



Arboricultural Impact Assessment

Prepared for:

DSPL Ltd

Proposed site:

Steeple Road, Duleek, Co. Meath

Prepared by:

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1 Summary

1.1 This arboricultural report has been commissioned by DSPL Ltd to provide information to assist with the planning process in relation to the above site.

1.2 This report includes:

- an assessment of the trees, their quality and value in accordance with BS 5837:2012 - Trees in relation to design, demolition and construction;
- the site context and observations on the trees;
- local planning policies relevant to the consideration of trees on the site;
- the impact of the proposed development upon the tree population in and around the site.

2.0 Introduction

2.1 Instructions

Arbor-Care Ltd (Professional Consulting Tree Service) was retained by DSPL Ltd to undertake an on-site inspection and visual condition assessment of all trees and hedgerows that could potentially be impacted by the development works within the site extents (Figure 1), the findings of the report will be used to inform design of development works and support a planning application for same.

The objective of the impact assessment was to identify the areas that contained trees, groups of trees, and to ensure where possible that these areas would be retained and to identify the trees that are to be removed to facilitate the development.

The survey commenced on the 25th March 2022. The survey concentrated on the trees within area the development area.

The below impact assessment report is based on the British standard *BS 5837:2012 Trees in relation to design, demolition and construction recommendations*, this standard gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures. It sets out to assist those concerned with trees in relation to construction to form balanced judgements. This impact assessment report will be accompanied by an inventory of trees and hedgerows on site and a tree protection plan. The Arboricultural Impact Assessment and a tree protection plan was prepared for the site identifying trees that may be impacted on by the proposed development based on the proposed design.

2.2 Methodology

An initial tree survey and visual condition assessment was on the 25th March 2022. The purpose of this report and in accordance with *BS 5837: 2012 Trees in relation to design, demolition and construction recommendations* only trees with diameters of 75mm or greater were surveyed. Also in accordance with section 4.4.2.3 of the British standard document where trees formed obvious groups these were assessed and recorded as groups. All trees were individually tagged with a metal disc. This was placed on the northern side of the tree where practical.

Section 4.4.2.3 of BS 5837: 2012 states:

Trees growing as groups or woodland should be identified and assessed as such where the arboriculturist determines that this is appropriate. However, an assessment of individuals within any group should still be undertaken if there is a need to differentiate between them, e.g. in order to highlight significant variation in attributes (including physiological or structural condition).

NOTE: The term “group” is intended to identify trees that form cohesive arboricultural features either aerodynamically (e.g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally, including for biodiversity (e.g. parkland or wood pasture), in respect of each of the three subcategories.

The survey concentrated primarily on the significant trees/ groups located within and adjacent to the proposed development area and has been based on the topographical survey plan provided. The objective of this survey was to gather information regarding the trees within or adjacent to the development area and the impact the proposed scheme may have on the trees.

Significant trees can be equated as those trees whose visual importance to the surrounding area are sufficient to justify special efforts to protect/preserve and whose loss would have an irremediable adverse impact on the local environment. Significance can also be placed depending on the tree’s age. another variable to imply significance can be the aesthetic merit of the tree based on its unusual size, intrinsic physical features or outstanding appearance or occurring in a unique location or context, and thus provides a special contribution as a landmark or landscape feature.

All above parts of the trees were visually examined. Tree diameters (DBH) were estimated at 1.5 meter above grade as per standard arboricultural practice. Tree height was measured with the use of a clinometer (Where practical). A generalised system was employed to describe the overall health of the trees. The system uses a three tier rating scale with the following descriptors:

Specimen condition 3-tier rating system

- Poor- 1-30%
- Fair- 31-60%
- Good- 61-100%

3.0 Initial Tree Survey Overview

3.1 The Site

The proposed site is a green field site located adjacent to existing residential areas. The site is subdivided with low quality hedgerows, that primarily consists of fragmented scrub hawthorn and bramble. There are few trees within the hedgerows, those that are present consist of ash trees that are in decline with suspected ash die back (*Hymenoscyphus fraxineus*) and many are densely covered with ivy. The trees are of low quality and limited retention viability

Figure 1. Site location. Highlighted in red



4.0 Statutory and Non-Statutory Designations

The National Planning Framework (NPF) seeks to ensure that new development is sustainable and underlines the importance of Green Infrastructure, of which trees form an integral part. This encompasses recognition of the importance of trees in relation to the management of air, soil and water quality along with other associated ecosystem services and climate change adaptation. The NPF also seeks to achieve the protection and enhancement of landscapes and a net gain in biodiversity.

The site is located within the jurisdiction of *Meath County Council*. The Local Planning Authorities have a statutory duty to consider both the protection and planting of trees when considering planning applications. The potential impact of development on all trees (including those not protected by a Tree Preservation Order or other statutory designation) is therefore a material consideration. I have reviewed *Meath County Council Development Plan 2021-2027 Tree Preservation Orders (TPOs)*. There are no TPOs identified within the development site.

5.0 The Proposed Development (figure 2)

Brief Summary Development Description

DSPL Limited, intends to apply to An Bord Pleanála for permission for a strategic housing development on a site area of 4.8ha located at Longford Road / The Steeples Road, Duleek, Co. Meath in the townland of Commons. To the north-west of the site is the Stoneyford Green residential estate, to the west, on the opposite side of Longford Road / The Steeples Road, is The Steeples residential estate, with Larrix Mews / Kennel Lane to the east/south-east.

The proposed development will consist of 141 no. dwellings and a 2 storey creche (415sq.m). The residential dwellings will be comprised of 131 no. 2 storey houses and 10 no. 1 bed apartments accommodated 4 no. 2 storey buildings. The proposed houses consist of 4 no. 4 bed detached houses, 18 no. 3 & 4 bed semi-detached houses, 102 no. 3 & 4 bed terraced houses and 7 no. 2 bed terraced houses.

The proposed development provides for all associated site development works, including the provision of a roadside footpath and cyclepath along Longford Road / The Steeples Road, sub-stations, car parking, bin & bicycle storage, public and communal open spaces, hard and soft landscaping, boundary treatments and public lighting. Access to the development will be via one new vehicular entrance off Longford Road / The Steeples Road, with pedestrian / cyclist access provided along the northern & eastern boundaries.

6.0 Tree assessment

Steeples Road

The eastern boundary of the site bounds Steeples road. There are no trees within this boundary and it consists of an earthen mound overgrown with briars.

View of the Trees.

Steeples Road boundary (Hedgerow 1)



Displaying the Steeples road boundary. Note the lack of trees



Old laneway (Hedgerow 1)

View of the Trees.

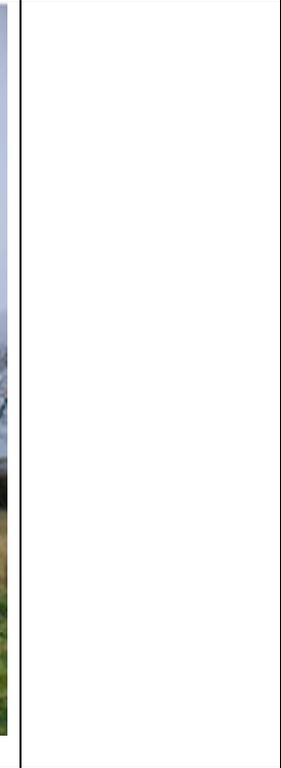
Old Laneway. There are few trees of quality within this hedgerow, they primarily consist of mature ash and scrub hawthorn. It is proposed to retain this hedgerow



Displaying the old laneway boundary. Note the densely covered ivy trees. Fragmented hedgerow of low quality



Early mature ash of low quality



Hedgerow 2. There are no trees within this boundary and it consists of an earthen mound with overgrown brambles. This boundary will be enhanced with new native plantings

View of the Trees.



Displaying the northern boundary. No trees within the boundary, the large tree in the background is off site.



Central Hedgerow 3.

There are no trees within this boundary and it consists of an earthen mound with overgrown brambles and sporadic scrub hawthorn. It is proposed to remove this hedgerow

View of the Trees.



Displaying the central hedgerow. No trees within this hedgerow, it is primarily an earthen mound of bramble



Central boundary

East to West hedgerow 4. There are no trees within this boundary and it consists of an earthen mound with overgrown brambles and sporadic scrub hawthorn. It is proposed to remove this hedgerow.

View of the Trees.



Displaying the east to west. No trees within this hedgerow, it is primarily an earthen mound of bramble



East to west boundary

7.0 Analysis of the Proposal in Respect of Trees

Arboricultural Impacts

- 7.1 Loss of trees – The hedgerows which primarily consist of earthen mounds of bramble and scrub hawthorn will be removed as well as any ash trees which are all in decline and of little retention value.
- 7.2 Arboricultural works – No pruning works have been recommended at this stage
- 7.3 Following the completion of the development, a tree condition assessment should be carried out on all retained trees for health and safety purposes.
- 7.4 Tree protection measures - All retained trees and hedgerows can be successfully protected during the proposed development by using robust fencing which complies with the recommendations outlined within BS5837:2012.
- 7.5 No materials or equipment other than those required to install tree protection will be delivered to the site until all fencing is in place.
- 7.6 For details of the tree protection measures required during construction, please refer to the Tree Protection Plan.
- 7.7 Compound area – The proposed site compound has been designed; there is sufficient space available throughout the site to avoid any unnecessary impacts to retained trees, provided the tree protection measures as detailed within this report are carried out.
- 7.8 Site access – The site is located on an existing road, therefore there will be no access issues.
- 7.9 Daylight and sunlight levels - Shading by trees has been assessed and is not considered a significant issue in relation to this proposal.
- 7.10 Drainage and services – All new service runs should be located outside the RPAs of retained trees to avoid impacting their condition. If it is found necessary to locate services within tree RPAs, it is recommended that these works are carried out under

arboricultural supervision. Methods of work should follow the recommendations in the NJUG (National Joint Utilities Group) guidance. BS5837 (2012) recommends the NJUG guidance as a normative reference to be used in these circumstances.

- 7.11 Boundary treatments – to be enhanced with native plantings
- 7.12 Any working operation within the RPAs of retained trees must be carried out manually using hand tools only. Fencing posts must be positioned at least 50 cm from the outer stems of each retained tree in order to allow for future incremental stem growth and to avoid structural roots during excavation works. The excavation for pits to install posts will be carried out using hand tools only. All roots above 25mm in diameter will be retained within the pits or alternative locations which do not contain roots above 25mm will be found. All fence post pits will be lined with 1000-gauge polythene to prevent phytotoxic effects of cement products impacting trees. The final location of the fence should be agreed by the arboricultural consultant prior to works commencing.
- 7.13 Landscape operations - Landscaping operations will typically take place at the end of the construction period. These works will normally require the removal of protective fencing to facilitate access for works. There is a risk that plant and machinery may damage soil structure where tree roots are growing. These risks can be managed by maintaining good professional standards of work and working to a method statement. The principle of avoiding soil disturbance or changes in levels within the RPAs of retained trees should be followed unless arboricultural advice has been sought.

Arboricultural mitigation

- 7.14 A landscape plan has been designed as part of the proposal. Please refer to the separate proposed landscape plan for further information

8.0 Discussion & Conclusion

- 8.1 My assessment is that there will be no loss of trees and therefore no impact on the character and appearance of the immediate surrounding landscape.
- 8.2 The proposed development complies with local planning policy as it relates to trees. A tree survey has been carried out in accordance with best practice and where possible trees have been retained and can be successfully protected during construction.

- 8.3 A landscape plan which will form part of the planning application. Please review the landscape plan for further information
- 8.4 The proposal has been assessed in accordance with BS5837:2012
- 8.5 Retained trees have been assessed and can be successfully protected during development by following the information provided within this report and adhering to industry best practice.
- 8.6 Provided the recommendations and methods of work, as outlined within this report, are adhered to, the proposed development can be successfully carried out without having a negative impact on the character or appearance of the surrounding landscape.

9.0 Recommendations

- 9.1 The proposal should be carried out in accordance with the recommendations outlined within this report. Please review section 2.
- 9.2 The positioning of tree protective barriers should be installed as detailed within the Tree Protection Plan.
- 9.3 Site supervision should be carried out by an arboricultural consultant at key stages of the project to ensure that retained trees are successfully protected during the development. Details of supervision are included within the Arboricultural Method Statement at Section 2 of this report

Appendix A: Tree Survey Schedule

Tree #	Species Botanical Name	Age class	Size (mm)	Height (M)	Crown Sp. (M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of the development	PMR	Category	R.P.A. Meters
Hedgerow 1	<i>Ash</i> <i>Hawthorn</i> <i>Bramble</i>	M	150	10	N=3 S=3 E=3 W=3	2	fair	Fragmented hedgerow consists of predominantly scrub hawthorn, and sporadic ash in fair condition	Retain	Retain	C2	2.5m
Hedgerow 2	Bramble	EM	90	2	N=0 S=0 E=0 W=0	0	Poor	An earthen mound of overgrown grass and bramble	Remove	Remove	U	
Hedgerow 3	Bramble	EM	90	2	N=0 S=0 E=0 W=0	0	Poor	An earthen mound of overgrown grass and bramble	Remove	Remove	U	
Hedgerow 4	Bramble	EM	90	2	N=0 S=0 E=0 W=0	0	Poor	An earthen mound of overgrown grass and bramble	Remove	Remove	U	
Hedgerow 4	Bramble	EM	90	2	N=0 S=0 E=0 W=0	0	Poor	An earthen mound of overgrown grass and bramble	Remove	Remove	U	

Section 2: Arboricultural Method Statement

Introduction

This report has been prepared in accordance with British Standard 5837: Trees in relation to design, demolition and construction – Recommendations (2012) which provides a methodology for the assessment and protection of trees and other significant vegetation on development sites.

Sequence of Operations

- Proposed tree works.
- Installation of tree protection measures.
- Enabling works.
- Construction of proposal and the installation of drainage and services.
- Landscaping.

Alternative sequences can be discussed and agreed with the local authority and project manager if required.

Supervision

All key / critical activities that will affect trees during construction will be inspected and monitored by the approved arboricultural consultant.

- Pre-commencement meeting with site manager and local authority to confirm location of tree protection measures.
- Inspection of all tree works and tree protection measures prior to the commencement of works.
- Monthly site visits to inspect tree protection measures are in place and reports issued to the local authority.
- Supervision during the excavation works within the RPAs of retained trees.
- Supervision during the installation of all services within tree RPAs.
- Supervision during any other works that may affect retained trees.
- Inspection upon completion.

Arboricultural Method Statement	
Scope	Methodology
Pre-commencement meeting	<p>Prior to the commencement of works, a meeting between the arboricultural consultant, local authority and the site manager will be held in order to discuss the tree protection measures and proposed works required in close proximity to trees.</p> <p>Contact details of all parties will be circulated to ensure all team members are able to communicate correctly.</p> <p>The site manager will be responsible for the protection of all retained trees for the duration of the project. Whenever necessary, the site manager will engage the arboricultural consultant to ensure trees are adequately protected.</p> <p>The appointed arboricultural consultant will be available for verbal advice throughout site works.</p>
Tree Works	<p>Please refer to the Tree Work Schedule at Appendix A for a list of all proposed tree works. The location of trees to be removed are highlighted on the Tree Removals Plan at Appendix B.</p> <p>It is the responsibility of the Site Manager to ensure all tree works have been approved by the local planning authority.</p> <p>All tree works will be carried out by a reputable arboricultural contractor in accordance with the recommendations given in BS 3998:2010 – Tree Work Recommendations.</p> <p>All tree works should be carried out in accordance with Section 40 of the Wildlife Act 1976 and Section 46 of the Wildlife (Amendment) Act 2000.</p> <p>It is the responsibility of the arboricultural contractor to ensure that no protected species are harmed whilst carrying out site clearance or tree surgery works.</p>

Tree Protection	<p>The position of protective fencing for construction is shown on the Tree Protection Plan at Appendix B.</p> <p>Protective fencing will be constructed and installed using fencing in accordance with BS5837:2012, please refer to the attached Tree Protection Plan for the specification. Alternatives to those shown must be agreed in advance by the client approved, arboricultural consultant.</p>
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	<p>Any machinery / site operative within tree RPAs must operate on the appropriate ground protection at all times, this will include the installation and removal of ground protection.</p> <p>Ground protection measures must be installed in accordance with industry best practice guidance as stated within Section 6.2.3.3 of BS 5837:2012. They must be fit for purpose and capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.</p> <p>No materials or equipment other than those required to erect protective fencing will be delivered to the site before the fencing is installed.</p> <p>Signs will be fixed to every third panel stating, <i>'Tree Protection Area Keep Out – Any incursion into the protected area must be with the agreement of the local authority or arboricultural consultant'</i>.</p> <p>The main contractor will inform the local authority and the arboricultural consultant that tree protection is in place before site clearance works commence.</p> <p>No alteration, removal or repositioning of the tree protection will take place during construction without the prior consent of the arboricultural consultant.</p>
<p>Compound Area</p>	<p>The proposed site compound area has not yet been designed; however, the considerations below must be followed:</p> <p>The site compound must be located outside the designated TPZs as highlighted on the Tree Protection Plan at Appendix B.</p> <p>No excavation works within tree RPAs are permitted to install temporary services for site cabins and facilities. Any temporary services within tree RPAs must be above ground and protected accordingly.</p> <p>No operating generators or toxic liquids will be stored within the RPAs of retained trees during construction.</p> <p>Overhanging tree canopies must be taken into consideration when transporting, installing and removing site cabins near tree crowns. A banksman will be present during this process to ensure that all operations are carried out in a controlled manner and no part of the</p>

	<p>cabin meets overhanging tree crowns.</p>
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<p>Installation of cellular confinement system</p>	<p>The installation of the cellular confinement system will be carried out under arboricultural supervision using the following methodology:</p> <p>The existing vegetation in the location of the footpath will be sprayed using a suitable herbicide that is not detrimental to trees and the area left for the prescribed timescale (normally 14 days).</p> <p>Once vegetation has died off the area will be raked and if levelling is required this will be carried out through the spreading of lawn sand or a good quality topsoil.</p> <p>Once levelled the area will be covered by a permeable membrane onto which the cellular system will be laid. This will then be infilled with 20-40mm angular non-fine aggregate and edged with pressure treated pegged timber board or similar. Please refer to the manufacturer's guidelines for additional information.</p> <p>The finishing surface layer will consist of a permeable hard surface material.</p>
<p>Installation of fencing within RPAs</p>	<p>The installation of fencing within the RPAs of retained trees will be carried out using the following methodology:</p> <p>Post holes will be carefully positioned as far away from the stem of trees as possible (minimum 50 cm) to minimise contact with tree stems and significant tree roots.</p> <p>Holes will be manually excavated with the use of hand tools only and where roots greater than 25mm in diameter or large fibrous roots are present, the position of the hole will be slightly altered to avoid potential root damage.</p> <p>If the position of the hole cannot be altered, roots greater than 25mm in diameter or large fibrous roots will be protected with flexible plastic pipes and retained within the pit.</p> <p>In some cases, individual roots less than 25mm in diameter may be pruned, making a clean cut with a suitable sharp sterile tool (e.g. secateurs or handsaw).</p> <p>Once the required depth has been excavated, the hole will be lined using</p>

	1000-gauge polythene and filled with the appropriate concrete mix.
Landscape Operations	All landscape operations within the protected area will be carried out by hand, using hand tools only, unless otherwise agreed with by the arboricultural consultant.

	<p>No dumping of spoil or rubbish, parking of vehicles or plant, storage of materials or temporary accommodation will be undertaken within the TPZs.</p> <p>All tree roots within the RPAs greater than 25mm diameter will be retained and worked around.</p> <p>Soil levels will not be increased or reduced within the RPAs of trees without prior agreement from the arboricultural consultant.</p>
<p>General Principles to Avoid Damage to Trees</p>	<p>All tree works will be carried out in accordance with the recommendations given in BS 3998 (2010).</p> <p>No fires will be permitted within 20m of the crown of any tree.</p> <p>No changes in soil levels will take place within the tree protection zones without prior written consent of the local authority.</p> <p>No materials, vehicles, plant or personnel will be permitted into the tree protection zones at any time without the prior consent of the arboricultural consultant.</p> <p>Any liquid materials spilled on site will be immediately cleared up and removed from the site. If liquid fuel or cement products are spilled within 2m of the tree protection zone, the contractor will report the incident to the arboricultural consultant immediately.</p> <p>The contractor will report any damage to trees or shrubs, whether caused by construction activities or from any other cause, to the arboricultural consultant immediately.</p>

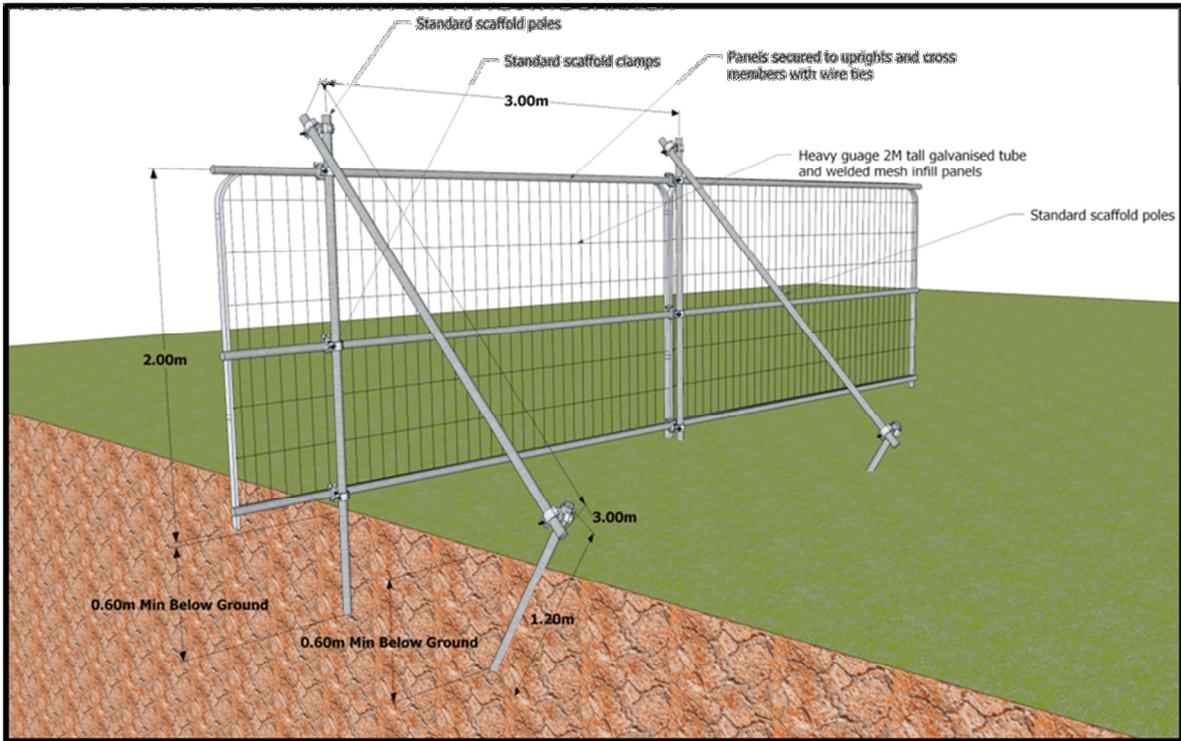
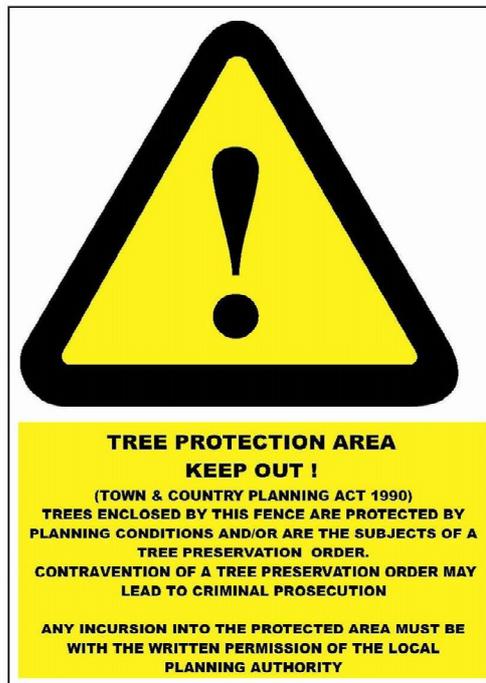


Figure 3 Default specification for tree protection barrier in accordance with BS5837:2012





This report was prepared by:

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Yours in Conservation,

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