

**Arboricultural Impact Assessment
Arboricultural Method Statement
Tree Protection Plan**

**ST. ANDREW'S CHURCH, HOLCOMBE HILL,
HOLCOMBE. BA3 5FR**



On behalf of

St. Andrew's Parochial Church Council
c/o Nestledown
Longleat Lane
Holcombe
BA3 5DX

prepared by

Alister Rankine BSc. (Forestry); Tech. Cert. (Arbor. A.)
Arboricultural Consultant

January 2018

1.0 Introduction

1.1 Brief

This report is prepared by Hillside Trees Ltd. on behalf of St. Andrew's Church, Holcombe Parochial Church Council.

1.2 Purpose of the Report

1.2.0 This report is intended to inform the Diocese and accompany a planning application relating to a proposed drain connection to an existing sewer associated with the installation of kitchen and toilet facilities at St,. Andrew's Church, Holcombe Hill, Holcombe. This document has been produced to demonstrate that the implications of the proposed development in relation to the arboricultural and landscape value of the trees on the site have been fully considered during the detailed design process.

1.2.1 This report, and the accompanying information, is supplied in order to:

- Identify trees to be removed, retained and requiring protection during the site preparation, trench excavation and drain installation phase of the project.
- Present information regarding the location of protective barriers and ground protection (Construction Exclusion Zones) on a Tree Protection Plan.
- Identify special engineering measures
- Provide an Detailed Arboricultural Method Statement for the recommended works related to trees to be retained during and after the development.

1.3 Documents Provided to Hillside Trees Ltd.

- Kevin Smith Architectural Services Drawing No.1854/01 Location & Block Plan
- Kevin Smith Architectural Services Drawing No.1854/03 Site Plan
- Kevin Smith Architectural Services Drawing No.1854/06 Proposals Details

1.4 Limitations

1.4.1 This is a preliminary assessment from ground level and observations have been made solely from visual inspection for the purposes of assessment in terms relevant to planning and development and informing the Diocese.

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

2

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

1.4.2 The conclusions relate to conditions found at the time of inspection.

1.4.3 It should be noted that this survey is not a tree safety inspection. It is carried out in order to inform the implementation of the proposed works.

1.5 Site Visit and Tree Assessment Methodology

1.5.1 A site visit was undertaken on 16th January 2018 by an Arboricultural Consultant of Hillside Trees Ltd.

1.5.2 The inspection took place from ground level aided by the Visual Tree Assessment method (Mattheck and Breloer, 1994).

1.5.3 Weather conditions were dry, bright and chilly.

1.5.4 While this appraisal is not a tree risk assessment it nonetheless takes into account observed structural defects of the inspected trees in order to inform conclusions with regard to their retentive worth.

1.6 Data Collection

1.6.1 Data collected includes designated tree number, tree species, height, number of stems, stem diameter, crown clearance (height of periphery of crown spread above ground level), branch spread (to N, S, E and W), age class, physiological condition, useful life expectancy, tree structural condition, site notes (where this has a bearing on the present or future health or structural condition of the tree), and tree category.

1.6.2 All measurements are metric.

1.7 Presentation of the Data Collected

1.7.1 Data collected regarding individual trees and groups of trees are presented in the Tree Schedule table in Appendix A in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

1.7.2 The data significant to the proposed site layout is also presented on the Tree Protection Plan (Drawing Number 180119-SAC-TPP-LI, Appendix B).

1.7.3 All other relevant data are presented within the main body of this report.

1.7.4 Trees have been allocated an individual number. This number is used to identify individual trees throughout this report, within the Tree Schedule and on the Tree

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillsidetrees.co.uk

3

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569

Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

Protection Plan presented in the Appendix B of this report. Trees have not been identified on site with individual tags in this instance.

Site Description

1.7.5 The site covers the churchyard of St. Andrew's Church, Holcombe Hill, Holcombe. Central grid reference: ST 671496.

1.7.6 The site currently comprises a churchyard laid to mown grass with an access path to the church off Holcombe Hill, a war memorial and a single mature Yew tree in the south-east corner.

2.0 Arboricultural Constraints

An assessment of the trees surveyed, presented in the Tree Schedule table in Appendix A, is also considered in the main body of the report below.

An Arboricultural Impact Assessment Plan has been produced showing the Root Protection Areas (RPAs) for the individual trees identified in the Tree Schedule (Appendix A). This represents the minimum area in m² which ideally, should be left undisturbed around each tree were it to be retained. The RPA has been calculated in accordance with Section 4.6 of BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

The Arboricultural Impact Assessment Plan also shows a representation of the crown spread of each tree measured in four cardinal directions.

A search of Mendip District Council's online mapping service on 21st January 2018 to determine if any of the trees within the site are subject to Tree Preservation Orders or if the site falls within a Conservation Area confirmed that currently no part of the site relating to trees is under statutory control. Consequently, consent for the removal of trees is not required from the Local Planning Authority.

2.1 Trees Identified for Retention and Removal

The proposed works involves the excavation of a trench to accommodate a mains drain connection to an existing drain and the installation of a drain associated with proposed kitchen and toilet facilities in the church.

The following tree will be retained:

T3 - Yew (*Taxus baccata*)

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

4

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

The following trees will be removed:

T1, T2 - Sycamore (*Acer pseudoplatanus*)

Both these trees are self-sown specimens located on top of the retaining wall of the churchyard above the neighbouring property 'Church View'. Inspection of the wall from the garden of 'Church View' by kind permission of the owner, revealed that both these trees are impacting on the structure of the wall. There is evidence that repairs to the pointing in the wall have been carried out in the past. There are now cracks in the mortar and some stones in the upper layers of the wall are being dislodged, making the trees dangerous in respect of their increasing impact on the stability of the wall.

T1 has a stem diameter of 100mm at 1.5m above ground level but is exempt from the requirement of a Faculty from the Diocese by means of its dangerous status in respect of its extant and continuing impact on the structural stability of the retaining wall.

T2 is also exempt from the requirement of a Faculty given that it has a stem diameter of 60mm and is also considered to be a danger to the future stability of the wall.

In addition to the above trees to be removed there is a small bush and a patch of bramble in the north-east apex of the churchyard that will also be cleared. These works will not require a Faculty.

3.0 Tree Protection

The Yew tree to be retained on site during and after the proposed works, as listed in Section 2.1, will require protection.

Protection measures, based on the RPA presented in the Arboricultural Impact Assessment Plan will involve the erection of tree protection barriers as discussed in Section 3.1. Where the proposed site layout requires the breaching of these ideal areas, measures are recommended in order to minimise the damage to the roots and the root environment of the tree in question. Such measures acknowledge the fact that the extent, distribution and actual position of roots of a tree within the RPA are not known.

The tree protection fencing is illustrated in the Tree Protection Plan. See the Detailed Arboricultural Method Statement (Appendix B).

As previously discussed, it is not certain where roots of trees may or may not be and the illustrations in the Arboricultural Impact Assessment Plan and Tree Protection Plan (Appendix B) are only guidelines based on calculations shown in BS5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*'.

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

5

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569
Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

3.1 Tree Protection Fencing

3.1.1 The Tree Protection Plan (Appendix B) shows the location of the proposed tree protection barriers where appropriate.

Such Construction Exclusion Zones will be erected in accordance with the recommendations in Section 6.2 of BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. The specifications for the barriers are presented in Figure 2 from BS5837:2012 presented in Appendix II of the detailed Arboricultural Method Statement, Appendix B.

Given the relatively small scale of the site, however, it may be appropriate to adapt the specification of the protective fencing. 'Heras' weldmesh panels secured in robust bases and tightly clamped would provide adequate protection here. The final specification will be agreed with the Project Arboriculturalist.

3.1.2 It is *essential* that tree protection fencing barriers are erected before any trench excavation work be commenced, i.e. as the first operation on site following Planning Approval.

3.2 Damage Limitation – Special Measures

Areas are identified on the Tree Protection Plan (Appendix B) where special measures will be required in order to minimise the impact of the proposed trench excavation on the retained tree where the proposed works breach the RPA.

REFERENCES

Mattheck, C. and Breloer, H. (1995). The Body Language of Trees: A handbook for failure analysis. Research for Amenity Trees **4**. HMSO, London, 240pp.

STANDARDS PUBLICATIONS

Trees in relation to design, demolition and construction – Recommendations. (BS5837), British Standards Institution, London (2012).

Tree Work Recommendations. (BS3998), British Standards Institution, London (2010).

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569
Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

Appendix A

Tree Schedule

Table 1 Cascade Chart taken from BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569
Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

Appendix A - Tree Schedule

Client:

Surveyor:

Date of Survey:

St Andrew's Church, Holcombe

St Andrew's PCC

Alister Rankine

16th January 2018



Tree Number	Single or Group	Scientific Name	Height (m)	Calculated Stem Diameter (mm)	Number of Stems	Root Protection Area (Radius, m)	Crown Clearance (m)	N - Radius (m)	S - Radius (m)	E - Radius (m)	W - Radius (m)	Age Class	Physiological Condition	ULE (Years)	Tree Structural Condition and Site Notes.	BS Category
T1	S	Acer pseudoplatanus	5	100	1	1.20	3	2	2	2	2	SM	P	10-20	Poor. Multi-stemmed. Located on top of retaining wall	C1
T2	S	Acer pseudoplatanus	4	60	1	0.72	3	1	1	1	1	SM	P	10-20	Poor. Multi-stemmed. Located on top of retaining wall	C1
T3	S	Taxus baccata	8	876	5	10.51	4	6	6	5	5	M	G	40+	Fair. Multi-stemmed	B1

Table 1 – Cascade chart for tree quality assessment

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
<p>Category U Those in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> • Trees that have a serious, irremedial, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or show signs of significant, immediate, and irreversible overall decline • Trees infected by pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing other trees of better quality <p><i>NOTE Category U trees can have existing potential conservation value which might be desirable to preserve; see 4.5.7</i></p>			<p>DARK RED</p> <p>RGB code 127-000-000 AutoCAD 246</p>
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria - Subcategories			Identification on plan
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
<p>Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	<p>LIGHT GREEN</p> <p>RGB code: 000-255-000 AutoCAD 90</p>
<p>Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	<p>MID BLUE</p> <p>RGB code: 000-000-255 AutoCAD 170</p>
<p>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</p>	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	<p>GREY</p> <p>RGB code: 091-091-091 AutoCAD 252</p>

Appendix B

Detailed Arboricultural Method Statement

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569
Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

**Arboricultural Method Statement
Tree Protection Plan**

**ST. ANDREW'S CHURCH, HOLCOMBE HILL,
HOLCOMBE. BA3 5FR**



On behalf of

St. Andrew's Parochial Church Council
c/o Nestledown
Longleat Lane
Holcombe
BA3 5DX

prepared by

Alister Rankine BSc. (Forestry); Tech. Cert. (Arbor. A.)
Arboricultural Consultant

January 2018

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

This Method Statement Comprises:

- 1. Method Statement Document**
- 2. Appendices:**
 - I. Schedule of Tree Removal**
 - II. Tree Protection Specification & Tree Protection Site Notice**
 - III. NJUG 4**
 - IV. Project Arboriculturalist Site Visit Report Form**
- 3. Tree Protection Plan (180119-SAC-TPP-LI)**

THESE DOCUMENTS ARE TO BE KEPT TOGETHER

Full Site Address:

St. Andrew's Church
Holcombe Hill
Holcombe. BA2 5FR

Proposed works:

Excavation of a trench to accommodate a drain connection to an existing sewer and the installation of a drain associated with proposed kitchen and toilet facilities in the church.

Contacts:

Client:

St. Andrew's Parochial Church Council
c/o Nestledown
Longleat Lane
Holcombe
BA3 5DX

10

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569

Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

Project Manager (for the client):

Mike Swinton
11 Kingmead Close
Holcombe
Radstock. BA3 5DR

Tel: 01761 232380
Email: xmrtpi@btinternet.com

Contractor / Builder:

To be confirmed

Arboricultural Officer:

Bo Walsh
Tree Officer
Council Offices
Mendip District Council
Cannards Grave Road
Shepton Mallet
Somerset
BA4 5BT

Telephone: 01749 341434
Email: bo.walsh@mendip.gov.uk

Project Arboriculturalist:

Alister Rankine
Hillside Trees Ltd.
2 Hillside
Bowden Hill
Chilcompton
Radstock BA3 4EN

Telephone: 01761 233244
E-mail: alister@hillsidetrees.co.uk

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

Works Requiring Tree Protection:

Works	Tree Number	Type of Protection	Reference
<ul style="list-style-type: none"> Trench excavation 	T3	<ul style="list-style-type: none"> Tree Protection Fencing Tree Protection Site Notice Temporary Ground Protection 	Appendix II Appendix II
<ul style="list-style-type: none"> Drain installation 	T3	<ul style="list-style-type: none"> Tree Protection Fencing Tree Protection Site Notice Temporary Ground Protection 	Appendix II Appendix II

Sequencing of Operations:

1. Pre-commencement Site Meeting

- a. Meeting of Appointed Contractor, Client Agent, and Project Arboriculturalist to discuss and agree drainage run works programme and tree protection.

2. Carry Out Tree Removal (See Appendix I)

- a. All tree removal works will be carried out by a suitably qualified and experienced tree surgeon

3. Install Tree Protection Fencing (see Appendix II)

- a. Tree Protection Fencing will be installed in the locations shown on the Tree Protection Plan (Drawing No. 180119-SAC-TPP-LI)
- b. The area between the Tree Protection Fencing and the tree will be a Works Exclusion Zone (WEZ)
- c. Tree Protection Fencing will be constructed to specification described in Appendix II OR 'Heras' weldmesh panels secured in robust bases and tightly clamped. Final specification to be agreed with the Project Arboriculturalist.

12

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569
Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

- d. Site Notices will be securely fixed to the Tree Protection Fence panels (Appendix II)
- e. Once installed the Tree Protection Fencing will be inspected by the Project Arboriculturalist and a Site Visit Report will be issued to the Local Planning Authority Arboricultural Officer and the Parochial Church Council (Appendix IV).
- f. There will be no movement of Tree Protection Fencing unless it is overseen by the Project Arboriculturalist.
- g. No activity is planned to take place within the WEZ; however, any work that does take place within the WEZ will be overseen and approved by the Project Arboriculturalist.

4. Installation of temporary ground protection

- a. Temporary ground protection will be installed in the location indicated on the Tree Protection Plan, Drawing No. 180119-SAC-TPP-LI
- b. Ground protection will consist of scaffold boards placed on top of a compression-resistant layer (e.g. 100mm depth woodchip) laid on to a geo-textile membrane.
- c. Once installed the temporary ground protection will be inspected by the Project Arboriculturalist and a Site Visit Report will be issued to the Local Planning Authority Arboricultural Officer and the Parochial Church Council (Appendix IV).

5. Excavation of Drainage Trench

- a. The section of trench to accommodate the proposed connection drain within the Root Protection Area of the Yew tree (T3) as shown on the Tree Protection Plan (Drawing No. 180119-SAC-TPP-LI), will be dug by hand. The trench will have a fall of 1:60 and a depth of 365mm.

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

- b. Spoil from the trench must be stored on the temporary ground protection and NOT within the Root Protection Area of the tree.
- c. All roots over 25mm in diameter must be left in place and worked around.
- d. Roots encountered less than 25mm in diameter may be pruned back with a sharp, clean handsaw or secateurs. They must then be covered with damp hessian to prevent the roots from drying out. The hessian must be removed immediately prior to backfilling.
- e. The new drain run is required to comply with the minimum standards set out in the National Joint utilities Group (NJUG) 2007 Volume 7, Issue 1 : 'Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees' (Appendix III).
- f. The hand excavation of the service trench will be monitored by the Project Arboriculturalist and a Site Inspection Report issued to the Local Planning Authority Arboricultural Officer and the Parochial Church Council (Appendix IV).

6. Removal of Tree Protection Fencing & Ground Protection

- a. Tree Protection Fencing and Ground Protection will only be removed once all works associated with the service trench have been completed.
- b. Once the Tree Protection Fencing and Ground Protection have been removed the site will be inspected by the Project Arboriculturalist and a Site Visit Report issued to the Local Planning Authority Arboricultural Officer and the Parochial Church Council (Appendix IV)

General Precautions

- 1. Any welfare and site storage facilities will be positioned outside the WEZ. The location will be agreed between the Site Manager and the Project Arboriculturalist prior to commencement of the project.

14

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569

Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

2. In the event of unforeseen incidents occurring, that may adversely affect or threaten the welfare or security of the tree, the Client Agent shall inform the Project Arboriculturalist at the earliest opportunity and not more than one working day following the incident.
3. The Project Arboriculturalist will visit the site to inspect and assess the circumstances and make any appropriate recommendations. The Local Planning Authority Tree Officer will be informed by the Project Arboriculturalist of such incidents and recommendations will be submitted for approval by the Local Planning Authority, initially verbally, and then in writing.
4. A record of any emergency incidents and works shall be maintained by the Project Arboriculturalist.
5. Incidents which may merit such contingency plans include:
 - Accidental / unauthorised damage to the limbs, roots or trunk of the Yew tree
 - The spillage of chemicals within or adjacent to a Root Protection Area
 - The discharge of toxins / waste within or adjacent to a Root Protection Area
 - The un-scheduled breaching of a tree protective barrier or Works Exclusion Zone.

This Method Statement has Been Informed by the Following Information

- Arboricultural Site Survey carried out by Hillside Trees Ltd on 16th January 2018.
- Kevin Smith Architectural Services Drawing No.1854/01 Location & Block Plan
- Kevin Smith Architectural Services Drawing No.1854/03 Site Plan
- Kevin Smith Architectural Services Drawing No.1854/06 Proposals Details
- BS5837: 2012 'Trees in relation to design, demolition and construction – Recommendations'

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

Appendix I

Tree Number	Work Specification
T1, T2	<ul style="list-style-type: none">• Remove to ground level• treat stumps with proprietary herbicide to prevent re-growth

All tree removal works will be carried out by a suitably qualified and experienced tree surgeon

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

Appendix II Specification for Protective Fencing Tree Protection Site Notice

17

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569
Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

**BS 5837:2012 – TREES IN RELATION TO DESIGN, DEMOLITION AND
CONSTRUCTION – RECOMMENDATIONS**

PROTECTIVE BARRIER DETAIL

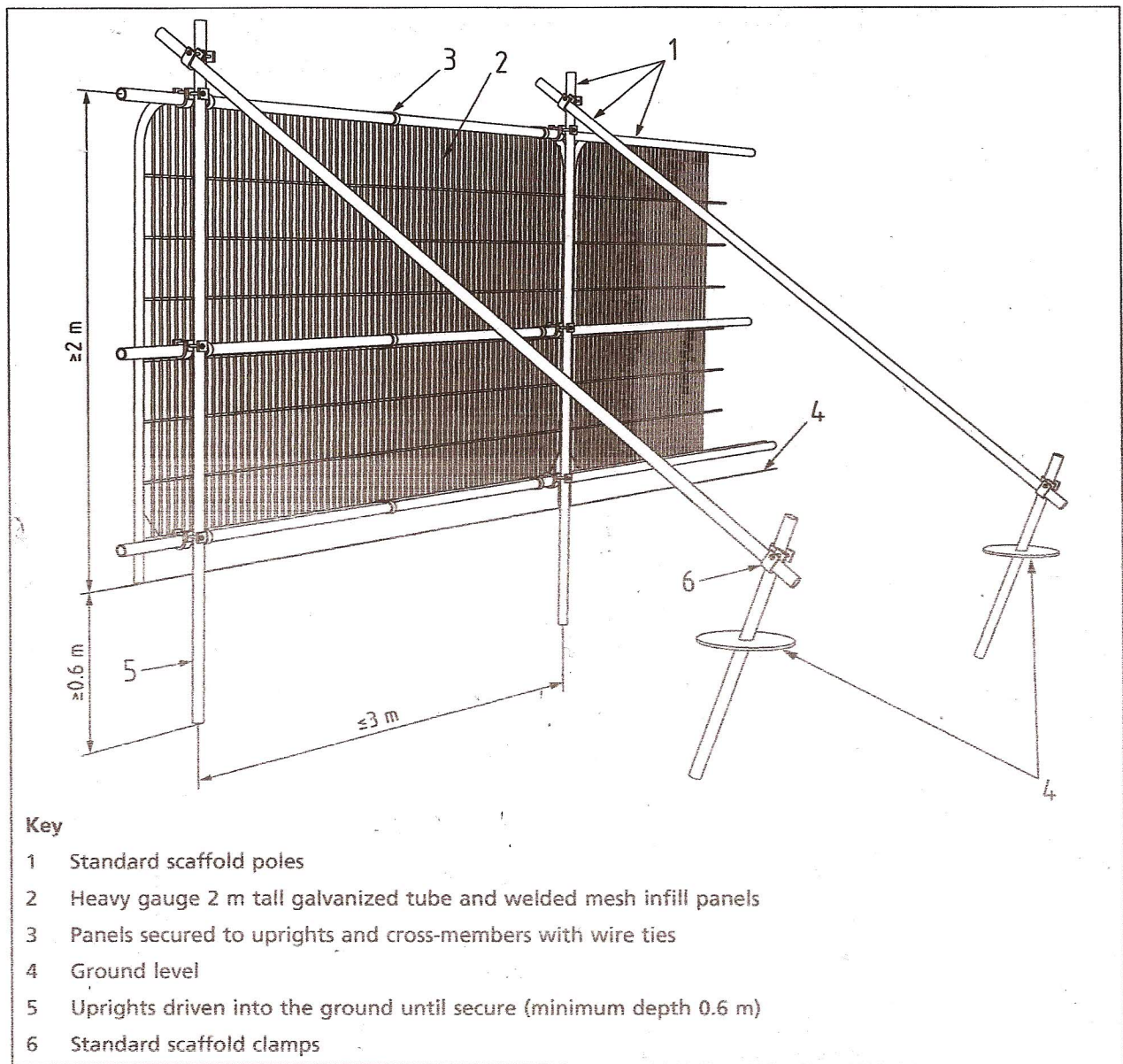


Figure 2 Default specification for protective barrier



**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**

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

Appendix III NJUG 4

18

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569
Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

Volume 4

NJUG GUIDELINES FOR THE PLANNING, INSTALLATION AND MAINTENANCE OF UTILITY APPARATUS IN PROXIMITY TO TREES

PLEASE ENSURE THAT YOU READ THE LEGAL NOTICE AND DISCLAIMER WHICH APPEARS IN APPENDIX B OF THIS PUBLICATION

Issue 1: 8th October 2007

NJUG has a vision for street works, this vision is simply:

- **Safety is the number one priority**
- **Damage to underground assets is avoided**
- **Utilities work together and in partnership with local authorities to minimise disruption**
- **Utilities deliver consistent high quality**
- **Utilities maximise the use of sustainable methods and materials**
- **Street Works in the U.K. are regarded as world class**

This document forms part of that vision.

**Mark Ostheimer
Director, Safety and Policy**

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

The following volumes constitute the NJUG Publications. They are living documents and may be amended from time to time. There is no attempt to describe any specific industry process as each utility has its own specifications and procedures. Not all the publications will necessarily be available at one time as individual volumes will be published when available.

NJUG PUBLICATIONS	
<i>Current</i>	<i>Previous</i>
VOLUME 1	
NJUG Guidelines on the Positioning and Colour Coding of Underground Utilities' Apparatus	NJUG 4 & 7
VOLUME 2	
NJUG Guidelines on the Positioning of Underground Utilities Apparatus for New Development Sites	NJUG 2, 5 & 6
VOLUME 3	
NJUG Guidelines on the Management of Third Party Cable Ducting	New
VOLUME 4	
NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees	NJUG 10
VOLUME 5	
NJUG Guidelines on Environmental Good Practice	New
VOLUME 6	
Legislation & Bibliography	NJUG 1

The following NJUG publications have not been reviewed and have been completely withdrawn:

- NJUG 3 – Cable Locating Devices
- NJUG 8 – Performance Guide for the Assessment of Metallic Pipe and Cable Locators
- NJUG 9 – Recommendations for the Exchange of Records of Apparatus between Utilities
- NJUG 11 – Proposed Data Exchange Format for Utility Map Data
- NJUG 12 – NJUG Specification for the Digitisation of Large Scale OS Maps
- NJUG 13 – Quality Control Procedure for Large Scale OS Maps Digitised to OS 1988
- NJUG 15 – NJUG/Ordnance Survey Service Level Agreement (Technical) for Digital Map Products and Services

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

CONTENTS

Background	5
Scope	5
1. HOW TREES ARE DAMAGED	7
1.1 The Root System	7
1.2 Below Ground	10
1.3 Above Ground	13
2. HOW APPARATUS IS DAMAGED	14
2.1 Below Ground	14
2.2 Above Ground	16
3. PLANNING OF WORKS	16
3.1 Special Considerations when Planning the Installation of Underground Apparatus	16
3.2 Precautions when Repairing Existing Apparatus	17
3.3 Special Considerations when Planning the Installation of Above Ground Apparatus	18
4. HOW TO AVOID DAMAGE TO TREES	19
4.1 Below Ground	19
4.2 Above Ground	24
4.3 Chemical Damage to Trees	26
5. HOW TO AVOID DAMAGE TO APPARATUS BY TREES	26
5.1 Consultation with Utilities	26
5.2 Precautions during Planting	26
6. SITES WITH DESIGNATED STATUS	27
6.1 Tree Preservation Orders and Trees in Conservation Areas	28

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

7. LEGISLATION	28
7.1 Primary Legislation	28
7.2 Secondary Legislation	29
8. OTHER USEFUL PUBLICATIONS	29
9. OTHER REFERENCES	30
9.1 Arboricultural	30
9.2 Herbicides	30
9.3 Utilities	30
FIGURE 1 – Tree Protection Zone	9
FIGURE 2 – Typical Tree Structure	12
TABLE 1 – Prevention of Damage to Trees Below Ground	23
TABLE 2 – Prevention of Damage to Trees Above Ground	25
GLOSSARY	31
APPENDIX A	
Important Legal Notice and Disclaimer	33

In this document the word ‘apparatus’ is used to describe both the distribution mains and also the lateral apparatus to properties. The words ‘plant’ or ‘services’ are also used to collectively describe this and other equipment.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

This volume supersedes NJUG 10 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees' and has been drafted by NJUG members and arboriculturists.

Background

The statutory right of undertakers (utilities) to carry out works within the public highway in order to provide and maintain their apparatus dates from the mid - 19th century. There are no statutory obligations governing the position or depth at which apparatus should be laid within the highway. The following guidelines should therefore be adhered to wherever practicable.

The New Roads and Street Works Act 1991, as amended by the Transport Act 2000, the Traffic Management Act 2004, the Transport (Scotland) Act 2005 together with the Street Works (Northern Ireland) Order 1995, sets down the legislative requirements to be adopted during the installation, repair and maintenance of apparatus in roads and streets (**see Volume 6 – 'Legislation and Bibliography'**).

Scope

(i) Trees (including shrubs and hedges) play an essential role in the environment and visual amenity of both rural and urban landscapes. They may take decades to grow, but can be destroyed in minutes. Wherever they are growing, whether in public footpaths, private gardens, rural verges or elsewhere, they require space for the adequate development of their root systems and to allow the branches to develop an attractive and natural shape.

(ii) Modern society expects a multiplicity of apparatus (electricity, gas, water, sewage, telecommunications and cable television) each of which requires an extensive distribution network, both above and below ground. These networks also need space, and they are frequently under tight constraints regarding their alignment.

(iii) The space available for both trees and apparatus is often very restricted, and they are frequently forced to share the available space, both above and below ground. Where they are in close proximity, there is the potential for either the tree or the apparatus to be subject to damage. To successfully co-exist precautions should be taken to minimise the risk of damage to both trees and apparatus based upon technical guidance obtained from this document and where appropriate further advice from local authority arboriculturists.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

(iv) Legislative mechanisms for ensuring that existing trees (including shrubs and hedges) are safeguarded already exist (see sub-section 7 – ‘Legislation’). References to legislation relate to the whole of the United Kingdom (UK) but variations between countries may occur. They seek to provide constructive advice on how to minimise damage to trees by undertakers (utilities) and to utility apparatus by trees and will be helpful to utility companies, contractors, arboriculturists, highway engineers, developers and planners. The guidelines have been prepared in collaboration between representatives of the utilities, the arboricultural and urban forestry professions and the Department for Communities and Local Government. As with all guidelines, their interpretation and application should be complimented at all times by common sense. However, expert guidance on specific instances should be sought from the appropriate utility, local authority or arboriculturist. The emphasis throughout this document is on the need for local liaison and communication.

(v) Certain trees are subject to Tree Preservation Orders (TPOs). Trees protected by a TPO must not be willfully damaged or destroyed and cannot be cut down, uprooted, topped or lopped without the local planning authority consent.

(vi) These guidelines are applicable to all apparatus (underground and overhead) and to trees in any location (public or private, rural or urban). They should be considered when new apparatus is planned to be constructed adjacent to existing trees, when new trees are to be planted adjacent to existing apparatus and where apparatus is to be maintained or repaired and trees are to be managed (e.g. pruning, removal or replacement).

(vii) Site surveys should be undertaken appropriate to the scale of the planned works. These surveys will identify the presence of trees which could impact on works. Advice should then be sought from a local authority tree officer. However, on major projects, a consultant arboriculturist may be employed to liase with the local authority tree officer. Site surveys should be carried out according to the recommendations within BS 5837 (see sub-section 8 – ‘Other Useful Publications’).

(viii) The principles set out in these guidelines also have relevance in respect of work carried out to highways near trees (e.g. kerbing, footway reinstatement).

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

1. HOW TREES ARE DAMAGED

Trees are complex living organisms, which are susceptible to damage from a wide range of physical agents or activities. Trees do not heal, damage caused to a tree will remain for the rest of its life. Even minor damage may set up circumstances leading to serious long term decay.

Contrary to popular belief, the root system of a tree is not a mirror image of the branches, nor is there usually a 'tap root'. The majority of the root system of any tree is in the surface 600mm of soil, extending radially in any direction for distances frequently in excess of the tree's height. Excavation or other works within this area are liable to damage the roots.

1.1 The Root System

The base of a trunk typically flares out in buttresses extending into the main lateral structural roots. These rapidly subdivide into the mass of smaller roots which serve to anchor the tree into the soil and transport water and nutrients. Even at a short distance (3m) from a large mature tree, most roots will be less than 10mm in diameter, but these may extend to well beyond the branch spread of the tree. A mass of fine roots, less than 1 mm in diameter, develop off all parts of this root system. These fine roots also absorb the water and nutrients, which are essential for the growth of the tree.



NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

The main structural roots (close to the trunk) develop as the tree grows in response to the need for physical stability. Beyond these major roots growth is influenced by the availability of water, air and nutrients in the soil. Disturbance of soil provides ideal conditions for root growth. Apparatus is often cooler than the surrounding soil encouraging moisture within the soil to condense on its surface stimulating root growth close to the apparatus. For all these reasons root growth is often most prolific within the backfilled trench and in the soil around the apparatus.

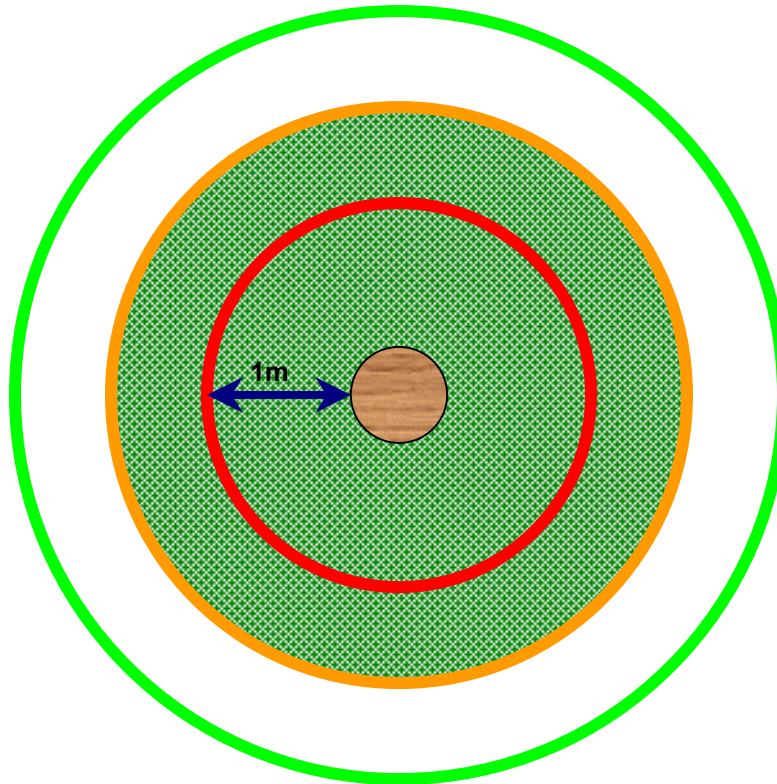
There are certain areas around trees, illustrated in Figure 1 – ‘Tree Protection Zone’, where excavation either must not be undertaken or only undertaken under strict conditions in order to avoid or minimise any damage to a tree’s root system.

For the purposes of this guideline document they are called zones;

- the Prohibited Zone (1m from the trunk)
- the Precautionary Zone (beneath the canopy or branch spread)
- the Permitted Zone (outside of the Precautionary Zone)

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

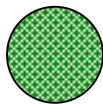
FIGURE 1 – Tree Protection Zone



Key



Trunk of tree



Canopy or branch spread



PROHIBITED ZONE – 1m from trunk. Excavations of any kind must not be undertaken within this zone unless full consultation with the local authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.



PRECAUTIONARY ZONE - beneath canopy or branch spread. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with the local authority Tree Officer if in any doubt.



PERMITTED ZONE – outside of the precautionary zone. Excavation works may be undertaken within this zone, however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

1.2 Below Ground

1.2.1 Root systems can be damaged by;

- the severance of a root, for example by trenching will destroy all parts of the root beyond that point. Even roots less than 10mm in diameter may be serving the fine roots over a wide area. The larger the root severed, the greater the impact on the tree.



Typical root damage caused by excavation works

- damage to the bark on the root. The bark protects the root from decay and is also essential for further root growth. It is loosely attached and easily damaged. If damage to the bark extends around the whole circumference the root beyond that point will be killed.
- damage to surface roots. Care must be taken when using mechanical plant. Materials and vehicles must never be stored within the Prohibited Zone and ideally should not be stored within the Precautionary Zone.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

- compaction of the soil. Incidental compaction may occur from storage of materials and / or the passing of heavy equipment over the roots. This can restrict or even prevent gaseous diffusion through the soil, and thereby asphyxiate the roots. The roots must have oxygen for survival, growth and effective functioning.



Poor site management within the Precautionary Zone

- alterations in soil level. Lowering the level will strip out the mass of roots near the surface. Raising levels will have the same effect as soil compaction.
- the application of herbicide - frequently used to clear weed growth on operational land (e.g. substations). The wide-ranging root system of a tree may extend into the operational land and absorb herbicides, which have been applied to the ground. Herbicide absorbed in one part of the root system can kill the whole tree.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

NOTE: The selection and application of herbicides must be undertaken by a competent person in accordance with Control of Substances Hazardous to Health (COSHH) regulations.

- spillage of oils or other materials (e.g. diesel oil, cement, resins). Spillage can permeate into the soil and damage root systems (see sub-section 4.3 – ‘Chemical Damage to Trees’).

1.2.2 If roots are damaged;

- close to the trunk. The anchorage and stability of the tree may be adversely affected rendering the tree immediately hazardous.
- anywhere along their length. The distal portion including the fine roots they serve, will be destroyed. Damage to fine roots by severance of a main root, or by compaction or alteration of ground levels, will prevent fine roots from absorbing the water and nutrients which are essential for the well-being, growth and anchorage of the tree.
- by successive excavations. Multi-utility excavations close to a tree can cumulatively damage a root system.

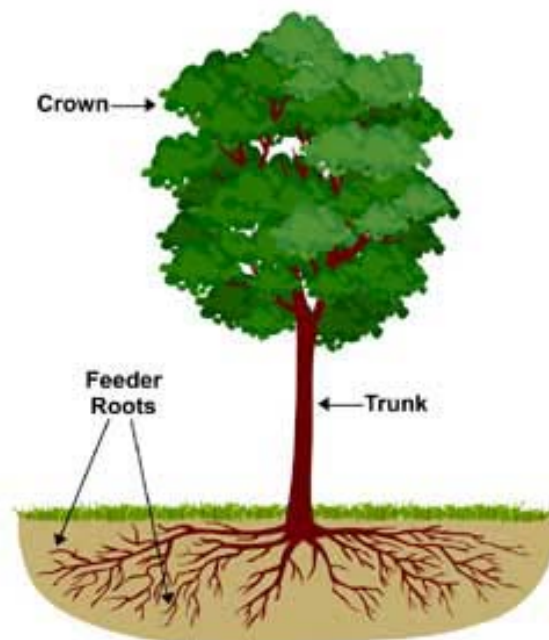


Figure 2 - Typical Tree Structure

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

1.2.3 Symptoms

Trees with damage may not show any immediate symptoms. Such symptoms may range from minor branch dieback to deterioration and ultimate death and collapse of the tree dependent on the severity of damage and the ability of the roots to regenerate.

If a root of 25mm diameter or over is severed, as a precautionary measure, a local authority tree officer / arboricultural officer should be contacted immediately.

1.3 Above Ground

Trees have a single or multi-stemmed trunk supporting a framework of branches and twigs. These structures are protected by a layer of bark, the purpose of which is to protect the functional tissues immediately beneath.

Trees can be damaged by:

- Direct impact by plant or machinery
- Fire and scorching.
- Poor pruning
- Abrasion by overhead apparatus
- Chemicals and fuel oils
- Storage of materials within the Prohibited and Precautionary Zones

1.3.1 Abrasion

The tree may be damaged by abrasion with overhead apparatus. Initially this only removes the outer bark. If the abrasion continues it can expose the underlying wood which may increase the risk of fire or eventual collapse of the branch or the tree.

If trees are growing in proximity to overhead apparatus it should be possible to prevent the development of problems by timely pruning and tree management. This requires knowledge of the growth pattern of the many different species of tree, consideration of the effects of the pruning on the appearance of the tree and application of the correct pruning techniques. All pruning should be in accordance with BS 3998 (see sub-section 8 – ‘Other Useful Publications’). All operatives should be authorised and competent.

For all works other than emergency or urgent works, notification and consultation with all interested parties is necessary before work commences (see section 5 – ‘How to Avoid Damage to Apparatus by Trees’).

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

1.3.2 Permissions / Notifications

Any work to trees adjacent to an area of operations that extends beyond what is absolutely necessary for operational requirements may require either written permission from the local planning authority (in respect to tree preservation orders) or six weeks' notification to the local planning authority (in respect to trees in conservation areas)(see also section 6 – 'Sites with Designated Status').

2. HOW APPARATUS IS DAMAGED

The positioning and type of underground apparatus are detailed in NJUG publication **Volume 1 – 'NJUG Guidelines on the Positioning and Colour Coding of Underground Utilities' Apparatus**.

Construction methods and utility service materials are subject to change and any cluster of utility services is likely to consist of a variety of historic and modern materials constructed to various specifications. In general utility apparatus includes the following:

- Pipes
- Cables
- Ducts
- Chambers
- Poles/Towers/Masts/Satellite dishes
- Above ground installations

2.1 Below Ground

Underground apparatus (especially those less than 600mm deep) may be affected by tree roots. The risk will depend on the ability of the apparatus, in particular any joints, to resist or tolerate distortion.

2.1.1 Direct damage

Direct damage is caused by the annual increase in root thickness resulting in eventual contact with apparatus. However, it is usually either the root or the adjacent soil that will distort rather than the apparatus itself. The potential for damage depends on how much the root thickens and is greatest in the main structural roots within 3 metres of the tree. Roots may grow around an apparatus to form a sheath but this will rarely exert sufficient pressure to cause any damage. Surface wrappings inadequately attached to an apparatus, if non-toxic, may be colonised by roots and eventually lifted off.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

2.1.2 Indirect damage

Indirect damage is restricted to shrinkable soils, mainly clays but also peat and some silts. Such soils shrink as they dry with the potential to distort any apparatus supported by the soil. Vegetation growing within the same area of soil may increase the drying effect.

The degree of the shrinkability of the soil will affect the amount of movement caused by drying and thus the potential for damage to occur. In situations where apparatus passes from a shrinkable soil into a rigid structure there is the possibility of extreme distortion taking place. Regular seasonal movement can also cause damage even in the absence of roots, particularly with short segmented pipes (see sub-section 3.1.4 – ‘Shrinkable Soils’).

2.1.3 Root incursion

Intact apparatus will not generally be penetrated by roots. However roots can exploit existing defects such as;

- defective pipe joints
- cracks in foul or surface water drains
- inadequate or degraded pointing of inspection chambers.

Where internal conditions are moist and aerated and therefore most conducive to root growth, root proliferation may occur and ultimately block the apparatus. If root thickening occurs where it passes into apparatus, root related enlargement of a defect may occur. This is unlikely at distances 3 metres or more from the trunk.

2.1.4 Trees and Wind Movement.

The potential for damage to apparatus close to a tree may increase due to movement of the lower trunk and a structural root as the tree sways in strong winds. Such movement may result in direct pressure being applied to the apparatus. Furthermore, if a tree is uprooted, any apparatus passing across or through the disturbed root plate may also be displaced. Such events are unlikely and are restricted to situations where apparatus is in close proximity to the trunk of the tree, but the potential may be increased if other structural roots are severed. Encasing apparatus in lean mix or course concrete can exacerbate this problem as fine roots may penetrate the material providing a greater ‘hold’ on the apparatus unless an appropriate root barrier material is used to separate the apparatus from the root system.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

2.1.5 Mechanical Removal of Trees and Stumps

The mechanical removal of tree stumps by grinding or grubbing may disturb or damage apparatus passing across or through the root plate of the tree. Using a mechanical digger to uproot a tree scheduled for removal is very likely to damage apparatus within and also close to the Prohibited or Precautionary Zones as the roots will apply pressure to the apparatus as they are uprooted.

2.2 Above Ground

If overhead apparatus come into contact with trees they may be damaged as a result of:

- Abrasion when the tree and / or apparatus move in the wind bringing them into contact. The resultant abrasion can damage wires affecting their efficiency, strength and causing interference or loss of supply.
- The collapse of a branch or a whole tree which could bring down overhead lines.

3. PLANNING OF WORKS

The inherently variable nature of trees, and also the generally low incidence of damage to underground apparatus, makes it neither practical nor justifiable to impose absolute limits on the proximity of trees to apparatus. Therefore site specific liaison and agreement between the asset owner and other interested parties is essential.

With respect to overhead apparatus there are minimum established clearances which must be maintained. Details of these clearances can be obtained from the utility network operator.

Before new trees are planted the advice of a local authority tree officer or arboriculturist should be obtained.

3.1 Special Considerations when Planning the Installation of Underground Apparatus

3.1.1 New / Renewal of Apparatus - New Trees

In considering the location of new or renewed apparatus in conjunction with a new tree planting scheme early consultation is essential between the relevant

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

professional organizations e.g. local authorities, utility companies, developers and landowners

3.1.2 New / Renewal of Apparatus - Existing Trees

When planning the installation or renewal of apparatus the position of existing trees should be considered as one of the primary factors which could affect the siting, depth, method of installation and future maintenance of that apparatus.

Consultation with the relevant interested parties will identify any conflict and consideration should be given to apparatus diversion or felling and re-planting. This decision should be influenced by the value of the tree and the extent of the additional diversionary works.

3.1.3 Existing Apparatus - New Trees

Early consultation with utilities should take place before any tree work, including planting, is undertaken to ascertain the position of existing apparatus. Records of underground apparatus should be obtained from utilities and used in conjunction with on site apparatus detection techniques. The guidance contained within Health and Safety Executive guidance note HSG47 – ‘Avoiding Danger from Underground Services’ should be followed when excavating. In addition, when planning new tree planting, there should be liaison with the utilities, local authority and landowner so that the risks trees may pose to utility apparatus in the future are minimised.

3.1.4 Shrinkable Soils

Apparatus laid in clay or peat should be constructed to tolerate movements of the subsoil caused by root activity. Special precautions for differential movement should be incorporated where apparatus joins rigid structures founded at a different depth to the apparatus (e.g. pipe connections to chambers). See sub-section 2.1.2 ‘Indirect Damage’.

3.2 Precautions when Repairing Existing Apparatus

Where apparatus requires repair the location of the excavation is often defined by the location of the fault. The nature of the work usually requires open excavation. Excavation within the Prohibited and Precautionary Zones should be in accordance with sub-section 4.1 ‘Below Ground’ except for emergency or urgent works.

Where emergency or urgent works may have caused damage to roots with a diameter in excess of 25mm, interested parties should be informed immediately. They may choose to consult a local authority tree officer or arboriculturist regarding whether remedial treatment to the tree is necessary.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

If roots have grown into a drain or duct and proliferated so as to cause a blockage, the removal of the root mass from within the drain or duct will only provide temporary relief. If the root, which originally penetrated the drain, is still present it will regenerate and recreate the same problem. Roots of other plants may have a similar effect. Permanent relief can only be obtained by the proper repair of the original defect e.g. by replacement or refurbishment.

Utility apparatus may be refurbished by the use of pre-fabricated, slip lined or cured-in-place lining systems or pipes. Pre-fabricated and slip lined systems and pipes are generally resistant to root growth / intrusion, but cured-in-place linings may deform and ultimately collapse from the incursion of root growth. Following pre-survey (e.g. CCTV), it is essential that any roots are removed from the bore of the apparatus as far as practicable prior to lining, by the use of proprietary root removal systems (e.g. high-pressure water, flails, or rotating blade cutters).

3.3 Special Considerations when Planning the Installation of Above Ground Apparatus

The aerial parts of a tree are constantly growing larger and are prone to bend and flex in windy conditions. As a result parts of a tree may come close to or into contact with above ground apparatus.

3.3.1 Electricity

The overhead apparatus belonging to the electricity supply industry is subject to minimum clearances from adjacent trees and other structures. This is to ensure the safety of the public and protect against flashover and loss of supply. Local conditions may require an increase in the clearances specified in current electricity industry standards.

Part IV of The Electricity Supply Regulations covers the construction of power lines above ground. Schedule 4(9) of the Electricity Act 1989 enables electricity companies to require the felling or lopping of trees which obstruct or interfere with the working of their lines or constitute an unacceptable source of danger.

In addition to the above reference should be made to the Energy Networks Association (ENA) document Engineering Recommendation G55/1- Safe Tree Working in Proximity to Overhead Electric Lines (see section 8).

3.3.2 Communications

Communication operators run their systems under the Telecommunications Act 1984 (as amended by the Communications Act 2003) in accordance with The

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

Telecommunications Code (Schedule 2). Paragraph 19 of the Telecommunications Code enables operators to require the lopping of trees which overhang the street and obstruct or interfere with the working of their lines.

4. HOW TO AVOID DAMAGE TO TREES

This section gives general guidance on methods of work to minimise damage to trees. The local authority (or for privately owned trees, the owner or their agent), should be consulted at an early stage prior to the commencement of any works. This will reduce the potential for future conflict between trees and apparatus.

4.1 Below Ground

Wherever trees are present, precautions should be taken to minimise damage to their root systems. As the shape of the root system is unpredictable, there should be control and supervision of any works, particularly if this involves excavating through the surface 600mm, where the majority of roots develop.

4.1.1 Fine Roots

Fine roots are vulnerable to desiccation once they are exposed to the air. Larger roots have a bark layer which provides some protection against desiccation and temperature change. The greatest risk to these roots occurs when there are rapid fluctuations in air temperature around them e.g. frost and extremes of heat. It is therefore important to protect exposed roots where a trench is to be left open overnight where there is a risk of frost. In winter, before leaving the site at the end of the day, the exposed roots should be wrapped with dry sacking. This sacking must be removed before the trench is backfilled.

4.1.2 Precautions

The precautions referred to in this section are applicable to any excavations or other works occurring within the Prohibited or Precautionary Zones as illustrated in Figure 1 – ‘Tree Protection Zone’.

4.1.3 Realignment

Whenever possible apparatus should always be diverted or re-aligned outside the Prohibited or Precautionary Zones. Under no circumstances can machinery be used to excavate open trenches within the Prohibited Zone.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

The appropriate method of working within the Precautionary Zone should be determined in consultation with the local authority (or for privately owned trees the owner or their agent) and may depend on the following circumstances;

- the scope of the works (e.g. one-off repair or part of an extensive operation)
- degree of urgency (e.g. for restoration of supplies)
- knowledge of location of other apparatus
- soil conditions
- age, condition, quality and life expectancy of the tree

Where works are required for the laying or maintenance of any apparatus within the Prohibited or Precautionary Zones there are various techniques available to minimise damage.

Acceptable techniques in order of preference are;

a) Trenchless

Wherever possible trenchless techniques should be used. The launch and reception pits should be located outside the Prohibited or Precautionary Zones. In order to avoid damage to roots by percussive boring techniques it is recommended that the depth of run should be below 600mm. Techniques involving external lubrication of the equipment with materials other than water (e.g. oil, bentonite, etc.) must not be used when working within the Prohibited Zone. Lubricating materials other than water may be used within the Precautionary Zone following consultation and by agreement.

b) Broken Trench - Hand-dug

This technique combines hand dug trench sections with trenchless techniques if excavation is unavoidable. Excavation should be limited to where there is clear access around and below the roots. The trench is excavated by hand with precautions taken as for continuous trenching as in (c) below. Open sections of the trench should only be long enough to allow access for linking to the next section. The length of sections will be determined by local conditions, especially soil texture and cohesiveness, as well as the practical needs for access. In all cases the open sections should be kept as short as possible and outside of the Prohibited Zone.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

c) Continuous Trench - Hand-dug

The use of this method must be considered only as a last resort if works are to be undertaken by agreement within the Prohibited Zone. The objective being to retain as many undamaged roots as possible.

Hand digging within the Prohibited or Precautionary zones must be undertaken with great care requiring closer supervision than normal operations.

After careful removal of the hard surface material digging must proceed with hand tools. Clumps of roots less than 25mm in diameter (including fibrous roots) should be retained in situ without damage. Throughout the excavation works great care should be taken to protect the bark around the roots.

All roots greater than 25mm diameter should be preserved and worked around. These roots must not be severed without first consulting the owner of the tree or the local authority tree officer / arboriculturist. If after consultation severance is unavoidable, roots must be cut back using a sharp tool to leave the smallest wound.

4.1.5 Backfilling

- Any reinstatement of street works in the United Kingdom must comply with the relevant national legislation (see: **Volume 6 – ‘Legislation and Bibliography’**). In England this relates to the requirements of the code of practice – ‘Specification for the Reinstatement of Openings in Highways’ approved under the New Roads and Street Works Act 1991. Without prejudice to the requirements relating to the specification of materials and the standards of workmanship, backfilling should be carefully carried out to avoid direct damage to roots and excessive compaction of the soil around them.
- The backfill should, where possible, include the placement of an inert granular material mixed with top soil or sharp sand (not builder’s sand) around the roots. This should allow the soil to be compacted for resurfacing without damage to the roots securing a local aerated zone enabling the root to survive in the longer term.
- Backfilling outside the constructed highway limits should be carried out using the excavated soil. This should not be compacted but lightly “tamped” and usually left slightly proud of the surrounding surface to allow natural settlement. Other materials should not be incorporated into the backfill.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

4.1.6 Additional Precautions near Trees

- Movement of heavy mechanical plant (excavators etc.) must not be undertaken within the Prohibited Zone and should be avoided within the Precautionary Zone, except on existing hard surfaces, in order to prevent unnecessary compaction of the soil. This is particularly important on soils with a high proportion of clay. Spoil or material must not be stored within the Prohibited Zone and should be avoided within the Precautionary Zone.
- Where it is absolutely necessary to use mechanical plant within the Precautionary Zone care should be taken to avoid impact damage to the trunk and branches. A tree must not be used as an end-stop for paving slabs or other materials nor for security chaining of mechanical plant. If the trunk or branches of a tree are damaged in any way advice should be sought from the local authority tree officer / arboriculturist.

See TABLE 1 –‘Prevention of Damage to Trees Below Ground’ below for summary details regarding causes and types of damage to trees and the implications of the damage and the necessary precautions to be taken to avoid damage.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

TABLE 1 - Prevention of Damage to Trees Below Ground

Causes of Damage	Type of Damage	Implications to Tree	Precautions
Trenching, mechanical digging etc.	Root severance	<ul style="list-style-type: none"> • The tree may fall over • Death of the root beyond the point of damage • Potential risk of infection of the tree <p>The larger the root the greater the impact on the tree.</p>	Hand excavate only within the Precautionary Zone. Work carefully around roots. Do not cut roots over 25mm in diameter without referring to the local authority tree officer. For roots less than 25mm in diameter use a sharp tool and make a clean cut leaving as small a wound as possible.
Trenching, mechanical digging, top soil surface removal etc.	Root bark damage	<ul style="list-style-type: none"> • The tree may fall over • If the damage circles the root it will cause the death of the root beyond that point • Potential risk of infection of the tree <p>The larger the root the greater the impact on the tree.</p>	Do not use mechanical machinery to strip the top soil within the Precautionary Zone. Hand excavate only within the Precautionary Zone. Work carefully around roots. Do not cut roots over 25mm in diameter without referring to the local authority tree officer. For roots less than 25mm use a sharp tool and make a clean cut leaving as small a wound as possible.
Vehicle movement and plant use. Material storage within the precautionary area.	Soil compaction & water saturation	Restricts or prevents passage of gaseous diffusion through soil, the roots are asphyxiated and killed affecting the whole tree.	Prevent all vehicle movement, plant use or material storage within the Precautionary Zone.
Top-soil scouring, excavation or banking up.	Alterations in soil level causing compaction or exposure of roots.	Lowering levels strips out the mass of roots over a wide area. Raising soil levels asphyxiates roots and has the same effect as soil compaction.	Avoid altering or disturbing soil levels within the Precautionary Zone.
Use of herbicides.	Poisoning of the tree via root absorption	<ul style="list-style-type: none"> • Death of the whole tree • Death of individual branches <p>Damage to leaves and shoots.</p>	The selection and application of herbicides must be undertaken by a competent person in accordance with COSHH regulations.
Spillage of oils or other materials.	Contamination of soil	Toxic and asphyxiation effects of chemicals, oils, building materials (cement, plaster, additives etc.) on the root system can kill the tree.	Never store oils, chemicals or building materials within the Precautionary Zone or within the branch spread of a tree, which ever is the greater.
Placement or replacement of underground apparatus.	Various	Death of all or part of the tree.	Effective planning and liaison with local authority tree officer, taking into consideration the position of trees, and their future growth potential and management

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

4.2 Above Ground

4.2.1 Damage by Pruning

Trees (including shrubs and hedges) can be damaged by inappropriate or excessive pruning. Reference should be made to the Energy Networks Association (ENA) document “Engineering Technical Report 136 Vegetation Management near Electricity Equipment – Principles of Good Practice” (see section 8 – ‘Other Useful Publications’) or appropriate company specific documentation for guidance on pruning.

See TABLE 2 – ‘Prevention of Damage to Trees Above Ground’ below for summary details regarding causes and types of damage to trees and the implications of the damage and the necessary precautions to be taken to avoid damage.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

TABLE 2 - Prevention of Damage to Trees Above Ground

Causes of Damage	Type of Damage	Implications for the Tree	Precautions
<p>Impact by vehicle or plant</p> <p>Physical attachment of signs or hoardings to the trunk</p> <p>Storage of materials at base of tree</p> <p>Rubbing by winch or pulling cables</p>	<p>Bark bruising, bark removal, damage to the wood, damage to buttress roots, abrasion to trunk</p>	<p>Wounding with the potential for infection ultimately resulting in death of all or part of the tree.</p> <p>Structural failure of the tree</p>	<p>Surround the trunk with protective free-standing barrier. Exclude vehicles, plant or material storage from the Precautionary Zone. Ensure sufficient clearance of cables or ropes.</p>
<p>Impact by vehicle or plant</p> <p>Rubbing by overhead cables</p>	<p>Bark damage to branches, breakage and splitting of branches, abrasion to branches</p>	<p>Structural failure of the branch.</p> <p>Wounding or loss of a branch with the potential for infection ultimately resulting in death of all or part of the branch or tree.</p>	<p>Exclude vehicles, plant or material storage from the Precautionary Zone. Ensure sufficient clearance of cables or ropes.</p> <p>All pruning should be carried out in accordance with BS3998 (<i>prune affected branches to give appropriate clearance from cables</i>)</p>
<p>Inappropriate siting of overhead apparatus, such as CCTV, lighting fixtures and communications masts and dishes.</p>	<p>Inappropriate pruning, unnecessary tree removal</p>	<p>Severely pruning tree to acquire line of sight signal for communications dish etc.</p>	<p>Effective planning and liaison with local authority tree officer / arboriculturist, taking into consideration the position of trees, and their future growth potential and management.</p>
<p>Lack of forethought in design and location of apparatus and services entries on new developments</p>	<p>Complete tree removal</p>	<p>The tree is removed unnecessarily</p>	<p>Agree the location and installation of services at the design stage. Consideration should be given to the creation of dedicated service routes wherever possible.</p>
<p>Use of herbicides</p>	<p>Poisoning of the tree via absorption through bark, leaves and shoots</p>	<p>Death of the whole tree, death of individual branches, damage to leaves and shoots</p>	<p>The selection and application of herbicides must be undertaken by a competent person in accordance with COSHH regulations.</p>

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

4.3 Chemical Damage to Trees

Chemical damage to trees adjacent to utility premises and operational land can be avoided if;

- the risk is identified when planning any work involving herbicides or other chemicals ensuring that only appropriate chemicals are used. Particular care should be exercised when considering the use of herbicides recommended for “non crop areas” as many of these also specify “do not use where there may be roots of desirable plants”,
- herbicides are applied only at the rate and in the manner recommended by the manufacturer,
- follow-up applications are not undertaken until weeds reappear on the operational land,
- alternative methods of weed control are considered.

5. HOW TO AVOID DAMAGE TO APPARATUS BY TREES

5.1 Consultation with Utilities

The potential for future conflict between trees and above-ground apparatus can be reduced by appropriate planning. Early consultation with utilities should therefore take place before any tree work including planting is undertaken to ascertain the position of existing apparatus. Records of underground apparatus should be obtained from utilities and used in conjunction with on site apparatus detection techniques. Specific care must be taken when removing the stumps of existing trees. In addition when planning new tree planting there should be liaison with the utilities, local authority and landowner so that the risks trees may pose in the future are minimised.

5.2 Precautions during Planting

Every possible precaution should be taken to ensure that the existing apparatus is not damaged during excavation works. Health and Safety Executive guidance note HSG47 – ‘Avoiding Danger from Underground Services’ and any specific guidance issued by the apparatus owner should be followed at all stages of the work.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

5.2.1 Below Ground

Before any excavation work begins, trial holes should be undertaken to validate the results of any detection surveys undertaken to confirm the actual position and depth of the apparatus.

5.2.2 Above Ground

Consideration should be given to the presence of satellite dishes and masts on commercial properties, poles and drop wires, as future tree growth may cause operational problems.

Reference should also be made to Energy Networks Association (ENA) document 'Engineering Technical Report 136 Vegetation Management near Electricity Equipment – Principles of Good Practice' (see section 8 – 'Other Useful Publications') or appropriate company specific documentation.

NOTE: In all cases where definitive clearances are required, contact must be made with the appropriate electricity or communication company who will determine the clearance to be adopted.

See also sub-section 3.3 – 'Special Considerations when Planning the Installation of Above Ground Apparatus'.

6. SITES WITH DESIGNATED STATUS

Certain sites may be specifically designated and will require consultation and / or permission from the relevant authority prior to undertaking any works. These sites include:

- Sites of Special Scientific Interest
- English Heritage Sites
- English Nature / Natural England
- National Trust Land
- Nature Reserves
- Conservation Areas
- Scottish Natural Heritage
- Areas of Outstanding Natural Beauty
- Countryside Council for Wales
- Historic Scotland
- Northern Ireland Environment and Heritage Service
- Cadw (Welsh Historic Monuments)

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

6.1 Tree Preservation Orders and Trees in Conservation Areas

Section 198 of the Town and Country Planning Act 1990 (the Act) gives local planning authorities powers to make trees and woodlands the subject of tree preservation orders (TPOs) in the interests of amenity. Trees protected by a TPO may not be willfully damaged or destroyed and cannot be cut down, uprooted, topped or lopped without the local planning authority's consent.

Additionally, under section 211 of the Act, anyone proposing to cut down, uproot, top, lop etc. a tree in a conservation area is required to give the local planning authority six weeks' notice before doing so. This gives the authority an opportunity of making a TPO in respect of the tree.

Certain statutory obligations imposed by Acts of Parliament may allow for the limited felling, topping or lopping of trees protected by a TPO in order to supply and maintain service. This does not preclude the requirement to consult with the owner.

See also: **Volume 5 – 'NJUG Guidelines on Environmental Good Practice'**

7. LEGISLATION

Reference should also be made to **Volume 6 – 'Legislation & Bibliography'**.

7.1 Primary Legislation

National Parks and Access to the Countryside Act 1949*
Health and Safety at Work Act 1974
Highways Act 1980**
Telecommunications Act 1984
Gas Act 1986
Electricity Act 1989
Town and Country Planning Act 1990 (Section 198 Tree Preservation Orders).
Water Industry Act 1991
The New Roads and Street Works Act 1991 (NRSWA)
The Streets Works (Northern Ireland) Order 1995
Communications Act 2003
Traffic Management Act 2004
Transport (Scotland) Act 2005
The Streets Works (Northern Ireland) (Amendment) Order 2007

* Under the National Parks and Access to the Countryside Act 1949 local authorities are given a general power to plant trees.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

** Under the Highways Act 1980 highway authorities may plant trees in the highway, or license others to do so. They need to ensure that trees do not overhang or cause a danger to roads or footpaths, and are given powers to prevent this from happening.

The above list is not exhaustive.

7.2 Secondary Legislation

Each Act of parliament in 7.1 will have various associated regulations that should be referred to.

8. OTHER USEFUL PUBLICATIONS

This is not an exhaustive list of available publications and is only valid at the time of issue.

BS 3998 Recommendations for Tree Work

- Provides general recommendations for tree surgery and other tree work.

BS 5837 Trees in Relation to Construction

- Gives advice on the integration of new development amongst trees.

Codes of Practice approved under the New Roads and Street Works Act 1991

- Co-ordination of Street Works and Works for Road Purposes and Related Matters
- Specification for the Reinstatement of Openings in Highways
- Safety at Street Works and Road Works
- Measures Necessary where Apparatus is Affected by Major Works (Diversionary Works)
- Inspections

Energy Networks Association publications:

- Engineering Technical Report 136 'Vegetation Management Near Electricity Equipment – Principles of Good Practice'
- Engineering Recommendation G55/1 – 'Safe Tree Working in Proximity to Overhead Electric Lines'
- ENA-TS 40-80 – ENA Technical Standard for Overhead Line Clearances
- Engineering Recommendation G70 – Vegetation Control near Overhead Lines

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

- ETR 132 – Improving Network Performance (under abnormal weather conditions by the use of a risk based approach to vegetation management near electric overhead lines)
- MNT/004 – UK Distribution Policy for the Inspection and Maintenance of Overhead Lines

HSE Arboriculture and Forestry Advisory Group publications

- AFAG 804 Electricity at work: Forestry and arboriculture
- AFAG 404 Electrical utility arboriculture

Manual for Streets (supercedes Design Bulletin 32 and Places, Streets and Movement)

- The Department for Transport and the Department for Communities and Local Government (DCLG), with support from the Commission for Architecture and the Built Environment (CABE), commissioned WSP , TRL , Llewellyn Davies Yeang and Phil Jones Associates to develop a Manual for Streets to give guidance to a range of practitioners on effective street design.

National House Building Council (NHBC) Standards Chapter 4.2. Building near trees

- Gives information on the design of new foundations in proximity to trees on shrinkable clay soils.

9. OTHER REFERENCES

9.1 Arboricultural

Arboricultural advice may be sought from the:

- Arboricultural Advisory and Information Service
- Arboricultural Association
- Arboriculture and Forestry Advisory Group
- International Society of Arboriculture
- Local authority Arboricultural Officer
- The Tree Advice Trust

9.2. Herbicides

Information on herbicides and their application may be obtained from the:

- British Agrochemicals Association

9.3 Utilities

Utility advice may be sought from the local utility contact or NJUG.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

GLOSSARY

Apparatus	Equipment such as valves, stopcocks, chambers, cabinets, transformer chambers etc and includes any structure for the lodging of apparatus.
Arboriculturist	A professional who cultivates and manages trees, hedgerows and shrubs and provides information and advice on specific tree related issues.
Carriageway	A way constituting or comprised in a highway, being a way (other than a cycle track) over which the public have a right of way for the passage of vehicles.
Cycle track	A way constituting or comprised in a highway over which the public have a right of way on pedal cycles with or without a right of way on foot.
Desiccation	The state of extreme dryness, the drying out of roots.
Distal	Situated farthest from the centre.
Drop wires	Overhead wire from telegraph pole to customer premises.
Duct / ducting	Structure (usually cylindrical) used to convey and protect apparatus.
Fibre optic	The use of very thin glass or plastic fibres through which light can be transmitted to carry information from a source to a receiver, especially for telecommunication, television and information technology systems.
Footpath	A highway over which the public have a right of way on foot only, not being a footway.
Footway	A way comprised in a highway which also comprises a carriageway, being a way over which the public have a right of way on foot only.
GRP	Glass Reinforced Plastic
Herbicide	A chemical that destroys plants.
Main	Structure (usually cylindrical) used to convey water or gas or oil generally greater than 50mm in diameter.
NJUG	National Joint Utilities Group Limited.
Pipe	Longitudinal structure (usually cylindrical) used to convey water, gas or oil.
Root plate	Formed just below the soil surface when shallow lateral growing roots predominate over the development of a deep taproot.



NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

Service strip	A strip of designated land alongside a carriageway or footway used to convey services.
Sub-duct	Longitudinal structure (usually cylindrical) laid inside ducts used to carry smaller diameter cables such as fibre optic.
Tiles	Impact resistant cover constructed of earthenware, concrete or polyethylene for protecting underground cables
Utility	An undertaker by statute that has a legal right to provide customer services (e.g. communications, electricity, gas, water)
Verge	A strip of land which may form part of the public highway alongside a carriageway or footway, which may contain services.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

APPENDIX A

Important Legal Notice and Disclaimer

1. This publication describes utility industry guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. NJUG has endeavoured to ensure that the information is correct and up-to-date at the date of first publication, but does not warrant its completeness and accuracy or that it will remain up-to-date. This publication is not intended to be exhaustive and may not be applicable in all situations.
2. You are permitted to print and download and make photocopies of this publication for your own use only on the following basis:
 - a) none of the information or related graphics in this publication are modified in any way;
 - b) no graphics in this publication are used separately from accompanying text; and
 - c) NJUG's copyright notices and this Legal Notice and Disclaimer are to appear in all copies
3. Unless otherwise stated, the copyright and other intellectual property rights in this publication are owned by NJUG Ltd or its licensors. For the purposes of this legal notice, any use of extracts from this publication other than expressly permitted by this legal notice, is prohibited. If you breach any of the terms in this legal notice, your permission to use this publication automatically terminates.
4. No part of this publication may be reproduced in any way (including via any website) or stored in any public or private electronic retrieval system or service without NJUG's prior written permission. Any rights not expressly granted in this legal notice are reserved.
5. This publication has no legal or statutory authority and is not intended to be a definitive or complete statement of the applicable law. Reference should always be made to any relevant legislation. This publication is not intended to be or to replace specific legal advice and all persons acting or placing reliance on this publication or any part of it are advised to consult with their own legal advisors to ensure that they understand and comply with the legal requirements which are applicable to their organisation and circumstances.

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

6. Persons who act or place reliance on this publication are solely responsible for undertaking all surveys, enquiries, tests and other investigations as may be appropriate in the circumstances. NJUG Ltd and its directors, advisors and other contributors to this publication (together collectively referred to as 'NJUG') do not accept any responsibility for the actions or conclusions drawn by persons acting or placing reliance on this publication.
7. This publication is free of charge and persons relying on this publication acknowledge that it would be unreasonable to hold NJUG liable in respect of this publication and the information contained in it. NJUG excludes all liability to the maximum extent permitted under applicable law. NJUG shall not be liable for any direct, indirect or consequential losses, damage, costs or expenses whatsoever or howsoever sustained by any person acting or placing reliance on this publication (or any person or entity claiming through such person) or otherwise arising therefrom – whether arising in tort, contract or otherwise – including, without limitation, any loss of profits, contracts, business, goodwill, data, income, revenue or anticipated savings.
8. Nothing in this disclaimer shall exclude or limit NJUG's liability for death or personal injury arising from its negligence, nor any other matter which cannot be excluded or limited under applicable law.

Arboricultural Method Statement

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

Appendix IV Project Arboriculturalist Site Visit Report Form

19

Hillside Trees Ltd.
2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: alister@hillside-trees.co.uk

Directors: A. Rankine BSc. (Forestry), Tech. Cert. (Arbor. A.), S. J. Rankine BSc. (Hons)

Registered in England No. 07175569
Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD



Site Inspection Report

ST. ANDREW'S CHURCH, HOLCOMBE HILL, HOLCOMBE. BA3 5FR

On behalf of

St. Andrew's Parochial Church Council
c/o Nestledown
Longleat Lane
Holcombe
BA3 5DX

Inspected and prepared by

Alister Rankine BSc. (Forestry); Tech. Cert. (Arbor. A)
Arboricultural Consultant

MM/YY

Date of Site Inspection:

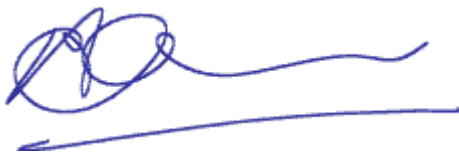
Present:

Purpose:

Background:

Assessment:

Summary:

A handwritten signature in blue ink, consisting of a series of loops and a long horizontal stroke.

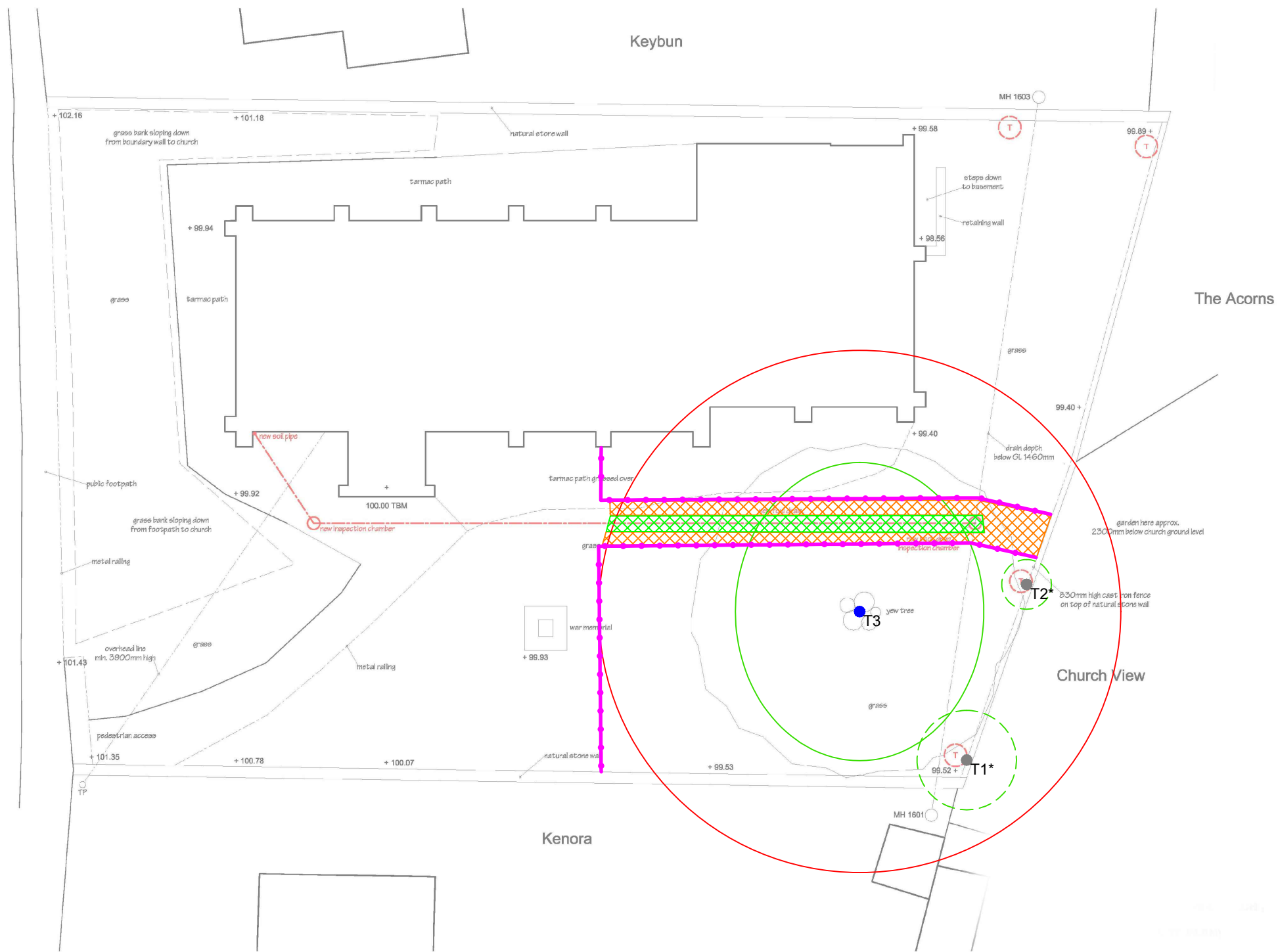
ALISTER RANKINE

DD/MM/YY

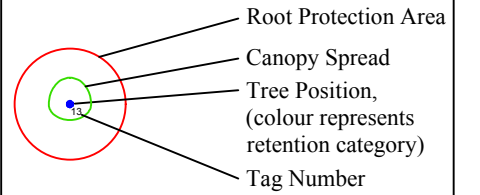
Arboricultural Method Statement

**ST. ANDREW'S CHURCH, HOLCOMBE HILL,
HOLCOMBE. BA3 5FR**

**Tree Protection Plan
Drawing No. 180119-SAC-TPP-LI**

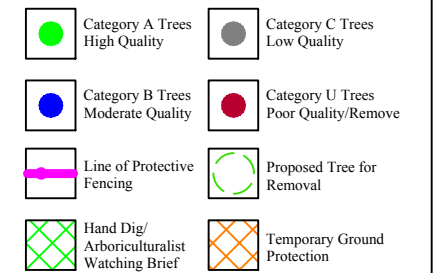


Symbol Guide



NOTE: Tree/group numbers marked with an * have approximate locations.

BS5837:2012 - Tree Category



Project Name:
St Andrew's Church, Holcombe

Drawing Title:
Tree Protection Plan

Drawing Number:
180119-SAC-TPP-LI

Client:
St Andrew's PCC

Agent:
-

Date:
January 2018

Scale:
1:200 @ A3

