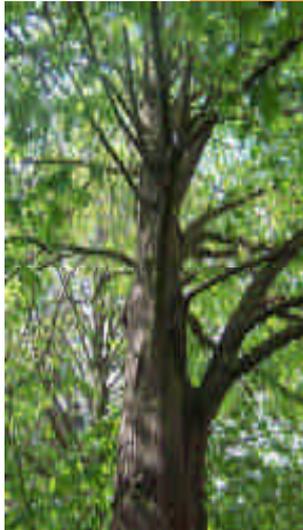


Trees & Development

supplementary planning guidance

**South Derbyshire District Council
Planning Services**



INVESTOR IN PEOPLE

Purpose of the Guidelines

The purpose of this Supplementary Planning Guidance (SPG) is to provide information to developers, landowners, agents, architects, planning consultants, landscape architects, arboriculturists and contractors, on the standards that South Derbyshire District Council will expect from new development proposals. The guide seeks to ensure that trees are afforded due consideration in the planning process so that they can be effectively integrated into new development.

This SPG has been prepared in accordance with the requirements of Environment Policy 16 of the Derby and Derbyshire Joint Structure Plan (January 2001), Environment Policy 9 and Housing Policy 11 of the South Derbyshire Local Plan and Policy ENV2, ENV3, ENV5 of the South Derbyshire Local Plan Revised Deposit Draft (January 2003)

The Importance of Trees

Trees are widely appreciated as playing a vital part in enhancing the scenic character of urban and rural areas.

The retention of trees within new developments provides an immediate sense of maturity, to the benefit of a site and surroundings, raising the overall quality of schemes and enhancing property values.

Where trees are damaged and subsequently decline and die, or where inappropriate design leads to conflict, trees become a constant source of complaint and ultimately, any positive benefits are lost.

Local Planning Authority's aims & objectives

The Council's general aims are to continue to promote the benefits of trees throughout the District, to encourage sustainable management of the District's trees and to enhance the level and quality of tree cover by the use of its planning powers, and through negotiations. The Council will expect development proposals to provide positive environmental benefits. The Council will take account of current Structure Plan and Development Plan Policies, of relevant Supplementary Planning Guidance and all current legislation, Government advice and recommendations. Planning permission will not normally be granted for:

- Developments which directly or indirectly threaten trees or woodlands of high amenity value.
- Developments which have inadequate or inappropriate landscape proposals that fail to provide measures to conserve, or where appropriate, enhance the character of the landscape.
- Developments which directly or indirectly threaten 'important' hedgerows (Hedgerow Regulations 1997).

Surveying the Site

Existing trees on development sites are particularly vulnerable to damage during the construction process. It is important that basic information about the site is gathered to inform the design process.

Land Surveys will be expected to meet the requirements of Section 5 of the British Standard BS5837 (1991) Guide for Trees in Relation to Construction, and should follow the standard drawing convention within British Standard BS1192 Part 4 (1984), Recommendations for Landscape Drawings.

Tree Surveys

Where developments are likely to affect existing trees, the Council will normally require the submission of a detailed Tree Survey, drawn up in conjunction with the Land Survey.

Tree Surveys should plot the accurate locations of all existing trees, shrubs and hedges, including those on adjacent land which may be affected by the development, and should detail the following information in plan or tabular form:

- The species, trunk diameter (measured at 1.5m above ground level) and the accurate canopy spread of each tree. (Plans must define accurate crown spreads rather than using illustrative circles).
- The condition and vigour of each tree including details of any relevant defects and any necessary, or proposed remedial works.
- The age of each tree, together with an assessment of future life expectancy and potential future growth.
- The current and potential amenity value of the trees.
- The "desirability for retention" of each tree, or group of trees, designated as in the detailed requirements of British Standard BS5837 (1991) Section 5.2.2.
- The suitability of each tree within the context of the proposed land-use for the site (residential, industrial, etc.).
- A clear indication of which trees are to be retained, and those which are proposed for removal

NOTE: Surveys should be prepared with professionally qualified Arboricultural input and should be available before any detailed design decisions are made in relation to the development proposals.

Planning the Form of the Development Brief to Developers

In general, site layouts will be expected to:

- Provide for the retention of as much existing tree cover as is practicable. The allocation of

space for trees must be assessed in terms of the overall landscape of the area: continuity and long term sustainability of tree cover are important criteria to be considered.

- Make adequate provision for the long-term retention of trees, groups of trees or areas of woodland which are identified as having significant current or potential amenity value. British Standard BS5837:1991 recommends that: 'preference should be given to retaining the high and moderate category trees'
- Provide for the retention of as much of the existing hedgerow cover as is practicable.
- Ensure the long-term retention of all 'Important Hedgerows' (Hedgerow Regulations 1997).
- Allow appropriate space for new planting.
- Ensure that where proposals include the felling of existing trees, landscaping schemes make provision for sufficient replacement planting to offset any resulting loss of amenity.
- Include sufficient information to allow for a full, detailed assessment of the short and long-term arboricultural and landscape implications of the development proposals to be made.

Layout Design Criteria

Existing Trees (avoiding direct damage)

The layout of any development should be designed with detailed reference to the general Site Survey and the Tree Survey.

Consideration should be given to ensuring that trees and hedges which have been identified for retention are not directly or indirectly damaged by the proposed works.

A minimum area around each tree, or group of trees and hedges, should be identified by reference to the

Table 1:
Protection of trees: minimum distances for protective fencing around trees

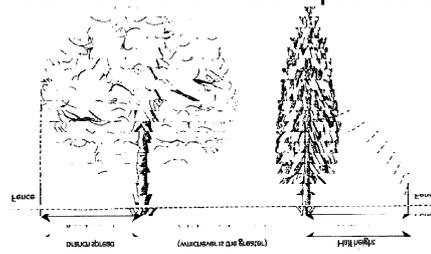
tree age	tree vigour	trunk dia. mm	min. distance m
young (age less than 1/3 life expectancy)	normal	<200	2.0
		200 to 400	3.0
		>400	4.0
young	low	<20	3.0
		200 to 400	4.5
		>400	6.0
middle age (1/3 - 2/3's life expectancy)	normal	<250	3.0
		250 to 500	4.5
		>500	6.0
middle age	low	<250	5.0
		250 to 500	7.5
		>500	10.0
mature	normal	<350	4.0
		350 to 750	6.0
		>750	8.0
mature & overmature	low	<350	6.0
		350 to 750	9.0
		>750	12.0

Note 1: It should be emphasised that this table relates to distances from the centre of tree to protective fencing. Other considerations, particularly the need to provide adequate space around the tree including allowances for future growth and also working space around the tree including allowances for future growth and also working space will usually indicate that structure should be further away.

Note 2: With appropriate precautions, temporary site works can occur within the protected area, eg for access or scaffolding

Tree Survey data, and to Table 1 and Figure 2 of British Standard BS5837 (1991)

Fig. 2: Alternative location for protective fencing



These areas, to be referred to as the 'exclusion zones', will be expected to remain undisturbed for the duration of the development. Site layouts should therefore be designed to avoid any construction works within the identified exclusion zones and should make adequate provision for sufficient working space. The Council will consider any essential intrusion into the exclusion zones on their own merits following the submission of detailed specifications and method statements.

The long-term implications of any construction work within the exclusion zones should also be carefully assessed in relation to Table 2 of BS 5837 (1991). New structures, drains, services, walls, paths, driveways and areas of hardstanding should be sited or designed so as to avoid direct damage from future growth of the bole and main structural roots of retained trees.

Table 2:
Minimum distance (metres) between structure and centre of trunk of young trees or position of new planting, to avoid direct damage to a structure (inc. foundations) from future growth of the base of the trunk and roots

Buildings & heavily loaded structures. Lightly loaded structures (such as single storey timber- framed buildings, garages, porches, etc.)	-	0.5	1.2
	-	0.7	1.5
Drains & underground services: < 1m deep > 1m deep	0.5	1.5	3.0
	-	1.0	2.0
Masonry boundary walls	-	1.0 ¹	2.0 ¹
	-	0.5 ²	1.0 ²
In situ paths & drives	0.5 ¹	0.5 ¹	1.0 ¹
	-	1.0 ²	2.5 ²
Paths & drives with flexible surfaces, such as asphalt, shale or paving slabs	0.7	1.5 ¹	3.0 ¹
	-	0.5 ²	1.0 ²

¹ These distances will generally avoid virtually all direct damage.

² These distances assume that some movement and minor damage which may be tolerated might occur

Note 1: Constructing too close to existing trees can damage them, render them dangerous or kill them.

Note 2: Trunk and branches may also affect the structure

Note 3: Special precautions may be needed on clay soils.

Note 4: This table provides guidance on the acceptable proximity of young trees or new planting to allow for future growth. The table should not be taken to imply that construction work can occur at the specified distances from existing trees, as such work might damage the tree, or render it dangerous, but refers to the potential for future growth, either of a young tree or of planting occurring subsequent to construction.

Existing Trees (avoiding future conflict)

Tree Preservation Orders: A Guide to the Law and Good Practice (March 2000) advises: 'Incoming occupiers of properties will want trees to be in harmony with their surroundings without casting excessive shade, or

otherwise unreasonably interfering with their prospects of reasonably enjoying their property. Layouts may require careful adjustment to prevent trees which are to remain from causing unreasonable inconvenience to future occupiers, leading inevitably to requests for consent to fell'.

Development layouts, even if not affecting trees directly, may not be acceptable if they would result in undue pressures, in the short or the long term, for felling or excessive pruning of important trees.

Site layouts:

- will be expected to ensure that trees which are to remain are given adequate space including sufficient allowance for future growth, without the need for excessive or unreasonable pruning.
- will ensure that trees at maturity will not dominate buildings, inevitably leading to concerns about safety and ultimately to requests to fell or heavily prune.
- must ensure that trees will not cause unreasonable obstruction of direct sunlight, or daylight to properties.

NOTES: 45° 'Rule of Thumb':

- *The sun is 45° or more above the horizon from mid-April to mid-August, between approximately 11.00am and 3.00pm (British Summer Time).*
- *If a tree is no closer to a property than its ultimate mature height, the sun will be above the tree's canopy during those periods, and that property will receive reasonable levels of sunlight and daylight.*
- should ensure that gardens are of adequate size, are large enough to enable normal domestic use and can reasonably accommodate the trees including allowance for growth. Consideration should also be given to future house extensions and what is allowed under permitted development without reducing the amount of garden space to unacceptable levels.
- must ensure that due consideration is given to the pruning requirements of retained trees, (full details should be included in the Tree Survey). All tree works will be expected to comply with current arboricultural best practice and meet the requirements of British Standard BS3998 (1989) Recommendations for Tree Work.

Site Access and Services

The provision of permanent and temporary site access is an important part of the layout design stages, and full detail will normally be required in support of any planning application.

Clear guidance from the Highway Authority for site access and visibility splays will be required prior to the submission of an application to assess the implications for existing trees and hedges.

The implications of temporary site access should also be considered. Temporary access may be required for unusually long, wide, high or heavy vehicles or plant. The implications for trees and hedges, which are to remain, must be carefully assessed, and full detail submitted as a part of any application.

Drainage and service layouts must be designed in such a way as to allow for installation and future maintenance without adversely affecting trees and their root systems. The provision of common service trenches may help to minimise potential conflicts. Full details of service layouts should be submitted with any planning application. Service layout planning and installation should be carried out in accordance with the requirements of The National Joint Utilities Group (NJUG) Publication No 10. Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees.

Tree Planting (general principles)

Tree Preservation Orders: A Guide to the Law and Good Practice (March 2000) states: *'Tree planting provides for the future amenity of a site and its surroundings, supplements existing tree cover or enhances areas where tree cover is sparse'.*

- Tree planting on development sites should contribute to the creation of a high level of amenity, which enhances the attractiveness of the site and the surrounding area.
- Tree planting is a vital component in the visual composition of a development and should be recognised from the outset as an integral part of any development scheme. On sites, which have no trees, it is especially important to plan for the planting of trees as part of the development.
- Tree planting schemes will be expected to contribute to the establishment of a well-structured framework of diverse ages, sizes and species.
- Developers should recognise the functional role of tree planting in enhancing the physical characteristics of a development through providing shelter, screening, enclosure, softening the harsh outline of buildings, defining space or directing routes and views, or simply in 'lending enchantment' to the visual amenity of an area.
- Particular attention should be given to the use of tree planting in enhancing public areas within developments and views into sites from surrounding public viewpoints.
- In locations where nature conservation objectives are recognised, planting schemes will be expected to maximise the benefits to wildlife, through the use of a range of native trees and shrubs suited to the ecology of the locality.

Tree Planting (avoiding future conflict)

Tree Preservation Orders: A Guide to the Law and Good Practice (March 2000) states: '*Landscaping should be designed to complement the development, without reducing the occupants' enjoyment, so reasonable daylighting and other requirements should be observed...the likely future growth of trees in relation to the development should be given due consideration.*'

In order to ensure that new trees do not interfere with buildings to such an extent that unsightly heavy pruning or removal becomes necessary, the following factors will require attention:

- There should be a careful choice of species and siting to ensure maximum long term amenity benefits and minimum future conflict.
- Decisions regarding species and siting should be taken on an assessment of the potential dimensions and growth habit at maturity, which will give an indication of whether future pruning requirements are likely to be acceptable.
- Careful siting of new trees with reference to Table 2 of British Standard BS5837 (1991), will ensure that future root damage to structures, drains, services, walls, paths and drives is prevented, or at least kept within acceptable limits.
- The future impact of tree plantings on the site should be assessed in the light of the Layout Design Criteria (avoiding future conflict) detailed in this guidance.
- The inclusion of professional Arboricultural and/or Landscape input into the landscape design stages is recommended, whenever new tree planting is proposed.

Applying for Planning Permission

Information Required

Tree Preservation Orders: A Guide to the Law and Good Practice (March 2000) states: '*... Applicants should ensure that applications are properly presented, containing all the information needed for a decision, and they should provide additional information promptly when reasonably requested.*'

It is essential that all relevant information pertaining to the assessment of trees and landscaping on a site is submitted with the planning application.

Where a development is likely to affect existing trees, on or adjacent to a site, the applicant will be expected to give due regard to the full range of construction related activities with potential to cause damage to trees, and will be expected to forward all the relevant

detail necessary for the Council to make an accurate assessment of the short and long term arboricultural implications of the proposals.

Where the Council considers that insufficient detail has been forwarded in support of any application, the following supplementary information may be requested, prior to determination.

- Land/tree survey.
- An arboricultural implication study.
- Tree protection measures
- Detailed hedgerow survey
- Full levels survey (*which should include existing and proposed spot levels at tree bases and around crown extremities. Cross sectional diagrams may be required in certain cases*).
- Drainage detail.
- Detailed service layouts
- Soft and hard landscaping treatments
- Permanent/temporary access arrangements
- Construction specifications and related method statements
- Detailed internal layouts of properties, including slab levels.

NOTES: *Permitted development (Town and Country Planning General Permitted Development Order 1995) which affects protected trees or hedgerows, may still require a formal application for consent under the Tree Preservation Order, Conservation Area or Hedgerow legislation. The Council's Officers are available to provide detailed, technical advice on such matters, and it is advisable to discuss Permitted Development proposals with them, prior to the commencement of any works.*

Implementation

Tree Works

This section refers to any tree felling, transplanting or tree surgery works, recommended as part of the Tree Survey, which may be necessary prior to or during implementation of an approved planning permission, or which may be required upon completion.

All tree work schedules and specifications should be detailed, precise and accurate, be drawn up in accordance with current arboricultural best practice and with the requirements of British Standard BS3998 (1989) Recommendations for Tree Work and should contain sufficient levels of detail for an accurate assessment of the full implications of the proposals to be made.

The Council expects all Tree Work operations to be carried out to the highest standards and will apply planning conditions and use Tree Preservation Orders, where necessary in order to ensure that such standards are maintained.

The Council recommends the use of qualified Arboriculturists, with appropriate levels of expertise, qualifications and insurance cover, and promotes the

use of Arboricultural Association (AA) approved Consultants and Contractors. Copies of Directories are available from: The Secretariat, Arboricultural Association, Ampfield House, Romsey, Hants. SO51 9PA. A list of local consultants and contractors is available, on request, from South Derbyshire District Council Planning Reception. The Council also supports Royal Forestry Society members/contractors and International Society of Arboriculture contractors (I.S.A).

Tree Protection Measures

Trees on development sites are particularly vulnerable to disruption during the construction process, and damage is often irreparable leading to decline and death. Tree roots systems are especially sensitive to construction damage. Such damage is not usually deliberate and is more often than not due to a lack of understanding of how easily trees can be harmed by nearby activities.

Some important facts about trees and their root systems:

- Trees do not usually have tap roots but a mass of rapidly sub-divided fibrous roots, normally extending well beyond the edge of the outer most branches.
- Most of a trees roots are within the top 600mm of the soil surface where the levels of moisture oxygen and nutrients necessary for survival are found.
- The health of a trees root system is vital to its long term well being, and any activity which affect the soil structure, damages or kills the fine roots, or alters the balance of moisture, oxygen and nutrients within the rooting zone, will affect the whole tree.
- Damage or severance of the main structural roots as well as killing off the distal portion of the fine root system may also affect a trees stability rendering it dangerous.
- The fine fibrous root system is equally important in terms of structural stability. The mass of soil particles bound together by the fibrous roots creates a structural counter balance to the above ground portions of a tree. Structural stability may also be impaired by excavation within the rooting zone even where major roots have not been severed.

Potentially damaging operations include:

- Excavation within the rooting zone
- Raising or lowering of ground levels
- Compaction of the soil by construction works, by site machinery or vehicles, and by the storage of materials and debris.
- The dumping or spillage of toxic materials

- The installation of impermeable surfacing
- Direct damage to trunks and branches by construction vehicles
- Fires built closer than 20m from the base of a tree

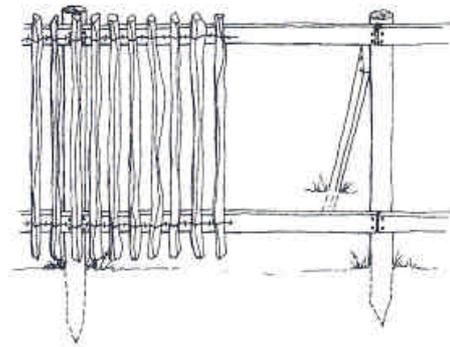
The Council will normally require a detailed tree protection scheme to be submitted for approval which will be expected to make provision for the retention and protection of trees shrubs and hedges growing on or adjacent to the site.

Tree Protection Schemes will be expected to address the following issues:

- Protective fencing should be positioned so as to enclose as large an area around each tree, group of trees and hedgerows as is practicable and must contain at least the area of the exclusion zone previously identified by reference to Table 1 or Figure 2 of BS5837 and the Tree Survey.
- The type of protective fencing should be appropriate for the degree of construction activity (a number of suggested protective fencing construction specifications are detailed as follows)
- The positioning of protective fencing must ensure that the development can be implemented without intruding into the exclusion zones.

Acceptable Types of Protective Fencing

1.2m Chestnut Paling



Key

Posts

75-100mm round top fence posts, 1.8m high at 2m spacings, securely driven in by 0.6m.

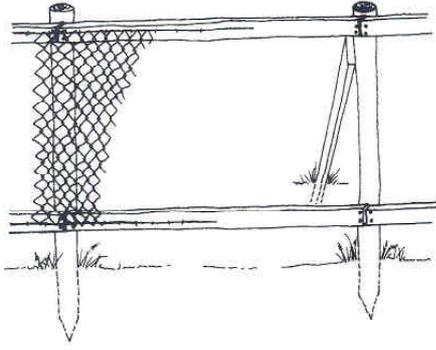
Top and Bottom Rails

50mm x 75mm softwood, nailed to uprights.

Support Struts

50mm x 75mm softwood, securely nailed to uprights at every third post, and at each corner or change of direction.

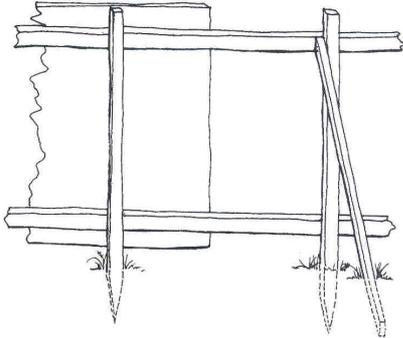
1.2m High Chain Link



Key

As per Chestnut Paling but chain link: 1.2m high chain link (in accordance with BS1722:Part 1) securely fixed to timber framework.

2.4m C'



Key

Posts

100mm x 100mm x 3.5m driven in to 1m depth at 2.5m spacings.

Top and Bottom Rails

50mm x 75mm softwood, twice nailed to uprights.

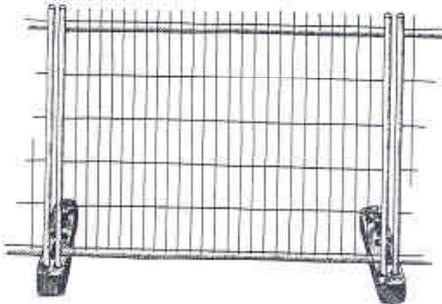
Support Struts

75 x 50mm softwood securely nailed to upright at every third post and at each corner or change of direction.

Plyboard

2.4m high, 20mm thick plyboard, securely affixed to timber frame.

2.1m Woven Mesh Wire/Weld Mesh



Key

- 2.1m high woven mesh wire fencing, eg. such as Heras
- Individual panels butted together and fixed with 3no clamps to each joint.
- Scaffold poles used to make it permanent.
- Each panel supported by a 45° scaffold tube strut, from the top rail of the panel back into the exclusion zone
- The base of the fence panels supported in a concrete or rubber base (as supplied with the fence panels). The base pinned to the ground by a 0.7m length of scaffold tube, driven not less than 0.45m into the

ground. A 0.2m length of scaffold tube fixed to form a 'T' to the top of the vertical tube, preventing movement of the base.

- No fixing made to any tree, and all possible precautions taken to prevent damage to tree roots when locating posts.

British Standard BS5837 (1991) provides clear guidance on the implementation of tree protection schemes and the Council expects the contents of this document to be complied with. Planning conditions and /or legal agreements will normally be used to ensure that:

- The protective fencing is erected prior to the commencement of any construction works on the site (including demolition and any preparatory site clearance).
- No development or other operations shall take place until preparatory works required by the Tree Protection Scheme are in place.
- All subsequent development operations are carried out in accordance with the approved scheme.
- No development operation or construction activity which could potentially cause damage to trees or hedges is permitted within any area designated in the approved scheme as being fenced off or otherwise protected,
- The protective fencing is retained in tact for the full duration of the development and is not repositioned or removed without the prior written approval of the local planning authority.

Arboricultural Method Statements

On sites where trees are felt to be particularly vulnerable to damage, and where additional safeguards are felt necessary, a planning condition requiring the submission and approval of a detailed Method Statement for Arboricultural Works may be attached to the planning approval. Arboricultural Method Statements will be expected to address the following:

- Timing and phasing of all arboricultural works in relation to the proposed development.
- Implementation, monitoring and supervision of the Tree Protection Scheme.
- Implementation, monitoring and supervision of the approved Tree Work Specification.
- Implementation, monitoring and supervision of the approved development works or construction

activities within the defined exclusion zones.

- Provision for regular monitoring of ongoing development operations to ensure full compliance with the approved Tree Protection Scheme and Arboricultural Method Statement for the duration of the development.
- The setting up of an agreed framework for maintaining appropriate levels of communication between all involved parties.
- Provision or qualified arboricultural supervision.

Landscape Schemes

- Planning conditions, and/or legal agreements, will normally be used to ensure that tree planting schemes are planned, implemented and maintained to provide maximum long term environmental benefits.
- The submission of a full, detailed landscaping scheme, in support of a planning application, is preferable on all sites.
- The Council expects sufficient information to be provided, to judge the value of tree planting schemes. Consideration should be given to augmenting proposals with cross-sections, projections or illustrative drawings.
- The minimum levels of information required for new tree planting proposals are as follows:
 - An accurate, detailed planting plan and schedule.
 - A comprehensive list of species and a stock specification.
 - Details of planting densities using full species names, plant sizes and spacings.
 - Individual locations of all specimen trees and shrubs
 - Clear indication of existing trees specified for retention and those for removal.
- The long term aims of a scheme can only be achieved if the landscaping succeeds. The Council will pay particular attention to the practical measures that are proposed as part of any scheme, to ensure the successful establishment of new planting.
- Tree planting schemes will, therefore, be expected to include the following provisions:
 - Preparation of the planting environment (including decompaction and drainage) should be at least to the standards set out in British Standard BS4428 (1989) Code of Practice for General Landscape Operations (excluding hard surfaces).
 - All plant material provided will be expected to comply with and be planted in accordance with the requirements of: British Standards BS3936 Specification for Nursery Stock, BS5236 Cultivation and Planting of Trees in the Advanced Nursery Stock Category, BS 4043 (1989) Recommendation for Transplanting Rootballed Trees and BS4428 (1989) Code of Practice for General Landscape Operations (excluding Hard Surfaces), as appropriate.
 - Final planting positions for new trees will be expected to take account of the requirements of Table 2 of BS5837:1991. A Guide for Trees in Relation to Construction.
 - The inclusion of a detailed maintenance schedule in a accordance with the requirements of BS4428 (1989) Code of Practice for General Landscape Operations (excluding hard surfaces).

Bibliography

Trees and Development Guidelines
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Further Advice

This leaflet is one of a series of leaflets (Supplementary Planning Guidance) published by South Derbyshire District Council Planning Service. Other documents in the series are as follows:

- **Car Parking Standards**
(as appended to the South Derbyshire Local Plan)
- **Cycling Strategy**
- **Housing Design and Layout**
- **Historic South Derbyshire**
- **House Extensions**
- **Provision of outdoor playing space in new development**
- **Satellite dishes**
- **Shardlow Article 4 Direction**
- **Melbourne Article 4 Direction**
- **National Forest Guides**

If you require any further advice or require clarification on any of the issues raised or other planning matters please contact:

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01283 595784.

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