

**Trees and Development**  
**Supplementary Planning Document**

**February 2026**



**Bassetlaw**  
DISTRICT COUNCIL  
— North Nottinghamshire —

## Contents

1. Introduction	1
2. The Benefits of Trees	1
3. Legislation, Policy and Guidance	2
4. How trees can be damaged	3
5. Tree protection in development	4
6. Planning application requirements – trees and ancient/veteran woodland	8
7. Planning application requirements – hedgerows	14
8. Incorporating trees into development	17
9. Street trees	19
10. Tree Maintenance and Management	20
Appendix 1: Links to BS 5837:2021	23

## **Abbreviations**

AIA	-	Arboricultural Impact Assessment
AMS	-	Arboricultural Method Statement
BS	-	British Standard
NPPF	-	National Planning Policy Framework
PPG	-	Planning Practice Guidance
RPA	-	Root Protection Area
TPO	-	Tree Preservation Order
SUDS	-	Sustainable Urban Drainage Systems

## **1. Introduction**

- 1.1 Trees are a fundamental part of Bassetlaw's environment, contributing significantly to the district's landscape, biodiversity, and overall ecological health. As awareness of environmental and health challenges grows, it has become increasingly important to focus attention on trees, not only for the aesthetic value they bring to communities, but also for their role in supporting biodiversity and nature recovery, enhancing heritage, mitigating the impacts of climate change, improving air and water quality and improving the wellbeing of residents.
- 1.2 Bassetlaw hosts the northern part of Sherwood Forest but the extent of trees and woodland is much greater. Bassetlaw is home to over 10,000ha of woodland, including 600ha of ancient woodland, which is nearly double the national average. This ancient and veteran woodland and treed landscape is central to the district's identity. The ongoing protection and enhancement of the district's treescape must be taken into account when considering proposals for new development of all sizes, alongside opportunities to establish new and sustainable tree planting.
- 1.3 This Supplementary Planning Document (SPD) enables the Council to address these priorities and build upon the policies outlined in the Bassetlaw Local Plan in particular, Policy ST39: Trees, Woodlands, and Hedgerows and Policy ST48: Reducing Carbon Emissions, Climate Change Mitigation and Adaptation. It provides clear guidance on the protection and management of trees during the planning, design, and development process and in relation to the provision of trees to mitigate climate change. This SPD will ensure that trees are properly considered in both new development proposals and for site enhancements.
- 1.4 The structure of this document follows the general process of development, from initial site surveys to planning permission and construction implementation, as outlined in BS 5837:2012 - Trees in Relation to Design, Demolition and Construction. By providing detailed guidance on tree protection, planting techniques, and appropriate tree care during planning, design and development, this SPD seeks to improve tree-related outcomes in the planning system, making a meaningful contribution to the district's nature recovery and green infrastructure network.
- 1.5 This SPD aims to inform developers, landowners, architects, arboriculturists, landscape architects, planning consultants, and other stakeholders of the standards expected by the Council regarding the protection and management of trees. It will help guide the planning process to ensure that trees, both in urban and rural settings, are effectively incorporated into development schemes and their long-term survival is secured. On adoption, the SPD will be a material consideration in the assessment of planning applications.

## **2. The Benefits of Trees**

- 2.1 Trees play a significant role within the built and natural environment:
  - Enhance new and existing development; provide visual buffers and soften hard landscaping; blend the harsh edges of the built environment and provide scale and a sense of perspective. Trees can add a sense of maturity alongside a new development, enhancing the built environment.
  - Provide 'shelter' against the weather including the sun, wind and rain. Trees can also provide shading for buildings in the summer reducing the requirement for air conditioning and insulating buildings from the winter potentially reducing heating and cooling costs.

- Reduce and buffer sound. A canopy of trees can help absorb and dissipate noise creating a more peaceful and tranquil environment in which to live and work.
- Filter pollution. Trees can reduce the amount of dust particles in the air by collecting on their leaves. These are either washed from the leaves by rain or fall to the ground in autumn.
- Provide fresh air for all. Trees provide clean air as they take in carbon dioxide and release oxygen as part of their living process, acting as carbon sinks.
- Provide habitats. Trees provide a habitat and food for mammals, birds and invertebrates. Trees and hedges can also provide wildlife corridors linking habitats, conserving biodiversity and supporting nature recovery.
- Contribute to improved mental health and well-being. Research shows that the presence of trees can reduce anxiety, improve mental health, reduce stress and promote psychological restoration.
- Contribute to local heritage. Trees can conserve and enhance the historic environment, restoring heritage features and landscapes and creating the heritage landscapes of the future.
- Contribute to place-making by lining streets, defining and accenting spaces and neighbourhoods and contributing to local identity. Specific trees or groups of trees have historic and community significance in their own right due to their age, character and location.

### **3. Legislation, Policy and Guidance**

- 3.1 Statutory legislation, national and local planning policy consider the impact of development on existing trees. The Town and Country Planning Act 1990 charges the Local Planning Authority with the duty to ensure, whenever it is appropriate, when granting planning permission that adequate provision is made for the preservation and planting of trees through planning conditions and the serving of Tree Preservation Orders (TPOs).
- 3.2 Tree Preservation Orders (TPOs) legally protect specific trees, groups of trees or woodlands in the interests of public amenity. A TPO is particularly important in controlling the felling and pruning of protected trees or woodlands. Planning permission is required to undertake works to protected trees in accordance with national legislation and guidance.
- 3.3 The Council maintains a register of trees and areas that are subject to a Tree Preservation Order. Further information is available on the Council's website [Protected trees and hedgerows guidance | Bassetlaw District Council](#) New TPOs will continue to be made where trees of amenity value are at risk.
- 3.4 Important hedgerows on a site will be subject to the Hedgerow Regulations 1997 (as amended). These hedgerows are generally over 30 years old and contain a high number and mix of species. Where hedgerows fall under the Regulations and are identified for removal as part of a development, the Council is required to assess any proposed removal under the criteria in the Regulations.
- 3.5 Trees and woodland may also be important habitats for species that are protected under the Natural Environment and Rural Communities Act 2006. In these cases, the provisions of legislation will apply.
- 3.6 The Forestry Commission has statutory responsibility for trees and woodland under the Forestry Act 1967. Those considering development proposals which may impact on trees or woodland should also check with The Forestry Commission to determine if a felling

licence is required. Further details are available at: [www.gov.uk/government/organisations/forestry-commission](http://www.gov.uk/government/organisations/forestry-commission)

- 3.7 In line with national legislation, most new development is required to provide for a 10% net gain in biodiversity, preferably on site, or where it can be demonstrated after following the mitigation hierarchy that this is not practicable, off-site. Tree planting can contribute to net gain and can help provide a more joined up ecological network across the district. For further details refer to the [Biodiversity Net Gain Supplementary Planning Document | Bassetlaw District...](#)

#### **National Planning Policy Framework (NPPF)**

- 3.8 National policy (paragraph 136) recognises the various roles trees can play in new development, including the 'important contribution' trees make to the character and quality of urban areas supporting the provision of tree lined streets, unless there is clear and justified reasons for not doing so. Appropriate long term maintenance to manage trees provided by development is also supported. The retention of existing trees is sought wherever possible.
- 3.9 Paragraph 187 b) emphasises that development should contribute to and enhance natural and local environments, including trees and woodlands, particularly given the wider benefits generated for natural capital, ecosystem services and the countryside.
- 3.10 Trees play an important role in maintaining and enhancing resilient ecosystems. The NPPF states (paragraph 193a) that if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused. It adds that 'development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists' (paragraph 193 c).
- 3.11 The Natural Environment [Planning practice guidance - GOV.UK](#) sets out the considerations when planning for trees in development and guidance around ancient woodland and ancient or veteran trees. There is also further guidance on Tree Preservation Orders and trees in Conservation Areas.
- 3.12 The [Local Nature Recovery Strategy for Nottinghamshire and Nottingham | Nottinghamshire County Council](#) sets out a statement of biodiversity priorities, including for trees and woodland. It notes existing biodiversity and woodland coverage as well as opportunities for enhancing trees and woodland over the next 10 years. Off site biodiversity net gain should seek to progress these opportunities to aid nature recovery at a landscape scale to contribute to delivering 'bigger, better and more joined up' habitats, ensuring tree planting and retention contributes to landscape-scale ecological connectivity.

#### **4. How trees can be damaged**

- 4.1 Trees can be damaged both directly and indirectly through all phases of a development including site clearance of vegetation, demolition, construction and landscaping. Examples include:

##### **Damage to roots**

Tree roots are essential for water, nutrients and stability. They can be damaged by:

- Root severance from excavation, trenching, or lowering of soil levels

- Root bark damage from site striping, grading or remediation
- Raising soil levels across the site but especially close to retained trees
- Soil compaction from vehicles, heavy machinery, or storing materials

### **Damage to Trunks and Branches**

Tree trunks and branches are vulnerable to:

- Bark wounds caused by machinery
- Ripped or broken limbs from plant, vehicles, or construction equipment
- Poor and excessive pruning, which can leave large wounds and expose trees to decay

### **Environmental Stresses**

Additional pressures that reduce tree health include:

- Burning of waste material close to trees scorching the bark, the canopy or damaging the roots
- Changes in the water table
- Spillage of petrol, diesel, mixing of cement and the storage of other chemicals under the canopies and within the Root Protection Areas
- By moving traffic or manoeuvring vehicles making contact and damaging bark, uprooting the trees or overloading the roots.
- Suitable tree protections on site being moved or ignored due to lack of training on trees for operatives.

- 4.2 It is therefore important that trees are surveyed at an early stage and are used to inform layout and design of a proposal to ensure a quality development rather than trees being damaged, placed too close together and/or retained inappropriately.

## **5. Tree protection in development**

- 5.1 Development should seek to enhance local character and positively respond to a site's context, including the wider historic and natural environment. Further information is within the [Bassetlaw Design Code Supplementary Planning Document | Bassetlaw District...](#) New development should positively respond to existing trees and hedgerows and ensure these are protected, as well as looking for opportunities to incorporate new tree planting. Integrating trees should be considered from the outset, where appropriate within a masterplan, as an integral part of a development. This approach can help to deliver robust and sustainable green and historic infrastructure, both in terms of urban planting, green corridors and Sustainable Drainage Systems (SuDS).
- 5.2 Current industry guidance for trees and development is provided in the British Standard 5837 2012; Trees in relation to design, demolition and construction – Recommendations. This is an accepted framework by which to assess and protect trees both within and adjacent to a development site. The Council will be guided by BS 5837 2012 (as amended) in assessing planning applications.
- 5.3 High quality design cannot be achieved if the opportunities and constraints of a site are not identified and considered at an early stage. Where there are existing mature trees on a proposed development site, or immediately adjacent which could be impacted by a proposal, their retention and protection within the overall layout of the development, should be the aim wherever possible, particularly in public areas.
- 5.4 Early consideration will help minimise future conflict which could arise from the proximity of existing trees to a building/structure and which may lead to inappropriate pruning. Trees can potentially cause structural problems for buildings or areas of hardstanding if not designed in as part of the infrastructure. Even if a tree is not directly affecting a property

at the time of application, it may have the future potential to cause damage later. Therefore, such development layouts will not be acceptable.

- 5.5 The characteristics of different tree species need to be considered early as this may lead to modifications to the site layout. Some trees have characteristics which can lead to 'nuisance' e.g. honeydew, fruit drop and blossom. These have the potential to increase bird droppings or small debris falling onto cars or footpaths. Layout may need to be changed to include further buffer areas around these trees to allow for them to be retained.

### **Trees and the Historic Environment**

- 5.6 Much of the district's most significant and sensitive heritage lies within open spaces containing numerous trees. Buried archaeology, above-ground historic structures and the layout and features of historic parks and open spaces can be susceptible to damage from unmanaged tree growth, windthrow, and fallen limbs as well as routine tree works such as pruning, felling and tree planting. As such, any proposed works or tree planting within/adjacent to heritage requires careful consideration, with the protection and enhancement of the historic environment a key part of planning and decision-making.
- 5.7 Additionally, trees of high landscape or heritage value are important features in their own right. Their loss or other negative effects should be avoided, for example by selecting an alternative site for development or designing the scheme to avoid harm. The removal of trees, or works to trees, may also have consequences for the visual historic environment, the character of landscape or townscape or the setting of heritage assets. It is important that their contribution for the value they add to heritage assets is recognised and protected.
- 5.8 Tree planting proposals should ensure that heritage assets (designated and non-designated) and their settings are appropriately conserved and enhanced through proposals. Careful consideration should be given to setting and visual experience of heritage assets, especially in key views from and to heritage assets. Nottinghamshire County Council's Historic Environment Team can provide a search of the historic environment record to identify heritage assets that maybe affected by tree planting.
- 5.9 Trees may impact listed buildings and their setting. Therefore, it will be necessary to consult with the Council's Conservation team regarding new tree planting where a listed building is present or adjacent to the development site.
- 5.10 Tree planting would usually be inappropriate within scheduled monuments and would require separate Scheduled Monument Consent. Historic England should be consulted in relation to any proposals in and around scheduled monuments.
- 5.11 Planting may also be inappropriate in areas of non-designated archaeology. Local authority archaeological advisors should be consulted where proposals may affect non-designated archaeology.
- 5.12 Some trees and woodlands were planted within designed historic parks and gardens. The ecological value of these woodlands varies. Some may include areas of ancient woodland or wood pasture, and many are long-established. Some are more recent. Their landscape and heritage value are often significant. A map of registered historic parks and gardens can be viewed [Bassetlaw heritage mapping | Bassetlaw District Council](#). Specific tree and landscape assessments may be required for proposals affecting these locations.
- 5.13 Trees and hedgerows can add to the value, significance and local distinctiveness of Conservation Areas. Every effort should be made to ensure their retention. Where new

planting is appropriate reference should be made to the relevant Conservation Area Appraisals and Management Plans.

- 5.14 For proposals in Conservation Areas, the applicant will be required to seek planning permission for works to trees on the site. A section 211 notice is required to be submitted to the local authority at least 6 weeks before carrying out certain work on trees in a conservation area that are not protected by a Tree Preservation Order. This is outlined in section 211 of the Town and Country Planning Act 1990.

**Ancient woodland, veteran trees and important hedgerows**

- 5.15 Ancient woodland is land that has been continuously wooded since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS). Although ancient woodlands are defined as having been wooded continuously this does not mean there has been continuous tree cover across the whole site. Open ground, both temporary and permanent, can be an important part of ancient woodlands.
- 5.16 All ancient trees and woodland are considered to be veteran trees, but not all veteran trees are ancient. The age at which a tree becomes veteran will vary by species because each species ages at a different rate. For a tree to be considered veteran as defined by the NPPF it needs to be irreplaceable as a habitat, and that is more likely to be the case for trees that are large and old for their species.
- 5.17 A veteran tree will not be as old as an ancient tree but is likely to show signs of decay important for biodiversity. During the later stages of life, trees are progressively colonised by fungi that change the properties of wood and large quantities of dead and dysfunctional woody tissue accumulate. A variety of 'veteran features' develop, including trunk hollowing, branch cavities, live stubs, shattered branch ends, loose bark, sap runs and a range of rot types.
- 5.18 Different types of decay provide different specific habitats for specialised and rare invertebrates, some of which are interdependent with each other and often have limited mobility. The longer these features are in place the greater the diversity of colonising species. The scale, variety, complexity and longevity of these habitats in ancient trees makes them irreplaceable. Veteran trees lack the great age of ancient trees but exhibit a similar quantity and quality of those 'veteran features' and associated habitats including high carbon density habitats.
- 5.19 The Ancient Woodland Inventory is a valuable reference point, but not all ancient/veteran woodland is recorded. The composition of the ground flora can help identify ancient woodlands as some species are strong indicators of a continuity of woodland habitat. Where a number of key indicator species are found together, there is a high likelihood that the wood in which they occur is of ancient origin. Absence of these species does not always indicate that a woodland is not ancient. As inventories are not definitive it will often be necessary to refer to them and to survey individual woods and wood pasture on the ground to find evidence of their status. This is best undertaken by a qualified ecologist or through a pre-application enquiry with the Council's Tree Officer.
- 5.20 Paragraph 193c of the NPPF states that development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland, ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists. Proposals affecting ancient woodland (including planted ancient woodland sites) not previously identified as such, will be subject to the same considerations.
- 5.21 Wholly exceptional reasons could include delivery of infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act

and hybrid bills) where the public benefit would clearly outweigh the loss or deterioration of habitat.

5.22 As ancient woodland, ancient/veteran trees are defined as irreplaceable, proposed compensation measures will not be considered as part of an assessment about the merits of a proposal. Neither must they be a part of considerations about wholly exceptional reasons.

5.23 [Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK](#) is the Natural England and Forestry Commission standing advice for ancient woodland. It is a material planning consideration for local planning authorities (LPAs).

### **Hedgerows**

5.24 Policy ST39 places importance on retaining hedges of high landscape, heritage, amenity or biodiversity value. The value of a hedge will depend on a range of factors which need to be assessed on a case by case basis and will always entail an element of professional judgement.

5.25 There is no national standard approach to assessing the value of hedges. The Hedgerow Regulations 1997 contain a set of criteria (Schedule 2) for determining 'important' hedgerows for the purposes of the legislation. While the use of Schedule 2 criteria can be informative as to the value of a hedge they are not definitive.

5.26 The landscape value of a hedge will depend in part on the contribution it makes to the character of the wider landscape and the local neighbourhood. Factors listed below for heritage, amenity and biodiversity also contribute to landscape value. Hedges of particularly high value will include those that:

- are a key characteristic of the landscape type
- form part of relatively intact field boundary networks
- are conspicuous or notable in views of the landscape
- contain hedgerow trees, hedge banks or ditches

More information on landscape character can be found in the [bassetlaw-landscape-character-assessment-compressed.pdf](#)

5.27 The heritage value of a hedge will depend in part on its age and the contribution it makes to understanding of the history of the landscape it forms part of. Hedges of particularly high value will include those that:

- mark the boundaries of historic parishes, townships, parks, estates or manors
- are associated with historic monuments and listed buildings
- form an integral part of pre-parliamentary enclosure field systems
- follow historic roads, lanes and paths

5.28 Hedges are likely to be of high amenity value where they are notable in views from public vantage points and particularly where they lie close to roads, public rights of way and public open space, or where they screen incongruous or unsightly features.

5.29 The Statutory Biodiversity Metric includes calculations for the value of hedgerows and lines of trees assessed against a range of factors. These are not exhaustive. While the 'distinctiveness' categories used in the Metric and scores assigned for 'habitat units' can be informative as to the value of a hedge they are not definitive. Key factors in giving a hedge high biodiversity value include:

- species diversity
- the presence of hedgerow trees, banks and ditches

- the physical condition of the hedge and its ground flora
- the presence of rare, endangered, vulnerable or protected species
- a functional role in the landscape connecting other features and habitats.

## **6. Planning application requirements – trees and ancient/veteran woodland**

- 6.1 The Council have a statutory duty to consider the protection and planting of trees when granting planning permission for development. Where development is proposed on sites containing trees, or where trees are close to or overhang site boundaries, the following survey information will be required to support a planning application. Information for proposals involving hedgerows is in section 7.
- 6.2 The nature and level of detail required should be proportionate to reflect the scale and nature of the proposal and to enable the Council to carefully consider the implications and effects and to ensure, where appropriate that mitigation will be provided that it is fit for purpose. Depending on the nature and scale of the proposal, a heritage/ecological assessment may be required to accompany a planning application.
- 6.3 Where trees are statutorily protected e.g. by a tree preservation order or by their inclusion within a conservation area, developers are advised to contact the Local Planning Authority at pre-application stage to ensure that all appropriate procedures will be followed.
- 6.4 [Pre-Application Advice | Bassetlaw District Council](#) is encouraged for all proposals involving trees so that from an early stage there is clear understanding of the requirements relating to trees and so that the planning application can be prepared appropriately. It is beneficial to provide information such as a land survey, a proposed layout of the development and details as specified in BS 5837:2012, at this stage to enable the council to provide accurate advice and guidance.

### **Land Survey**

- 6.5 For all proposals involving trees a land survey will be required. It should be precise and include the following information plotted accurately to a recognised scale:
- Spot heights of ground levels throughout the site
  - Location of trees within or adjacent to the site where their canopies and Root Protection Area encroaches into the red line boundary
  - Canopy spread of trees
  - Existing structures and features
  - Utilities, both overground and underground.

### **Tree Survey**

- 6.6 A Tree Survey must be prepared in conjunction with the land survey. The tree survey will be based on the condition and value of the existing trees in accordance with BS 5837: 2012.
- 6.7 The tree/hedgerow survey should record the position, species, size, condition and life stage of all trees with a stem diameter of 75mm or more measured at 1.5m above ground level, including any off-site trees whose canopies or Root Protection Areas may be impacted.
- 6.8 All trees should be numbered on a plan which will provide the detail for the Arboricultural Impact Assessment, the Tree Constraints Plan and Tree Protection Plan. Where there are woodlands or blocks of trees which will not be impacted upon by the proposed development it is acceptable to 'group' them.

6.9 The Tree Survey must be carried out by a qualified arboriculturist. Ancient and veteran trees should be identified in the Tree Survey but may require more detailed investigation and assessment. In some cases, it may be necessary for them to be surveyed by an experienced entomologist to determine their habitat value for dead wood invertebrates. The direct and indirect effects of development both during the construction and operational stages must be considered.

#### **Tree Constraints Plan**

6.10 Correct interpretation of the information from the land and tree surveys is essential to select trees/hedgerows which are suitable for retention and to identify any constraints that these trees place upon the existing site and the proposed development. The Tree Constraints Plan will bring these together to illustrate the constraints imposed by the trees both above and below ground.

6.11 The Root Protection Area for each relevant tree must be illustrated on the Tree Constraints Plan. The Root Protection Area is a critical zone around a tree that contains its most sensitive roots. Early identification and protection during construction are essential to maintaining the health and stability of retained trees.

6.12 The Root Protection Area should be calculated using the formula 12 times the tree stem diameter at 1.5m above ground level to determine the appropriate area that must be kept free from construction activities.

6.13 For ancient or veteran trees (including those on the woodland boundary), the Root Protection Area should be at least 15 times larger than the diameter of the tree or 5m from the edge of the tree's canopy whichever is greater. It may need to be larger where assessment shows other impacts (such as air pollution) are likely to extend beyond that distance. The construction-free zone should be larger where practical. Harmful activities within the Root Protection Area should only take place in wholly exceptional circumstances.

#### **Ancient or veteran trees/woodland – additional survey requirements**

6.14 The council will use [Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK](#). in evaluating and recording planning applications that effect ancient woodland.

6.15 Where there is ancient woodland on or adjacent to a development site it is likely that it will be necessary to carry out both a tree survey and an ecological survey. The scope of information should be discussed with the Council's Ecology team. Ecological surveys should follow best practice guidance.

6.16 Where a proposal involves the loss or deterioration of ancient woodland the Council will not take account of the existing condition of the ancient woodland when assessing the merits of the proposal. Existing condition is not a reason to give permission for development as a woodland in poor condition can be improved with good management.

6.17 The NPPF states that development entailing loss or deterioration of ancient/veteran woodland should be refused unless there are wholly exceptional reasons, and a suitable compensation strategy exists. Ancient woodlands are irreplaceable, so negative effects should be avoided, for example by selecting an alternative site for development or designing the scheme to avoid any harm.

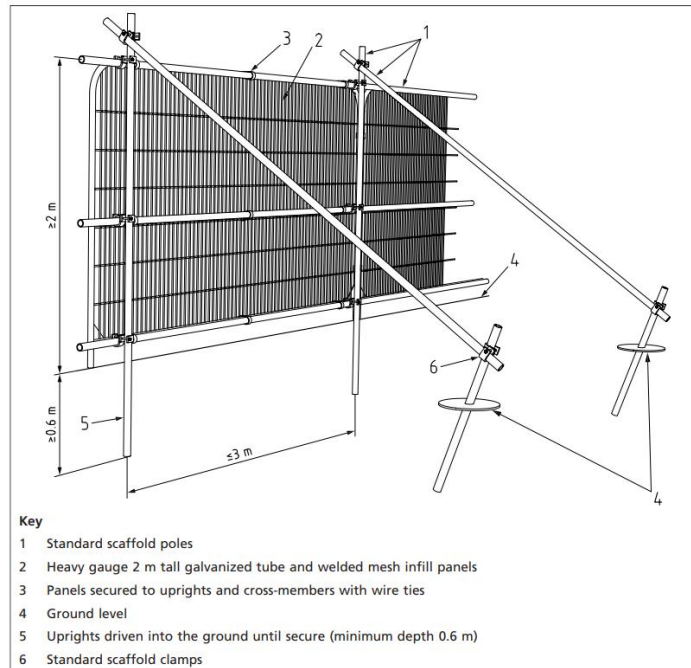
6.18 Buffer zones can afford a degree of protection to ancient woodlands. The size and type of buffer zone will vary depending on the scale and type of development and its potential effects on ancient woodland, together with the character of the surrounding area. Larger

buffer zones are likely to be needed if the surrounding area is less densely wooded, close to residential areas or steeply sloping. The buffer zone should be at least 15m from the boundary of the woodland to avoid root damage and may need to be larger where assessment shows other impacts (such as air pollution) are likely to extend beyond that distance. The boundary of the woodland is generally taken to mean the boundary fence, where one exists, rather than the canopy edge, but all need to be determined on a site-specific basis.

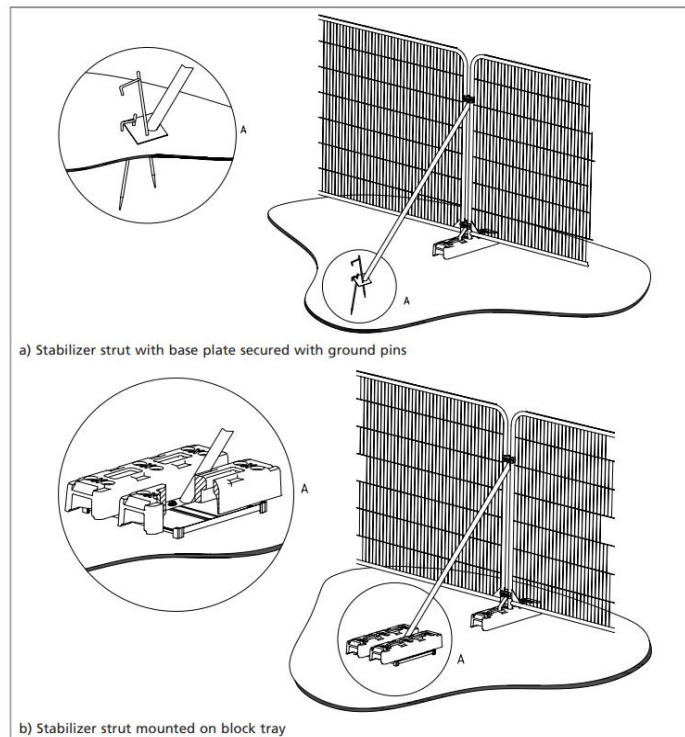
### **Arboricultural Impact Assessment**

- 6.19 The Arboricultural Impact Assessment is a comprehensive assessment derived from the Tree Constraints Plan, evaluating the direct and indirect effects of the proposed layout and identifies mitigation measures to minimise harm, such as adjustments to construction activities, layout modifications, or specialised tree protection strategies. Depending on the tree survey this document may be incorporated into one document with the Arboricultural Method Statement.
- 6.20 For trees to be retained, the starting point is that development must be located outside of a Root Protection Area. It should not be assumed that building or excavation can take place up to the edge of the Root Protection Area or that engineering solutions will be acceptable within a Root Protection Area. Where development encroaches into the Area, the applicant would need to demonstrate that a technical solution will prevent damage to the retained trees.
- 6.21 Adequate space between proposed buildings and the Root Protection Area may be required to manage growth post development.
- 6.22 In order to make informed decisions about which trees should be retained or removed at the time of development, arboriculturists should use the tree categorisation method to determine the quality and value of existing tree stock. For a tree to qualify under any given category, it should fall within the scope of that category's definition (U, A, B, C) and, for trees in categories A to C, it should qualify under one or more of the three subcategories (1, 2, 3). Subcategories 1, 2 and 3 are intended to reflect arboricultural and landscape qualities, and cultural values, respectively.
- 6.23 Trees can be easily and permanently damaged during construction activities so the protection of trees during construction is essential to ensure that they remain healthy and viable after the development process. During construction, retained trees must be protected by keeping all works and temporary structures clear of Root Protection Areas (RPAs), installing tree protection barriers, and supervising activities near trees in line with the Arboricultural Method Statement.
- 6.24 Tree protection barriers must be formed around the RPA to safeguard tree roots and prevent damage to the tree from construction activities, machinery, and personnel. Where construction activities require access within the RPA, ground protection is necessary to prevent soil compaction and damage to tree roots. It ensures that construction traffic and equipment do not harm the underlying root system.
- 6.25 In exceptional cases, where construction or temporary construction access is justified within the Root Protection Area, this should be facilitated by a set-back in the alignment of the tree protection barrier.
- 6.26 These barriers should be installed prior to any construction work and should remain in place throughout the construction phase to avoid encroachment into the Root Protection Area. Barriers should be fit for purpose to exclude construction activity and be appropriate

to the degree and proximity of work taking place around the retained trees. Barriers should be maintained to ensure that they remain rigid and complete.



**Figure 1: Default specification for protective barrier (BS 5837:2012)**



**Figure 2 - Examples of above-ground stabilizing systems (BS 5837:2012)**

6.27 Other mitigation measures may include:

- enhanced protective fencing with barriers to protect trees from dust and pollution
- measures to reduce noise or light pollution

- rerouting footpaths and managing vegetation to deflect trampling pressure away from sensitive locations
- maintaining functional connections with other semi-natural habitats

### **Arboricultural Method Statement**

- 6.28 The Arboricultural Method Statement is a methodology for the implementation of any aspect of development that falls within the Root Protection Area or has the potential to result in the loss of or damage to retained tree(s).
- 6.29 Where trees are particularly vulnerable on a development site and where there is a potential for the tree(s) to be damaged, a detailed method statement will be required. A precautionary approach towards tree protection will be adopted. Situations where an Arboricultural Method Statement will be required include:
- Where remediation of a site is required e.g., removal of asbestos, ordnance, contaminated soil etc
  - Creating access into a site
  - Demolition of existing structures
  - Removal or replacement of existing surfacing
  - Changes in ground levels e.g. retaining walls
  - Requirements for piling rigs
  - Construction of no-dig engineering solutions/temporary protection within the Root Protection Area
  - Erection of fencing
  - Installation or upgrading of utility infrastructure.
- 6.30 The Arboricultural Method Statement will need to demonstrate that the construction can be undertaken with minimal risk of adverse impact to the trees to be retained.

### **Tree Protection Plan**

- 6.31 The Tree Protection Plan must identify all trees for retention and explain how protection will be implemented through the development phases. This is achieved through combining the Land Survey, Tree Survey and Tree Constraints Plan with the proposed layout which has been informed by the Tree Constraints Plan.
- 6.32 The physical protection of trees during construction is an effective way to achieve protection for trees. This may incorporate fencing, ground protection and stem protection. In some instances, it may be appropriate to install an agreed 'engineered' solution e.g. the installation of a no-dig access placing a temporary surface close to the tree for the duration of the construction of the development.
- 6.33 Tree protection measures may impact upon the available space for site activities, including construction, material delivery and storage, scaffold etc. A Tree Protection Plan should be developed at an early stage to inform development site planning and should contain the following, where relevant:
- All trees to be retained clearly identified on the plan
  - Trees to be removed clearly identified on the plan
  - Location of tree protection measures clearly identified on the plan
  - Location of other physical protection measures e.g. temporary ground protection to prevent soil compaction
  - Positioning of site huts, temporary toilet facilities, material storage, cement mixing area(s)
  - Detailed schedule of pruning works informed by initial tree survey, precautionary or to prevent damage during construction.

- 6.34 Site supervision and ongoing monitoring is crucial to ensuring that tree protection measures are properly implemented and maintained throughout the construction process. It is recommended that arboricultural advice is taken. Wherever trees on or adjacent to a site have been identified within the Tree Protection Plan for protection, auditable arboricultural site monitoring should be made available on request to the Council's Tree Officer to demonstrate compliance if necessary.

#### **Aftercare conditions**

- 6.35 To help in ensuring trees and other soft landscaping reach maturity, conditions requiring the management of newly planted vegetation can be imposed by the Local Planning Authority on a planning permission.
- 6.36 Conditions typically require essential early management such as watering and require the replacement of any trees that die or are seriously damaged usually within the first five years of the development.

#### **Long Term Tree Management Plan**

- 6.37 A long-term tree management plan ensures that trees remain healthy and resilient over time. It should include the programme for regular monitoring, proper care, proposals for tree work and preventive measures to manage any issues such as disease, pest infestation, or structural defects.
- 6.38 To ensure the survival and health of newly planted trees, all applications involving the protection and provision of trees must submit a robust 10 year maintenance plan. A copy of this plan should be supplied to all parties with an interest in future site management. Where large-canopy species that require longer establishment periods are proposed a longer term maintenance plan covering a 15-year period may be required.

#### **Compensation mechanisms for unavoidable tree loss**

- 6.39 The aim of replacement planting should be to ensure that there is no overall reduction in canopy cover, or the contribution made by trees to amenity in the locality and that both should be restored within a reasonable timescale. The canopy of a large tree cannot be replaced within a reasonable timescale by planting a single tree, irrespective of the size of planting stock. Achieving a 'like for like' replacement of tree canopy will often require the planting of multiple trees. The level and type of planting that is appropriate will need to be assessed on a case-by-case basis.
- 6.40 On larger sites the Statutory Biodiversity Metric will be the appropriate mechanism for establishing the amount of replacement planting required (for urban trees using the 'urban tree' habitat metric) provided that its application is informed by the requirements of Policy ST39.
- 6.41 Impacts that become apparent during the maintenance period should be addressed by appropriate remedial works including replacement planting where necessary as advised by a competent person. Where tree removal is permitted, replacement planting will be required and must follow the specifications set out in BS 8545:2014.
- 6.42 Additional compensation measures should be set out in the Arboricultural Impact Assessment/Arboricultural Method Statement. The compensation strategy should include monitoring the ecology of the site over an agreed period and is likely to require the production of a Management Plan.

#### **Ancient and veteran woodland**

- 6.43 Compensation measures are always a last resort. These measures can only partially compensate for loss or damage. Compensation measures should be appropriate for the

site and for the scale and nature of the impacts on it. A compensation strategy could include measures to:

- create new native woodland or wood pasture and allow for natural regeneration
- improve the condition of the woodland
- remove invasive species
- restore or improve the management of other ancient woodland, including plantations on ancient woodland sites, wood pasture and parkland
- improve the connectivity of existing ancient woodlands and other semi-natural habitats
- connect woodland and ancient and veteran trees separated by development with green bridges, tunnels or hedgerows
- produce long-term management plans for new woodland and ancient woodland - including deer management
- improve access for management purposes

6.44 Planting new trees and creating new native woodland is not a direct replacement for lost or damaged ancient woodland but planting new trees in appropriate numbers can form part of compensation alongside other measures. New woodland planting is most effective in this role if it buffers, extends or links ancient woodland to other woodland or semi-natural habitats. In some cases, it will be appropriate to translocate soils, tree hulks, coppice stools and saplings from lost or damaged areas of woodland to the new planting site. This is considered to be compensation rather than mitigation as translocation or new planting can never reinstate irreplaceable habitat.

## **7. Planning application requirements - hedgerows**

### **Survey requirements**

7.1 Where there are countryside hedges on site it is likely that it will be necessary to carry out both a tree survey (see 6.6-6.9 above) and an ecological survey. Hedges should be identified in tree surveys and the extent of their canopy at the time of survey should be mapped. Identifying hedges as a single line on survey drawings can be misleading as the depth of hedges is often substantial. Failing to take account of this can lead to problems with implementing the development in later stages. Ecological surveys will capture additional information about the habitat value of the hedge for assessing biodiversity net gain.

### **Avoiding harm**

7.2 Hedges of high landscape, heritage, amenity or biodiversity value are important features, and their loss or other negative effects should be avoided, for example by selecting an alternative site for development or designing the scheme to avoid harm. The requirement of Policy ST39 is that proposals for new development will not be permitted that would result in the loss of, or damage to, such hedges unless the benefits of the proposal clearly outweigh the harm.

7.3 Loss of, or damage to, hedges may also have consequences for the visual environment, the character of landscape or townscape, for green infrastructure, biodiversity, or the setting of heritage assets. These effects will determine how the proposals are assessed against other policies in the plan and particularly Policy ST37 Green and Blue Infrastructure, Policy ST35 Landscape Character, Policy ST38 Biodiversity and Geodiversity and Policy ST40 The Historic Environment. These should be taken into account fully when considering loss of or damage to hedges.

### **Mitigation**

- 7.4 Protecting hedges involves the same principles as protecting trees. The Root Protection Area (RPA) should be mapped on the Tree Constraints Plan. Where possible buffer zones larger than the RPA should be used to include a grass headland and maintain more normal drainage conditions. Protective fencing should be erected outside of the RPA / buffer zone. In some circumstances it may be beneficial to lay or coppice a hedge or carry out pruning works to trees or shrubs within the hedge prior to the erection of protective fencing. This should be set out in the schedule of predevelopment tree works.
- 7.5 Due to the narrow linear nature of hedges they can be vulnerable to changes in ground water conditions and particularly where development takes place on both sides. Where this is the case, provision should be made for watering with bowsers during periods of dry weather. Where hedges are isolated by development over long periods provision should be made for maintaining the hedge on a normal cycle to prevent it becoming leggy and overgrown.
- 7.6 In some circumstances hedges can be translocated in order to retain some of their character, ground flora and soils. Hedge translocation involves moving the entire hedge and hedge bank (if present). This may be only a matter of a few metres – for example to improve sightlines at a road junction – in other cases it may involve transporting the hedge to a new location some distance away, or to a temporary holding area for re-instatement in its original location. Translocation is a specialist operation and may not be appropriate in all circumstances. Further discussion should be had with the Council's Tree Officer.

#### **Compensation**

- 7.7 All methods of avoidance and on-site mitigation must be fully explored before compensation is considered. Additional measures that might be introduced to compensate for unavoidable impacts or to improve the management of hedgerows as a matter of good practice may include:
- laying, coppicing and/or gapping up hedges within the site or surroundings to improve their management condition
  - planting or tagging hedgerow trees
  - creating conservation headlands along existing hedges to improve their habitat value

These measures should be set out in detail in the AIA and/or AMS.

- 7.8 Where hedges are lost, Policy ST39 requires that suitable replacement planting or restoration of existing hedges, is carried out within the site or the locality including appropriate provision for maintenance and management. The aim of replacement planting or restoration should be to ensure that there is no overall reduction in hedgerow length and canopy in the locality.
- 7.9 For many sites the Statutory Biodiversity Metric should be used to inform the type and amount of replacement planting or restoration required for hedgerow habitat. It should be applied in a way that reflects the requirement of Policy ST39 for suitable replacement planting or restoration.
- 7.10 Ideally compensation should be delivered on-site and where this is not possible developers should provide an off-site location where mitigation can be delivered or use a third-party organisation to deliver on their behalf. Enhanced management of hedges controlled by the developer but outside of the site should be considered where appropriate. The Local Planning Authority may be able to accept a financial contribution where developers are unable to undertake off site planting. Off-site compensation should from part of a considered approach to the context of the development having regard to

the contribution enhanced management and new planting can make to the wider green infrastructure network.

### **Existing hedges**

- 7.11 Hedges that are of high value, and those that can make a positive contribution to the new development, should be retained and integrated fully into its design. There may be little merit in retaining poor quality or relict hedges where this compromises the layout of a development and inhibits the freedom to create a masterplan and landscape infrastructure more suited to its new use. Surveys will be required to determine the value of a hedgerow.
- 7.12 When retaining hedges regard needs to be had to their management requirements. To be maintained as a hedge they will need to be trimmed every 2-3 years and/or laid on a longer cycle and this requires physical access and single ownership or management responsibility. Hedges generally, and particularly those of higher value, are therefore best retained in the public realm where they can be managed as a single entity. This can be achieved, for example, by having active frontages facing hedges rather than retaining them to the rear of gardens where consistent management can be difficult, or by retaining them alongside, or within, areas of open space. The long-term management of hedges forming part of the public realm should be detailed in a landscape management plan.
- 7.13 In some circumstances where lower value hedges are being retained it may be acceptable to retain them as a boundary between gardens or plots. In these situations, the retention of management of the hedge may vary between plots depending on the occupier. This is likely to substantially diminish the value attached to the presence or condition of the hedge in calculating the biodiversity impacts of the development as these cannot be guaranteed.
- 7.14 Where possible retained hedges should connect with, or border onto, other habitat features (woodlands, watercourses, natural greenspace, open space, SuDS) to maximise their value and prevent them from becoming isolated. Part of the biodiversity value of hedges lies in their ground flora and their relationship with adjacent habitats. Placing buildings, structures or close boarded fencing adjacent to hedges, and particularly on the southern side, can shade out light demanding species from the base of the hedge as well as affecting the hedge itself and will be discouraged.
- 7.15 Where possible hedges should be buffered by species rich grassland with a zone of either infrequently managed grasses or annually cut meadow grasses close to the hedge to form a transitional habitat. Even quite a narrow buffer zone can be beneficial. These factors will affect how the biodiversity impacts of the development are calculated.
- 7.16 Increasing the height at which hedges are cut can be a useful tool in screening development rapidly, particularly in shallow views. The annual growth put on by established hedges that are retained in and around the development will far exceed the growth of newly planted stock. This can be used as a tool to screen development permanently, or temporarily until other structural landscaping becomes established at which point the hedge can be restored to a more typical height.

## **8. Incorporating new trees into development**

- 8.1 Section 197 of the Town and Country Planning Act 1990 places a duty on the Local Planning Authority to ensure that, in the granting of planning permission, adequate provision is made for the preservation and / or planting of trees.
- 8.2 Policy ST48 of the Local Plan requires major new development to make provision for 5 new trees per dwelling/per 1000sqm non residential floorspace to help mitigate the

impacts of climate change. Tree planting in new development for biodiversity net gain, landscaping and amenity purposes can contribute towards this requirement.

- 8.3 Trees form a critical component of green infrastructure by contributing to urban cooling through evapotranspiration, shading and creating microclimatic conditions that help lower building energy demands. The presence of large species trees is increasingly being seen as advantageous for climate change resilience. Achieving successful integration of large species trees requires careful consideration at the conceptual and design stages.
- 8.4 Where trees are proposed, the Council will seek to ensure the planting of trees:
- Delivers and makes a positive contribution to green/blue infrastructure, enhances the ecological value of a development and considers climate change
  - Complements the surrounding rural or urban context, landscape/townscape and local distinctiveness
  - Are suitable for the location in relation to species and arboricultural characteristics.
- 8.5 The following must be considered when preparing a tree planting scheme:
- Space for planted trees to reach their mature height and spread without causing nuisance to buildings, structures and occupants
  - Suitability of planting position in relation to buildings and structures e.g. walls, buildings, existing services and to provide access to infrastructure and services e.g. mains water, gas, sewers
  - Provision of sufficient soil volume to allow trees to reach their optimum size, considering changes in soil levels, water tables etc.
  - Where trees are to be planted in areas of hard landscaping the use of planting systems integrated with the water management of the site must be demonstrated
  - Future shade which the tree will cast in maturity, which may be advantageous in buffering a changing climate
  - Characteristics of species such as colour, form, seeds, fruit and structural qualities and their future location e.g. branch attachments which may be a safety hazard in a public area, some species produce 'cotton seeds'
  - The proposal positively responds to a landscape character assessment and historic landscape characterisation in determining the most appropriate landscaping proposal
  - The proposal positively responds to the historic environment and the significance of heritage assets in determining the most appropriate design solution
  - Planting, where appropriate will form wildlife corridors with trees/hedgerows in neighbouring sites/land
- 8.6 It is important to establish the requirements for the landscape scheme early in the design process. This is to ensure that new tree planting and landscaping will positively contribute to the long-term structural landscape plan for the site, the layout of the development and ensure that sufficient space is available for a range of native tree species of size, shape, mix. The Council encourages the use of UK and Ireland Sourced and Grown (UKISG)-certified stock from appropriate seed zones. This ensures genetic provenance suited to local conditions and reduces disease transmission risks. Advice on detailed design should be sought from a landscape architect or other competent person. All proposals should align with the Bassetlaw Design Code.
- 8.7 Environmental factors must be considered along with species specific characteristics to ensure suitable species are planted that are able to establish and thrive in that locality and reach their full potential. The selection of tree species should be selected based on site-specific conditions such as soil type, drainage, and climate and the use of the development. For instance, in a town centre environment, species that are tolerant of

compacted soils may be preferable, while in edge of settlement areas, native species may be beneficial to enhance connectivity with the countryside.

- 8.8 Planting non-native species can in some circumstances help make planting schemes more resilient to climate change. It should be noted that climate change is unpredictable, and it cannot be assumed that trees suited to warmer or drier climates will necessarily be more robust. Many of the common and more widespread native species in the UK are tolerant of a broad range of climatic conditions and are likely to be robust in future. Planting those species will also contribute to the resilience of the wide range of other species that depend upon them.
- 8.9 Species selected for street trees need to be attractive, tough and pollution tolerant with an upright habit and a clear stem. They also need to have a degree of winter hardiness suited to the climate of the Midlands. Although species choice is restricted, planting monocultures should be avoided to ensure robustness to disease or changing conditions. The species selected for garden trees can be more varied. Attractive and distinctive species and cultivars of an appropriate size and habit are more likely to be valued and retained by householders. Species selection should be discussed with the Council's Tree Officer.
- 8.10 Trees with a large mature size (reaching 20-30m in height at maturity) provide greater environmental benefits and offer significant contributions to the character and appearance of an area. Adequate consideration therefore needs to be given to the inclusion of large trees where space is available. To establish larger size trees in areas where space is limited, trees with a narrow crown are a good consideration.
- 8.11 The planting of fruit trees is desirable for biodiversity, however consideration needs to be given to purpose and location. Creating 'community orchards' using local varieties can be a sustainable way to introduce fruit and nuts into new communities. It also allows for foraging and reduces the 'nuisance' factors from insects and birds attracted to the trees which might otherwise be close to buildings and public areas. Planting close to or within footpaths should be avoided so not to cause slip / trip hazards from dropping seeds/fruit.
- 8.12 Where new trees are proposed into areas of hard standing, provision for a viable rooting environment must be demonstrated as part of the planning application to maximise the longevity of the tree and avoid damage to the surrounding area. Proprietary engineered products are available such as cellular systems to provide the required soil volumes while facilitating areas of hard standing. These can also form an integral part of a sustainable water management system for the site. The use of these proprietary engineered products must be demonstrated to ensure the landscape scheme does not damage hard landscaping in the longer term.
- 8.13 Tree planting should ensure that the significance of heritage assets and their settings are appropriately conserved and enhanced. Tree planting is generally inappropriate within scheduled monuments and would require separate Scheduled Monument Consent. Historic England should be consulted in relation to any proposals in and around scheduled monuments.
- 8.14 Careful consideration should be given to the setting and visual experience of heritage assets, especially in key views and vistas important to the asset's significance. It will be necessary to consult with the Council's Conservation team regarding new tree planting where a heritage asset is present or adjacent to the development site.

## **9. Street Trees**

- 10.1 The use of trees in a street will improve the environment and aesthetics of an area but can also be used effectively to support meaningful highway functions. Examples include:
- To create horizontal deflections and localised narrowing for speed control purposes
  - To delineate parking bays and provide traffic calming
  - To reduce forward visibility for speed control purposes
  - To maximise on street parking availability e.g. a tree planted between 2 spaces in a 2-car layby will define two single spaces to avoid one car using both spaces
  - To define and/or protect parking areas, particularly in large shared space areas
  - To help define the start of shared space areas
  - To prevent obstructive parking.
- 9.2 Trees planted within the existing and adoptable highway should be in a properly constructed tree planting system in accordance with Nottinghamshire County Council Highway Design guide – Street trees: [55-street-trees.pdf](#)
- 9.3 A tree planting scheme, both public and private, should avoid street lighting, road signs, and roadside drainage gullies which may be damaged by roots and become blocked with leaf litter. Bus stop/shelters should be avoided where trees may obstruct the visibility of waiting passengers and where a reduction in light may cause waiting passengers to feel vulnerable. Trees should be located equidistant between lamp columns or be located on the opposite side of the street. Lighting columns when first installed should be sited so that it is not necessary to carry out substantial cutting back of trees, considering the fully mature spread of the tree.
- 9.4 In new streets where trees are to be planted, the lighting should be designed in consultation with the landscape architects and/or by considering the landscaping plan or tree schedule. It is not acceptable for a tree to be planted in front of a road sign, trees should be set back from a sign the maximum spread of the tree canopy once fully grown.
- 9.5 Planting in the highway by the occupier, or owner of premises adjoining the highway to plant and maintain trees, shrubs, plants or grass within the highway will only be permitted where a cultivation licence has been issued under Section 142 of the Highways Act 1980. Conditions are usually required relating to the issue of a licence.
- 9.6 Owners of private land containing trees that could cause a hazard to the adjacent highway will be instructed to take appropriate action by the Highways Authority. The landowner will be advised of the nature of the problem and given notice to undertake any remedial actions considered necessary under Section 154 of the Highways Act 1980.

#### **Planting new hedgerows**

- 9.7 Planting new hedges within or bordering a development can help integrate new buildings, define public and private spaces, ameliorate air quality and provide habitats for wildlife. The use of locally native species can help conserve local distinctiveness and is likely to be of value to the widest range of species. When planted at around 5 plants per metre these will create stock proof but species rich hedges characteristic of those areas. Hedges are generally planted either in single lines with 20cm between plants or in offset rows 40cm apart with 15cm between rows. For interplanting between coppiced sections, 4 plants per metre is usually sufficient.
- 9.8 Where possible new hedges should connect to existing features such as other hedges, woodlands and wetlands. Sufficient space should be allowed in the layout to accommodate the width of a mature native hedge, which can be up to 2m or more. The biodiversity value of new hedges can be enhanced by planting on a hedge bank, or alongside a ditch, or by buffering with a headland of species rich grassland to form a transitional habitat.

### **Trees and infrastructure**

- 9.9 Depending on the type of infrastructure and where it is in relation to the tree, different root management solutions are available. Continuous paved surfaces for example, require roots to be managed downwards to reduce the risk of pavement heave and other surface root damage. Deeper protection would be required near underground utilities.
- 9.10 Trees planted too close to CCTV cameras or lighting columns may lead to service conflicts. Developers should design layouts to anticipate future growth to avoid such issues. In the case of new structures, the design and construction of foundations should be undertaken in conjunction with planting proposals to minimise the risks of structural movement. It is therefore important that foundation design of permanent structures follows up-to-date guidance. The depth will depend on several factors including the type of tree, the tree's mature height, the distance of the tree from the foundations and the shrinkability of the soil. Where sufficient information is available, it is possible to determine an appropriate foundation depth using the LABC [Foundation Depth Calculator](#) Expert advice should be sought as necessary.

## **10. Tree Maintenance and Management**

- 10.1 The first five years after planting are critical for a tree's establishment. Early management of newly planted trees can help in minimising risk of structural weakness and reduce future maintenance costs. For details about the best practices for tree pruning, disease management, and risk assessment refer to British standards BS:3998:2010 - Recommendations for Tree Work.
- 10.2 To ensure long-term success, when planting trees set out within the long term management plan, and accounted for within the 10 years maintenance, the following key aspects of aftercare are essential:

### **Formative Pruning** (see diagram below)

- Formative pruning of urban trees will establish good branch placement and a well-shaped tree with a clear trunk to alleviate risk of conflicts with footpaths and roads.
- If there are two main leaders, remove the weaker (double leaders, or 'co-dominant stems', are prone to splitting or breaking as trees mature).
- In the longer term, correct pruning technique includes making final cuts in positions that minimise the risk of decay and promote wound closure. The diagram below shows the recommended final cut positions, one of the key technical aspects of safe and effective pruning.

### **Watering**

- Newly planted trees need regular watering in dry spells for 3-5 years to ensure good root growth.
- For trees in open spaces, Treegators are a suitable option. These are plastic bags that fix around the tree. Their bases are covered in small, perforated holes that allow water to seep out gradually.

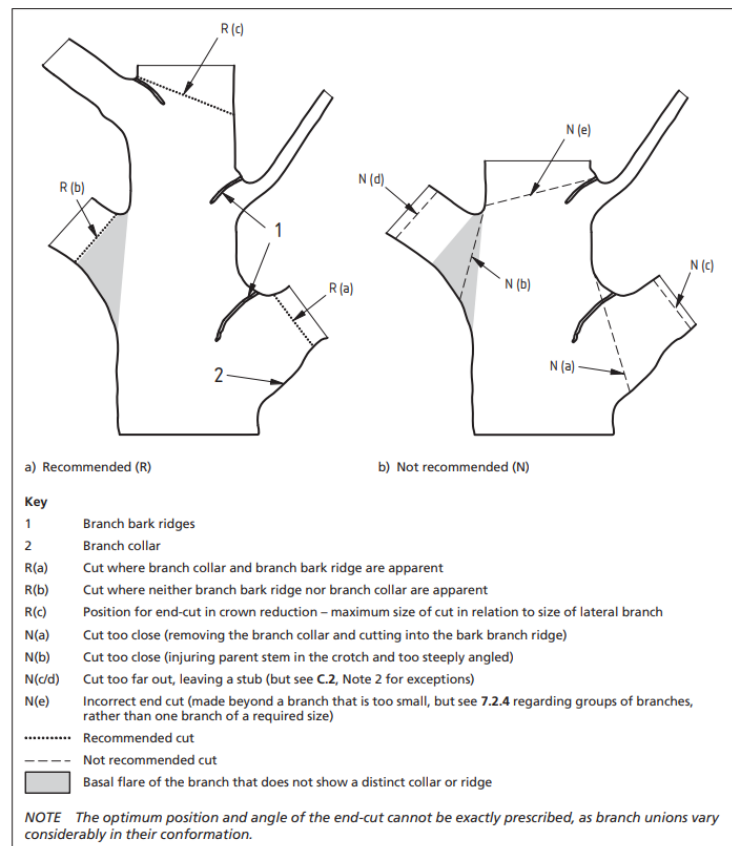
### **Removing dead, diseased and damaged wood**

- Good pruning first targets and removes access points for disease.

### **Mulching**

- Mulching around the base of trees in open spaces can alleviate the risk of damage from grass cutting equipment.

- The fitting of strimmer guards around trees is highly advised to avoid damage whilst maintaining grass areas.



**Figure 3: Positions of final cuts (BS 3998:2010)**

### Checking tree ties and stakes

- New trees should be staked until their roots provide good anchorage – this can take several years. If loose, the tree and its rootball will move, which hinders plant establishment.
- Regularly check ties are secure and a padded cushion is between the tree and stake. Rubbing against a stake can create bark damage, which leaves the tree open to disease. Fast-growing trees may need ties loosening every year.
- Ensure tree ties and stakes are removed completely when the tree is established.

10.3 These aftercare practices should form part of a landscaping and maintenance plan. A maintenance contribution may be sought to cover the costs of tree maintenance for 10 years. This will depend on the long term management arrangements agreed for the proposal.

## APPENDIX 1: Links to BS 5837:2012

Arboricultural Impact Assessment (AIA)	Section 5.4
Root Protection Areas (RPAs)	Section 5.2, 4.6, 6.2
Arboricultural Method Statement (AMS)	Section 6.1, 6.1.1
Trees in Relation to Design	Section 5, 5.3.1, 5.2.3, 7.4.2
Trees in Relation to Demolition	Section 6.2, 6.2.1.1, 7, 7.3.1
Tree Protection Barriers	Section 6.2.2, Section 6.2.2.1
Ground Protection	Section 6.2.3
Trees and new developments	Section 5.6
Species Selection and Diversity	Section 5.6
Justification for removal and replanting strategies	Section 4.5, 4.5.2
Compensation mechanisms for unavoidable tree loss	Section 8.4, 8.8.4.2
Role of trees in mitigating climate change impacts	Section 5.2
Street trees	Section 5.6.2.2
Trees and Infrastructure	Section 5.6.2.5