

Shields Arboricultural Consultancy

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Arboricultural Implication Assessment

Reference:

LRC/12/10/AIA.

Rev:

21st December 2010

At the Site of:

34 Llewellyn Road,
Coedpoeth
Wrexham

Commissioned by:

Mr N. Mathews

Inspection commenced:
December 2010

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- | | |
|-------------------------------|---|
| ▪ Trees, Litigation & the Law | ▪ Tree-related Environmental Impact Assessments |
| ▪ Planning & Appeals | ▪ Subsidence Risk Assessment |
| ▪ Mortgage Surveys | ▪ Trees & Development Sites (BS 5837) |
| ▪ Tree Preservation Orders | ▪ Tree Hazard & Risk Assessment |



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Arboricultural Implication Assessment

34 Llewellyn Road,
Coedpoeth
Wrexham

Introduction

- 1.1 Shields Arboricultural Consultancy received instructions from Mr N. Mathews to provide an arboricultural implication assessment in respect of the above development site.
- 1.2 Planning permission is being sought to extend an existing property.

Scope & Limitations

- 2.1 The purpose of the report is to assess the environmental and amenity values of all trees on or adjacent to the area affected by the proposed development. The report will assess the long-term contribution that the trees can make to the area and the arboricultural implications of retaining them and seek to find a satisfactory juxtaposition between the trees and the new development. The report will assess the potential impact that may arise as a result of the proposed construction works and make recommendations for protecting trees, hedges and shrubs where appropriate
- 2.2 The report is prepared in accordance with the recommendations of the British Standard Document BS 5837: 2005 'Trees in Relation to Construction'.
- 2.3 This report is not an ecological assessment and does not identify habitats or constitute a protected species survey.

Statutory Controls & Obligations

- 3.1 Forestry Act; The felling of trees is controlled under Forestry Act, which requires that a felling licence is obtained prior to cutting down any trees. The Forestry Act does not apply to the felling of trees growing within an orchard, private garden, churchyard or public open space. The Forestry Commission has the responsibility for enforcing the Forestry Act.
- 3.2 Tree Preservation Orders & Conservation Areas; Local Authorities have specific powers under the Town & Country Planning Act 1990 as amended, to protect trees through the use of Tree Preservation Orders.

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Where trees are protected under such orders it is a criminal offence (subject to any exemptions for which provision may be made by the act or order) to undertake, cause or permit the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees except with the consent of the local planning authority. Similar controls apply to all trees growing within a designated Conservation Area.

- 3.3 Bats, wild birds and other protected species; The Wildlife & Countryside Act & the Conservation (Natural Habitats & C.) Regulations make it an offence to disturb or destroy bats and bat roosts and wild birds and their nests. Other species of plant and animal are also protected. These creatures often inhabit trees and sufficient care must be taken to ensure they are not affected during forestry and arboricultural works.

Site Description

- 4.1 34 Llewellyn Road is a detached stone built period 2 story dwelling set within its own large garden off Llewellyn Road in the village of Coedpoeth. The site extends to approximately 0.1ha and slopes gently west to east and is at an elevation of 210m ASL. It shares boundaries with other residential properties to the north, west and south and with the public highway to the east.
- 4.2 The house is situated towards the middle of site with its north elevation close to the north boundary and a detached garage stands adjacent to the south boundary, with a driveway to the public road.
- 4.3 The most significant tree is an oak, approximately 17 metres to the west of the house. Two mature cherry plum stand directly behind the garage and there are two old fruit trees close to the south west corner of the plot.

Tree Survey Methodology

- 5.1 All trees adjacent to and within the site have been assessed where they are within 15 m of any area that may be disturbed as a result of the proposed development. Measurements have been taken in accordance with the procedures and protocols set out in BS 5837 and the Forest Mensuration Handbook. Height measurements are approximate unless otherwise stated. Trees have been assessed as individuals, groups or woodlands as appropriate. Where access to trees has been restricted, either as a result of their situation on private land or where vegetation or ground conditions are unfavourable, an estimation of trunk diameter has been made. This entails using a set of callipers to approximate the measurement. Estimates are rounded up

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to provide a margin. This technique has only been used where there is a sufficient buffer between the RPAs and any area disturbed by development. Where trees are in a woodland or groups only the outside edge trees are assessed unless there are larger trees with RPAs or crowns that would overlap the edge trees.

- 5.2 BS 5837: 2005 provides the framework through which tree can be categorised in terms of their health, amenity value and long-term viability for retention on a development site. There are four categories, A,B,C & R. The most significant or valuable trees are placed in the categories, A & B. Site design should make provision to retain trees in these categories and most Local Planning Authorities will insist upon this, whilst trees that should not be a constraint to development are recorded with a C category. Trees categorised as R are in a poor condition and should be removed prior to the commencement of work.
- 5.3 Where trees are to be retained, it is necessary to ensure that they are suitably protected to avoid damage during the construction phase of the development. It is also important to consider any long term implications, such as issues with shading or leaf litter that may arise as a result of tree retention.
- 5.4 To ensure that trees are not adversely affected by the construction works it is necessary to:
 - a. The avoidance of physical damage to the aerial parts of the trees (i.e. Impact and other damage to trunk and branches)
 - b. The avoidance of damage to retained trees as a result of the severance or other physical damage to their roots
 - c. Preserve of the character of the soil, through the avoidance of any activity that would cause it to become compacted or otherwise disturbed or disrupted, and to avoid contamination by potentially harmful substances
 - d. To ensure free gaseous exchange is permitted between the upper layers of soil and the atmosphere
 - e. To ensure adequate (but not excessive) water supply to the soil and hence to tree roots

This would normally be achieved by establishing an area, known as a construction exclusion zone (CEZ) around each tree. The CEZ is derived from the root protection area (RPA) and the crown spread of the tree. The RPA represents the area occupied by the tree's root system and is calculated for each tree based on its stem diameter and the ground conditions present taking account of and any impediment to rooting. The RPA should represent the most probable position of the tree's root system.

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The CEZ must be considered sacrosanct and be maintained completely undisturbed. No construction should take place within this area and it should not be used for storage of materials or fuels. Access for vehicles machinery or personnel is prohibited and to ensure that it is not damaged by construction activity it must be suitably protected during the construction phase, using robust fencing or alternative ground protection methods, to prevent disturbance and damage occurring.

- 5.5 In addition to the implications that a new development may have for existing trees it is also important to assess any long term issues or concerns that may arise as a result of retaining trees close to a new dwelling or structure. This can include problems associated with leaf litter and other debris that may fall from trees, the potential that a tree has to cause damage to a structure in the future, any on going maintenance requirements that may arise and the level of shade that the tree may cast. Trees can also cause feelings of apprehension to the occupiers of nearby buildings and can have an over bearing impact on a property if adequate space is not provided.
- 5.6 The report assesses all trees with regard to their size, position and natural characteristics, and taking into account of their future growth makes provides recommendations as to their long term suitability for retention.

Arboricultural Implication Assessment

- 6.1 Full details of the tree surveyed are provided in appendix A. and their relative positions, crown spreads, root protection areas are indicated on the attached plans.
- 6.2 The oak tree identified as T1 provides significant amenity to the property and is important in the local landscape. The land level drops by approximately 0.7 of a metre immediately to the east of the tree, and is held back by a small retaining wall. This land form would create a bias in root development to the north, south and west, away from the property. However oaks can root deeply even in quite heavy soils so the affect of the wall would be somewhat limited and this has been taken into account when determining the position of the CEZ. T1 can be satisfactorily protected during the development.
- 6.3 T1 is to the west of the dwelling and will cast some shade over the proposed extension during the evening. This would be no worse than what is currently experienced by the property and, with view to the predicted rise in summer temperature the dappled shade of a deciduous tree may be considered by many to be a positive and attractive benefit. The property would also enjoy sunlight for much of the day and it is not considered that the shading would be excessive.

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The property also has a generous garden area that can accommodate a tree of this size. Although the proposed extension will bring the dwelling closer to the tree it is considered that there is a reasonable distance between the tree and house to ensure that no problems associated with proximity arise that would cause detriment to the reasonable enjoyment of the property.

- 6.4 The other trees on site are of little public amenity value and the two old fruit trees should be removed as part of good arboricultural management. The remaining trees, T1 & T2 can be protected and will exert no influence over the proposed extension.

Arboricultural Operations

- 7.1 No work is required to facilitate the proposed development.

Arboricultural Method Statement

- 8.1 This arboricultural method statement (AMS) sets out the details of tree protection measures and the methodology for all proposed works that affect the retained trees on and adjacent to the site.
- 8.2 This document should be read in conjunction with the Tree Protection Plan (TPP). The TPP indicates the construction exclusion zone (CEZ) that must be maintained around each retained tree. These areas must remain undisturbed during the construction process (except where work is identified and undertaken in accordance with this report) and must be protected using suitable fencing or ground protection as specified.
- 8.3 Copies of the TPP & the AMS must be available on site and all tree protection requirements explained to all persons undertaking activities on the site during the site induction process.
- 8.4 All tree protection measures must be installed and inspected prior to bringing onto the site any plant, materials or equipment or undertaking any works or demolition, (with the exception of those works outlined in the arboricultural works specification detailed below) the LPA must be informed in writing once the tree protection measures are installed.
- 8.5 The site is to be inspected by the consulting arboriculturalist in accordance with the schedule of inspections.
- 8.6 All measurements are given in metric using standard abbreviations.

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Fencing and ground protection

- 8.7 The TPP indicates the position all protective fences and ground protection.
- 8.8 Protective fencing will comprise a 2.4 m high scaffold frame work with vertical and horizontal poles, driven into the ground to a depth of 0.6 m and well braced to resist impact. Onto this framework 'weldmesh' or 'herres' fencing panels must be securely fixed using scaffolding clamps.. The existing boundary fence will be acceptable where its location coincides with the tree protection fence.
- 8.9 Where ground protection is specified this will consist of 25mm thick plywood sheets placed upon a 100 mm compressible layer of chipped garden bark on top of a geo-textile membrane. The plywood sheets must be securely pegged into place to prevent lateral movement during construction. This type of protection is only suitable for pedestrian access.
- 8.10 The fencing and ground protection will remain in place until completion of the construction phase and then only removed with the consent of the LPA.
- 8.11 Other than works approved in writing by the LPA, no works including storage or dumping of materials shall take place within the exclusion zones defined by the protective fencing.

General Precautions

- 8.12 No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10m of the trunk of a tree that is to be retained.
- 8.13 No fires will be lit within 20m of the trunk of any tree that is to be retained.
- 8.14 Positions of site huts, toilets, storage and mixing areas are identified on the TPP. Contractor parking should be off site or in areas identified on the TPP.
- 8.15 Access to the work area is via the route indicated on the TPP.
- 8.16 All service and drainage routes, below or above ground must avoid the CEZ. All services are to be installed in accordance with NJUG volume 4 Guidelines.
- 8.17 To ensure that all tree protection measures are properly installed it is recommended that the site be monitored by Shields Arboricultural Consultancy to the following schedule.

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Schedule of Inspection

1. On completion of erection of fencing and installation of ground protection prior to commencement of development works
2. Monthly through out project
3. On completion of project

Conclusion

- 9.1 If the recommendations in this report are followed the proposed development will not have a significant detrimental impact on the arboreal environment of the site and surrounding area.

S.J.A. Shields

**Dip. Arb. (RFS), M.Arbor.A, MICFor.
Chartered Forester**

21st December 2010

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Arboricultural Implications and Recommendations

Tree No.	Species	Height (m)	Stem Dia (mm)	Crown Spread (m)				Comments	RPA (m2)	Cat
				N	E	S	W			
T1	Oak (<i>Quercus sp</i>)	16	814	8 e.	11	10.3	7.5	A prominent tree situated in the rear garden of the property. Structural Condition: Good Physiological Condition: Good RPA: The land level drops by approximately 0.7 of a metre immediately to the east of the tree, and is held back by a small retaining wall. Root development would be slightly restricted in this direction. AIA: Tree can be protected and retained. There is sufficient separation between the proposed extension and the tree to prevent it dominating the building. The tree will cast some shade during the evening; however this will be no worse than that already affecting the existing building.	300	A
T2 & T3	Cherry Plum (<i>Prunus sp</i>)	10 10	388 405	3.8 4.3	1 3.3	4.9 2	3.7 1	A group of two trees situated in the rear garden. The trees are in the latter stages of their life and provide little in the way public amenity value. Structural Condition: Good Physiological Condition: Fair	68 74	C2

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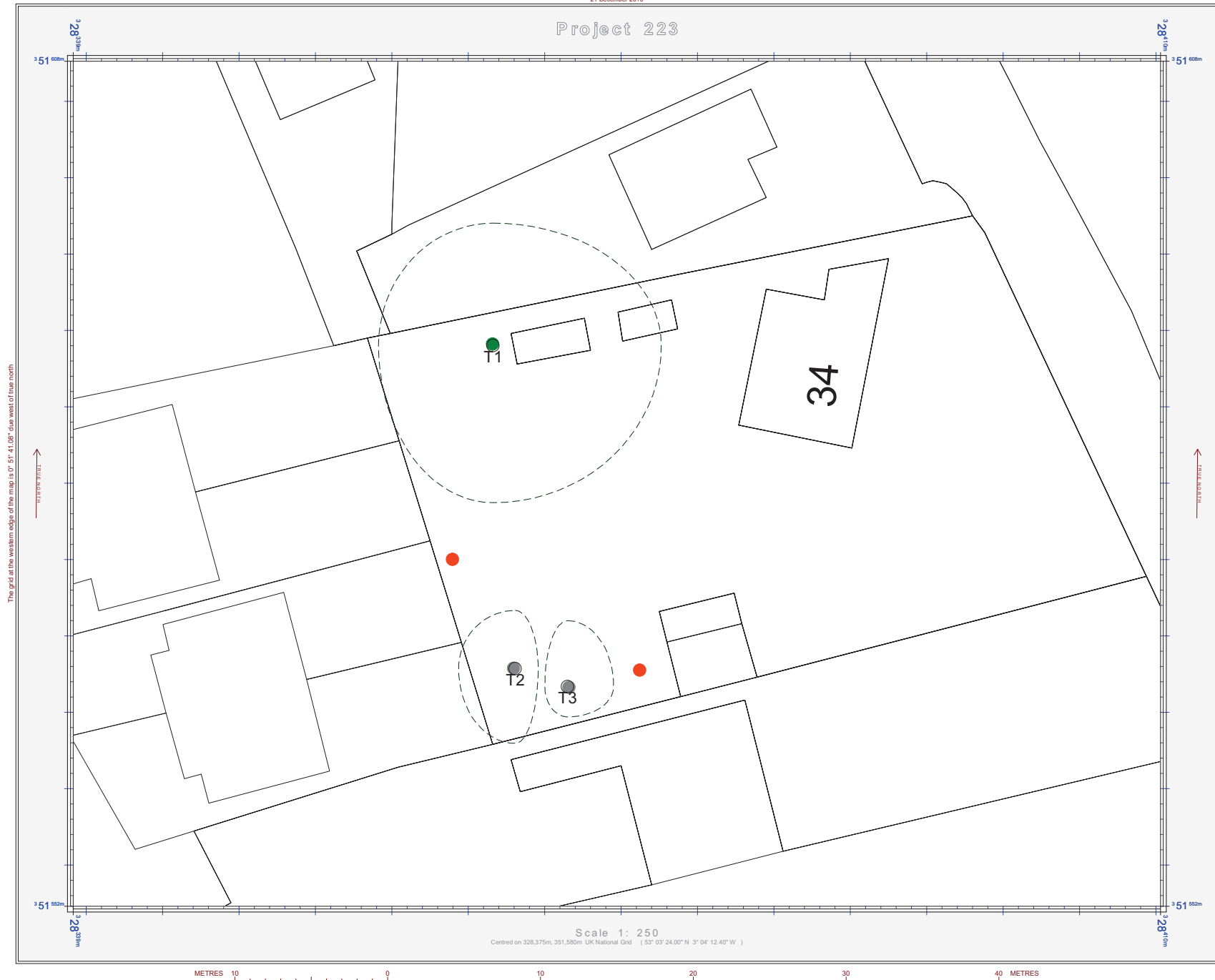


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								RPA: Circular		
								AIA: Tree can be protected and retained.		

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Project 223



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Tree Location Plan

34 Llewellyn Road
Coedpoeth

- Tree Cat A
- Tree Cat C
- Tree Cat R
- Canopy Spread

Drawing No: LRC/TLP/12/10/01

Drawn By: S. Shields

Scale: 1:250 @ A3

Date: 21st Dec. 2010

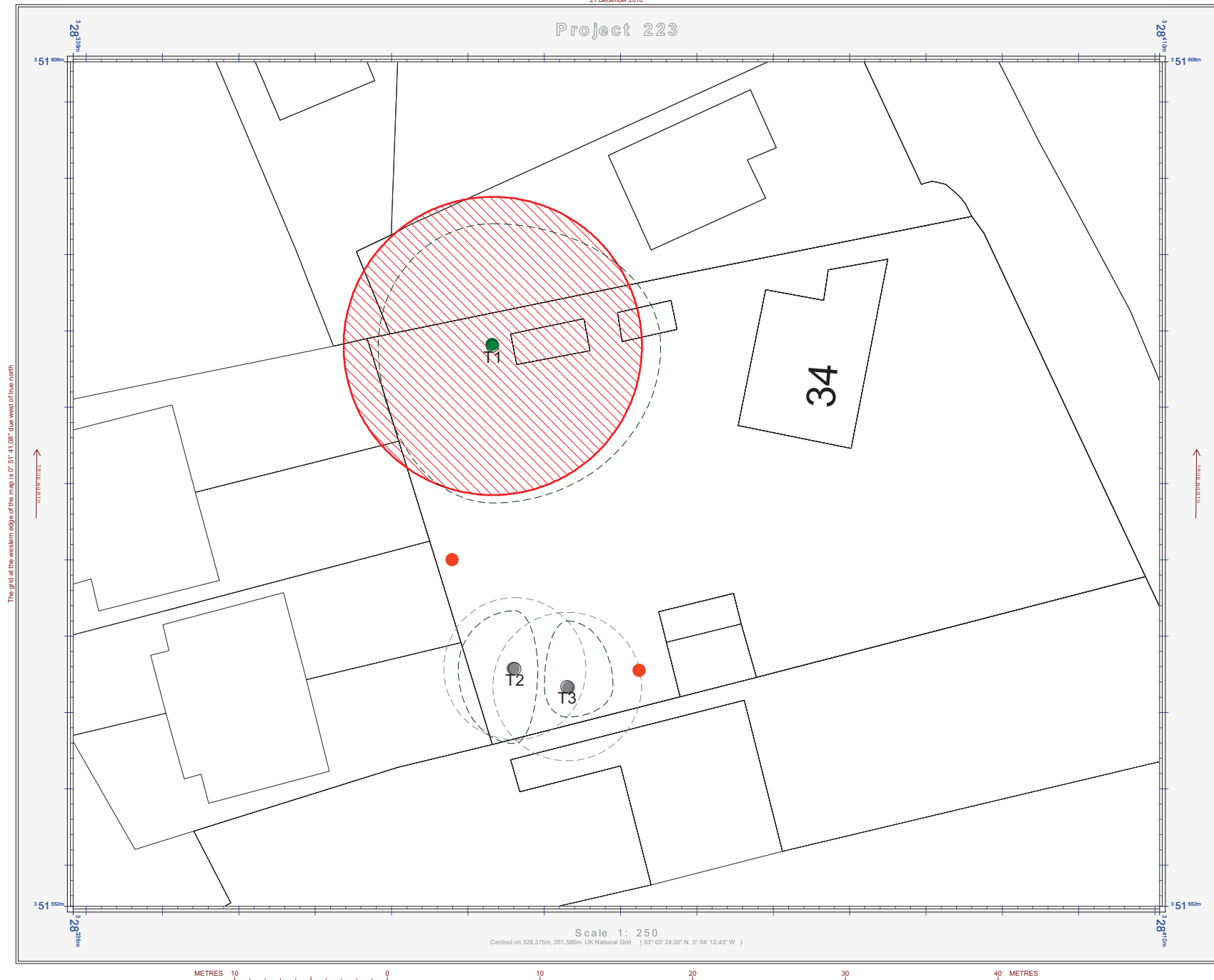
Revision: A

Do not scale from this drawing

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Root Protection Area

34 Llewellyn Road
Coedpoeth

- Tree Cat A
- Tree Cat C
- Tree Cat R
- Canopy Spread
- RPA
- RPA Cat C

Drawing No: LRC/RPA/12/10/01

Drawn By: S. Shields

Scale: 1:250 @ A3

Date: 21st Dec. 2010

Revision: A

Do not scale from this drawing

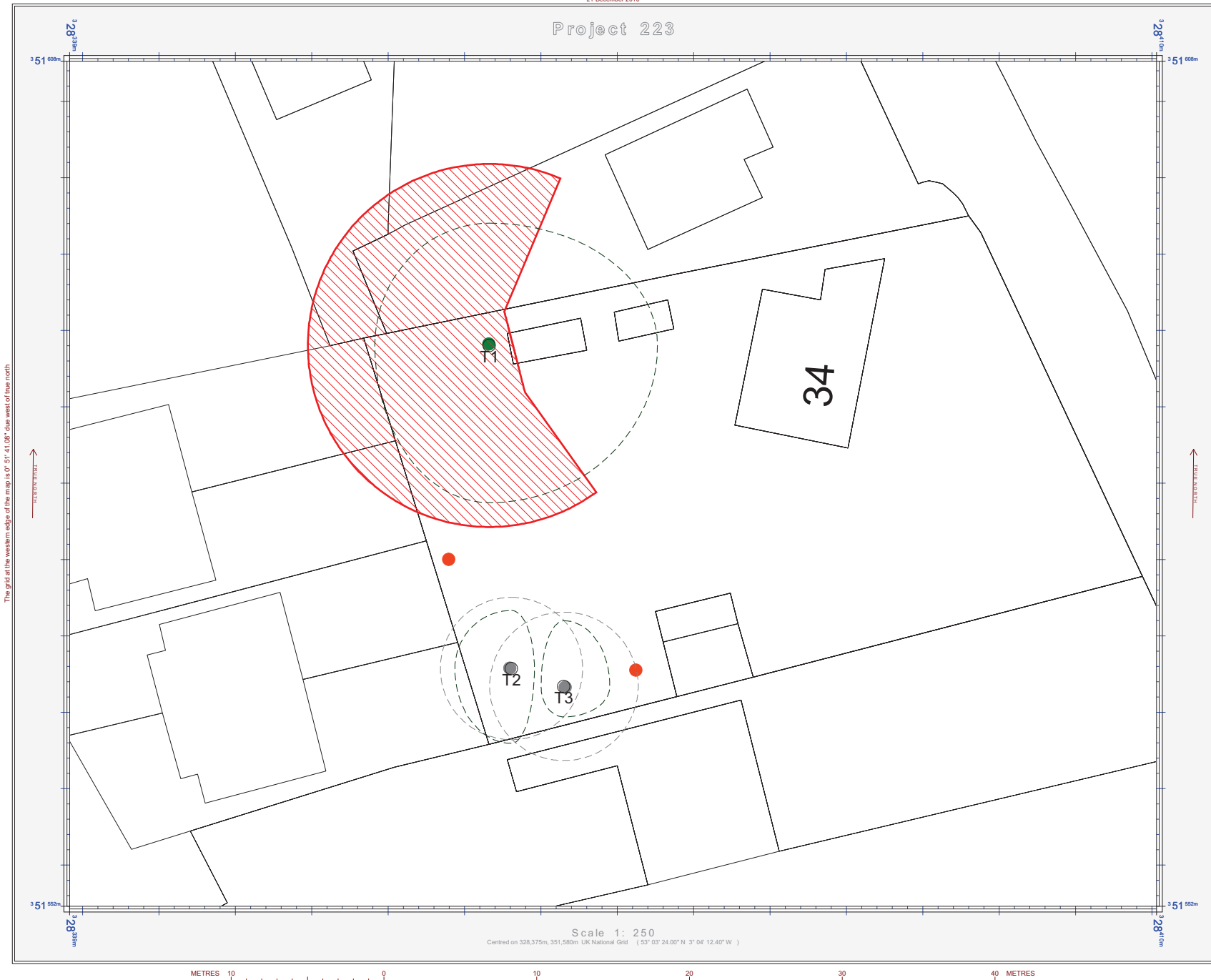
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Root Protection Area Modified for Ground Conditions

34 Llewellyn Road
Coedpoeth

- Tree Cat A
- Tree Cat C
- Tree Cat R
- Canopy Spread
- RPA
- RPA Cat C

Drawing No: LRC/RPM/12/10/01

Drawn By: S. Shields

Scale: 1:250 @ A3

Date: 21st Dec. 2010

Revision: A

Do not scale from this drawing

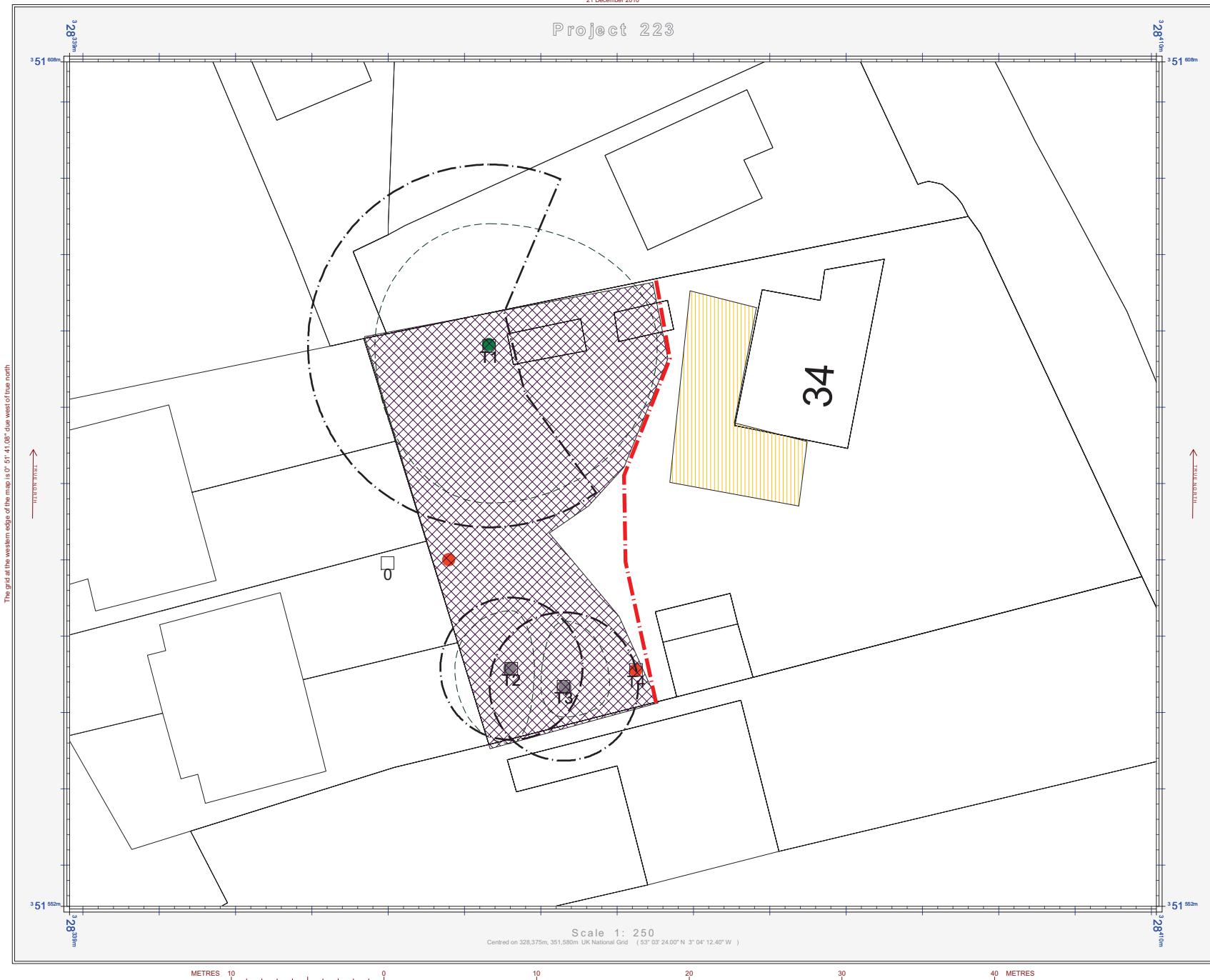
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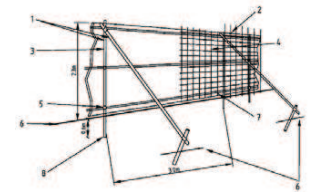
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Tree Protection Plan

34 Llewellyn Road
Coedpoeth

- Tree Cat A
- Tree Cat C
- Tree Cat R
- Canopy Spread
- Construction Area
- RPA
- Tree Protection Fencing



1 Standard scaffold poles 2 Uprights to be driven into the ground 3 Panels secured to uprights with wire ties and/or standard scaffold clamps 4 Weldmesh wired to the uprights and horizontals 5 Standard clamps 6 Ground level 7 Wire twisted and secured on inside face of fencing to avoid easy dismantling 8 Approx. 0.6 m driven into the ground

Drawing No: LRC/RPM/12/10/01

Drawn By: S. Shields

Scale: 1:250 @ A3

Date: 21st Dec. 2010

Revision: A

Do not scale from this drawing

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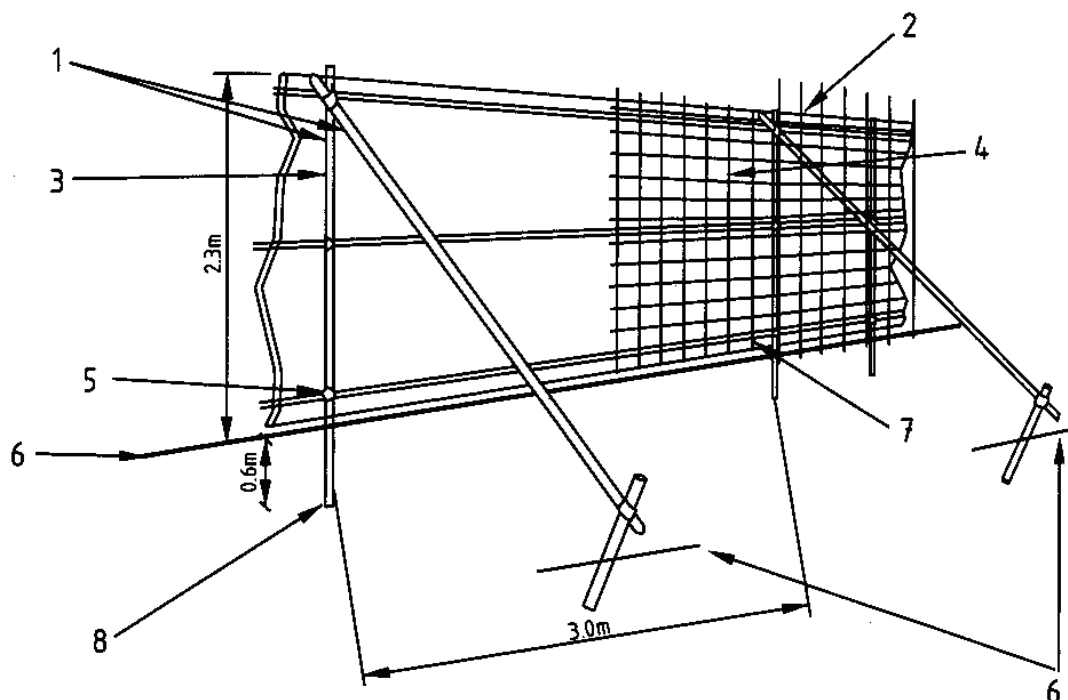
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Recommended Design of Tree Protection Fencing



1 Standard scaffold poles 2 Uprights to be driven into the ground 3 Panels secured to uprights with wire ties and/or standard scaffold clamps 4 Weldmesh wired to the uprights and horizontals 5 Standard clamps 6 Ground level 7 Wire twisted and secured on inside face of fencing to avoid easy dismantling 8 Approx. 0.6 m driven into the ground

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