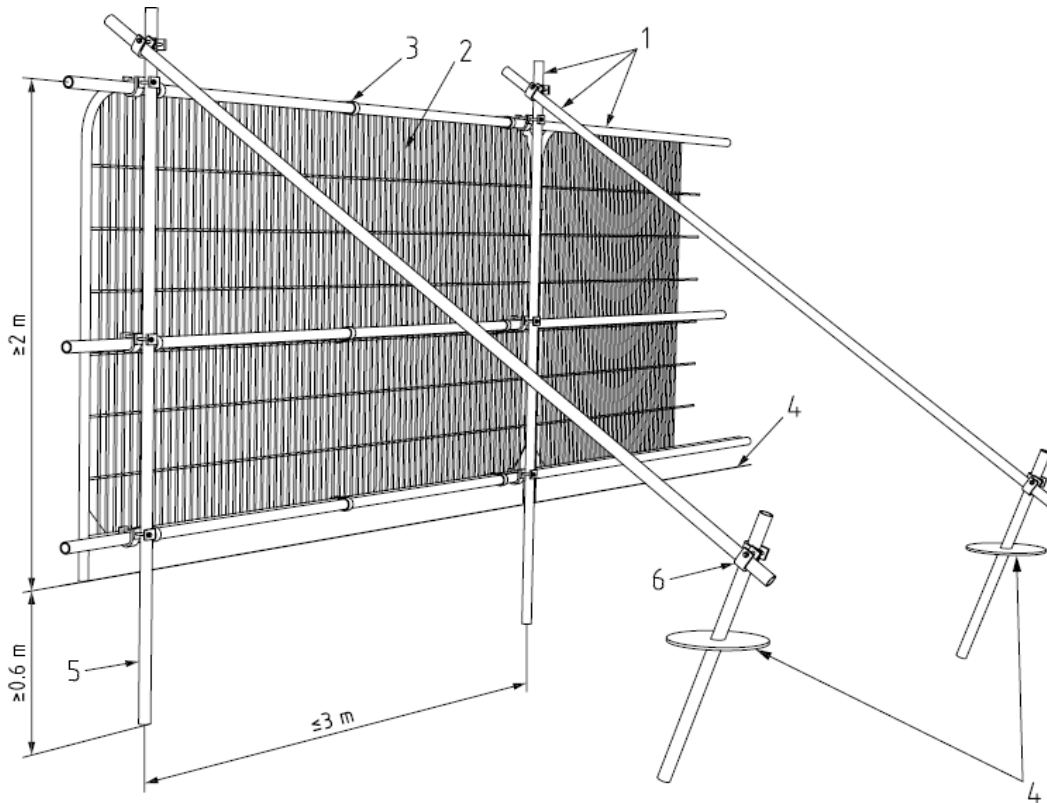
4.8.1 The guidance and principles within *BS5837: 2012 - Trees in Relation to Design, Demolition and Construction – Recommendations* are to be followed at all times to

prevent undue damage and / or stress on the tree root systems of trees within and adjacent to the proposed development site.

- 4.8.2 The integrity of the existing soil structures are fundamental to the long-term health and viability of trees and therefore soil compaction, excavation and contamination is to be avoided at all times within the RPAs. Great care is to be taken to avoid damage to tree roots, stems, boles, branches and canopies.
- 4.8.3 All tree protection measures are to be carried out on site in accordance with the relevant drawings and schedules which accompany this method statement.

## 5.0 FIGURES

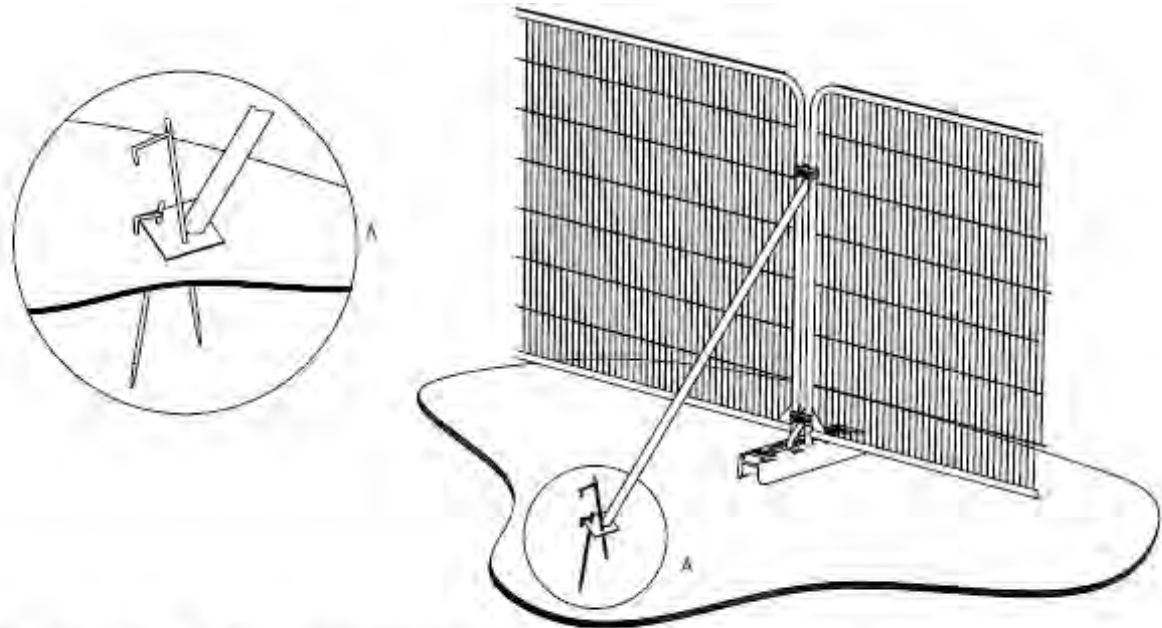
Figure 01. Tree Protective Fencing. Default specification for protective barrier  
(© The British Standards Institution 2012)



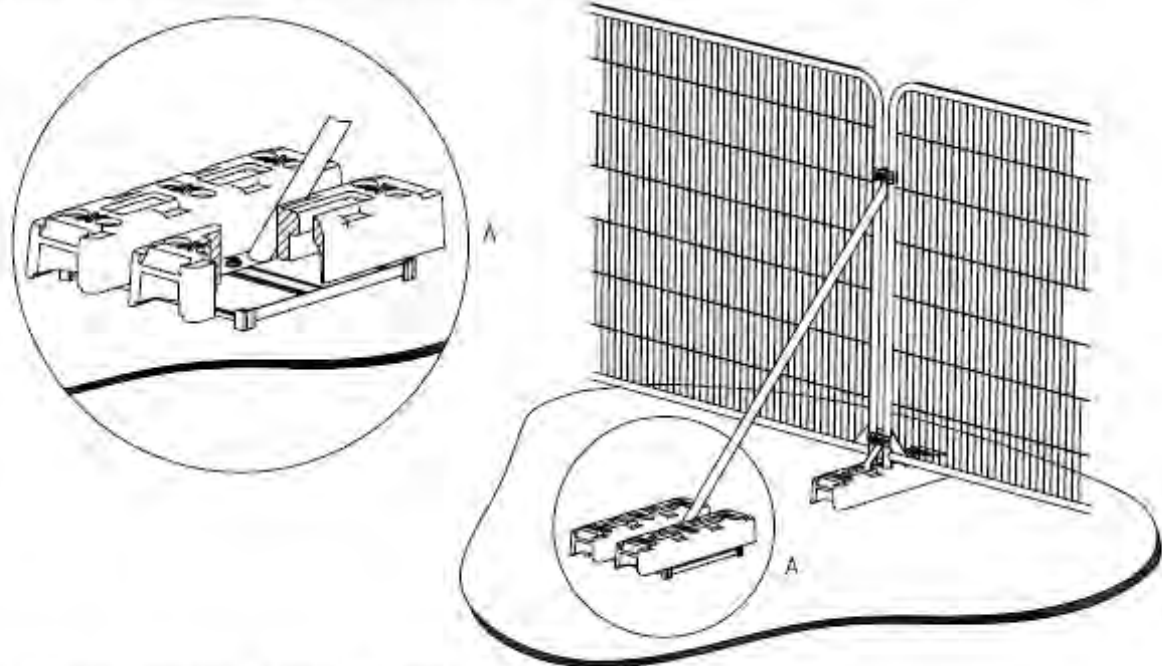
### Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps

Figure 02. Tree Protective Fencing Support - Alternative support specification for protective barrier.  
(© The British Standards Institution 2012)



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Figure 03. Tree Protection Fencing - Signage

# **TREE PROTECTION ZONE KEEP OUT**

**TREES ENCLOSED BY THIS FENCING ARE PROTECTED BY  
PLANNING CONDITIONS  
(Town & Country Planning Act 1990)**

**THE FOLLOWING MUST BE OBSERVED AT ALL TIMES;**

- **TREE PROTECTION FENCING MUST NOT BE REMOVED OR ALTERED**
- **NO PERSONS SHALL ENTER THE PROTECTED AREA**
- **NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA**
- **NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA**
- **NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA**
- **NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA**

**ANY INCURSION WITHIN THE PROTECTED AREA MUST BE WITH THE WRITTEN  
APPROVAL OF THE LOCAL PLANNING AUTHORITY**