



# AllAboutTrees

Arboricultural & Ecological Consultancy  
Chartered Arboriculturalists & Environmentalists

Arboricultural Impact Assessment

For Trees On

Land At Station Road,

Hebburn




For

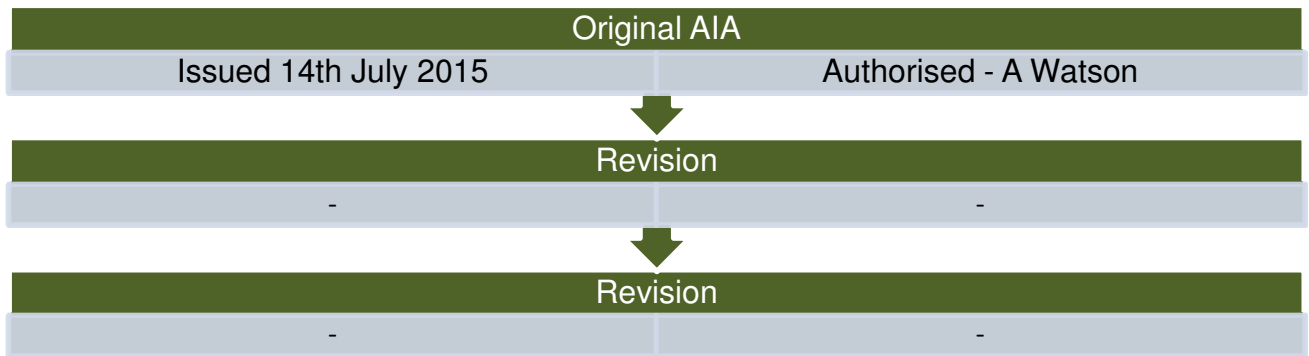
Projekt Architects



# Document Verification



Document Title	<ul style="list-style-type: none"><li>• Arboricultural Impact Assessment For Trees At Land Adjacent To Station Road, Hebburn</li><li>• For Projekt Architects</li></ul>
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## 1. Introduction

1.1 We are instructed by Projekt Architects to provide an Arboricultural Impact Assessment (AIA) for the significant trees located within a specified area adjacent to Station Road, Hebburn.

1.2 This report is produced to evaluate the proposed construction of a retail food store, with car park and associated infrastructure. The developments juxtaposition with the existing trees is considered.

1.3 We were provided with the following documents:

- Existing plan in digital AutoCAD format
- Proposed development plans in digital AutoCAD format

1.4 This assessment is concerned with recording the species, size and condition of the trees. Recommendations are made where appropriate to establish acceptable levels of safety for the site and also to establish a higher level of arboricultural management.

1.5 The trees are also evaluated for the purposes of British Standard 5837–2012 Trees in relation to design, demolition & construction, with regard to their quality and value. The type and size of the root protection area is calculated and the position of the protective barriers is determined. The remaining contribution or safe useful life expectancy is estimated as an indication of the trees period of retention.

1.6 All observations were from ground level without detailed investigation.

1.7 Trees are living organisms whose health and condition may change rapidly and all observations are based on the status of the tree at the time of inspection.

## 2. Protected Status Of Trees

2.1 Trees may be legally protected, this may either be in the form of a Tree Preservation Order (TPO) or that the trees are located within a Conservation area.

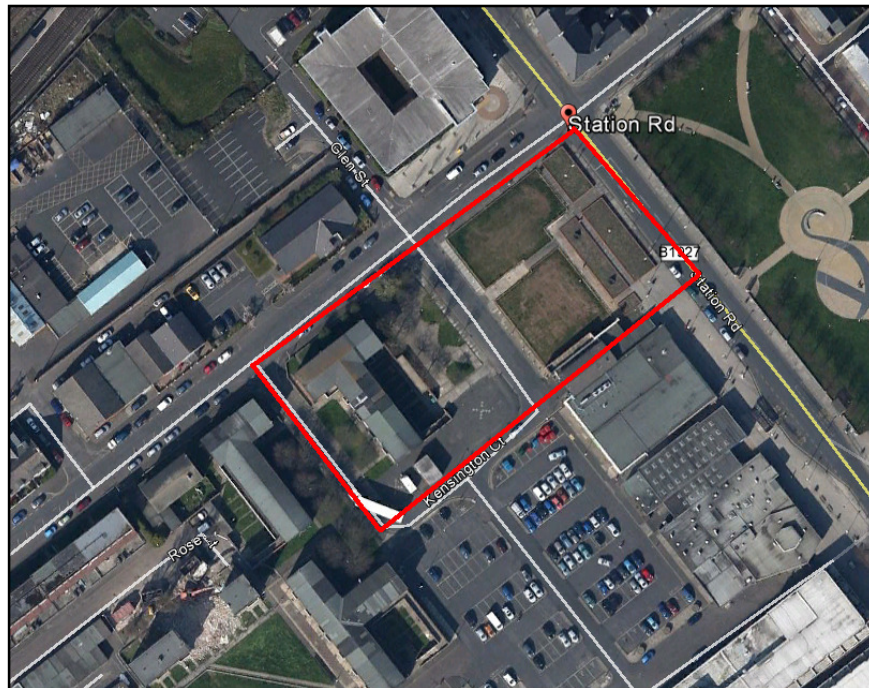
2.2 Potentially large penalties may be enforced for illegally carrying out works on protected trees. It is recommended that checks are made before any works are undertaken and no work should commence until permission has been granted. Please note that there are a number of exemptions from the requirement to obtain a felling licence including land on which full planning permission has been granted by the local authority, however this

exemption does not cover land where only outline planning permission has been granted, or on land which has been allocated for residential development within local authority urban and local development plans.

2.3 AllAboutTrees has been able to ascertain with North Tyneside Council (the Local Planning Authority) on Thursday 4<sup>th</sup> June 2015 that the site is not within a Conservation area. They have not been able to tell us if the trees are subject to Tree Preservation Orders. It is an offence to carry out tree works without the relevant permissions.

### 3. Site Visit & Description

Site location – N 54° 58' 27.03 W 01° 31' 11.56  
O/S Grid reference- NZ 307 644 GB Grid



*Figure 1 - The study area is indicated by the red boundary line as shown on the above image*

3.1 A site visit was undertaken on 11<sup>th</sup> July 2015 by Tim Archment. The weather was fine with no visibility constraints.

3.2 The study area is located in Hebburn town centre on the edge of a large car park. The town centre shops flank the car park, as well as a leisure centre. As such, both foot traffic and vehicular traffic are regular and heavy throughout the day.

3.3 The subject area is an open space, not under any formal use. Aerial photography shows buildings once occupied the western half of the site,

though these have been demolished in the recent past. Paths cross the eastern western half of the site which were under regular use at the time of the survey.

3.4 There are 12 middle aged / early mature trees within the study area, and 1 stump. The trees are generally in good order, though some removals and pruning works are required.

3.5 The site is relatively flat with no apparent drainage problems.

## 4. Appraisal

4.1 The trees have been surveyed on site and plotted on the site plan. Their positions are considered accurate given the provision of a detailed topographical survey.

4.2 All significant trees have been inspected and some of the smaller specimens have been included for accuracy. Individual recommendations are included within Appendix 1 of this report.

### 4.3 Root Protection Areas (RPAs)

4.3.1 The British Standard Root Protection Areas (RPAs) are indicated by the red circles surrounding the trunk position of the trees on the associated plans. These indicative circles do not take into consideration site specific conditions such as the presence of buildings, roads, footpaths, topography, underground utility services etc. and are representative of typical root morphology where said structures are not encountered. For this reason in certain areas of the site the RPAs of several trees have been modified to take account of these structures and conditions, the Predicted Site Specific Root Protection Area is shown on the associated plans as a cyan polyline. Although the shape of the RPA has changed, the rooting area to be protected has not decreased and offers superior protection for the tree in this instance. The above applies to:

- Trees 1-2, 7, 9 & 11

### 4.4 Tree Removals

4.4.1 It will be necessary to remove all of the existing trees to facilitate the proposed development.

- Trees 1-12 will need to be removed to facilitate the construction of the new buildings and associated infrastructure.

4.4.2 A breakdown of recommended removals, alongside their BS5837 category rating is provided in the table below. For further information

regarding the BS5837 quality categorisation system please refer to Appendix 2 (II).

Tree Category Rating	Remove To Facilitate The Development
A – High	-
B – Moderate	1, 5-7 & 11
C – Low	3 & 8-10
U – Unsuitable For Retention	2, 4 & 12

4.4.3 The proposed plans indicate a planting scheme will be implemented to compliment the proposed design. Careful consideration should be given to all new planting positions to ensure the trees can grow fully into maturity without requiring major or regular pruning works. New specimens should not be positioned in close proximity to buildings, windows or utility services.

## 4.5 Wildlife Habitats

4.5.1 As part of the survey the significant trees were inspected from ground level with the use of binoculars for signs of wildlife habitation, in particular birds and bats.

### Bats

4.5.2 All UK bats and their roosts are protected by law. The legislation protecting bats are:

- The Wildlife & Countryside Act 1981 (WCA)
- Conservation of Habitats and Species Regulations 2010

4.5.3 For all countries of the UK, the legal protection for bats and their roosts may be summarised as follows:

You will be committing a criminal offence if you:

1. Deliberately\* capture, injure or kill a bat
2. Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
3. Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
4. Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
5. Intentionally or recklessly obstruct access to a bat roost

*\*In a court, 'deliberately' will probably be interpreted as someone who, although not intending to capture/injure or kill a bat, performed the relevant action, being sufficiently informed and aware of the consequence his/her action will most likely have.)*

Penalties on conviction - the maximum fine is £5,000 per incident or per bat (some roosts contain several hundred bats), up to six months in prison, and forfeiture of items used to commit the offence, e.g. vehicles, plant, machinery.

4.5.4 No visual signs were found to indicate the presence of bats in the surveyed trees.

4.5.5 When carrying out tree works it is essential that the contractor or other competent person carries out a specific 'bats in trees risk assessment' which can be obtained from the 'Arboricultural Association' or the 'Bat Conservation Trust' (BCT). If evidence of bats is found work must stop immediately and Natural England Batline contacted (0845 1300 228). A further inspection may well be required by a licensed bat handler or roost visitor.

### **Birds**

4.5.6 In the UK, all wild birds, their nests and their eggs are protected by law.

4.5.7 In England, Scotland and Wales the legislation that protects wild birds is:

- The Wildlife and Countryside Act 1981
- The Countryside (or CRoW) Act 2000

4.5.8 No nesting birds were present at the time of inspection.

4.5.9 As with bats the contractor has an obligation to carry out visual checks prior to works. Where possible tree works should be carried out in the period from August to the end of February in order to avoid the bird nesting season.



## 5. Conclusion

5.1 It will be necessary to remove all vegetation to facilitate the proposed development.

5.2 All tree works should conform to BS 3998 (2010) 'Recommendations for Tree Work'.

For and on behalf of  
AllAboutTrees Ltd

Andrew Watson FLS MICFor CBiol MSB FARborA CEnv LCGI  
-Chartered Arboriculturalist & Registered Consultant

## Appendix 1

Tree No.	Species Common Name <i>Latin Name</i>	Height (M)	Crown Spread (M)				Trunk Dia (MM)	No. Of Stems	Height Of Lower Canopy (M)	First Sign Branch (M) (Position)	Age	Physiological Condition	Structural Condition	Root Prot Area Radian (M)	Estimated Remaining Contribution (Years)	Tree Quality Assessment	Comments	Maintenance	Bat Roost Potential	Ultimate Size For Species (M)		Priority
			N	S	E	W														Height	Spread	
1	Swedish Whitebeam <i>Sorbus intermedia</i>	9	3.5	4	4	3.5	420	1	1.5	3 S	Mature	Fair	Fair	5	20-40	B - Moderate	No major visible defects. Grafted tree.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	12	12	A
2	Swedish Whitebeam <i>Sorbus intermedia</i>	8	3	3.5	3	3.5	390	1	2	3 E	Middle aged	Poor	Poor	4.7	<10	U - Unsuitable for retention	Poor quality individual of low value. Low vitality. Low bud/leaf density. Large patch of stripped bark around basal area with degraded wood.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	9	8	A
3	Japanese cherry <i>Prunus serrulata</i>	7.5	2.5	5	4.5	3	330	1	1.5	3 S	Middle aged	Fair	Fair	4	10-20	C - Low	Surface roots sustained bark damage. Low bud/leaf density.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	12	12	A
4	Japanese cherry <i>Prunus serrulata</i>	6.5	4.5	2.5	4	2.5	260	1	1.5	3 W	Middle aged	Fair	Poor	3.1	<10	U - Unsuitable for retention	Crown distorted due to group pressure. Extensive stem decay.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	8	9	A
5	Birch <i>Betula spp.</i>	10	2.5	3.5	4.5	2	310	1	1.5	3 E	Middle aged	Fair	Fair	3.7	20-40	B - Moderate	Tree heavily stained by construction activities.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	14	8	A

Tree No.	Species Common Name Latin Name	Height (M)	Crown Spread (M)				Trunk Dia (MM)	No. Of Stems	Height Of Lower Canopy (M)	First Sign Branch (M) (Position)	Age	Physiological Condition	Structural Condition	Root Prot Area Radian (M)	Estimated Remaining Contribution (Years)	Tree Quality Assessment	Comments	Maintenance	Bat Roost Potential	Ultimate Size For Species (M)		Priority
			N	S	E	W														Height	Spread	
6	Birch <i>Betula spp.</i>	11	4.5	3	5	3	400	1	2	3 N	Middle aged	Fair	Fair	4.8	20-40	B - Moderate	No major visible defects.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	14	10	A
7	Cockspur Thorn <i>Crataegus crus-galli</i>	7.5	3.5	4	4.5	3.5	370	1	1.5	1.5 SE	Mature	Fair	Fair	4.4	20-40	B - Moderate	Low branches over road/footpath. Basal growth encroaching on adjacent path.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	12	10	A
8	Cockspur Thorn <i>Crataegus crus-galli</i>	6.5	3	3.5	4	2.5	230	1	1.5	2 E	Mature	Fair	Fair	2.8	10-20	C - Low	Leaning East. Cockspur thorn. Basal growth. Elder at base.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	12	9	A
9	Cockspur Thorn <i>Crataegus crus-galli</i>	4.5	3	3	3	1.5	200	1	2	2 S	Middle aged	Fair	Fair	2.4	10-20	C - Low	Crown distorted due to group pressure. Basal growth.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	12	9	A
10	Japanese cherry <i>Prunus serrulata</i>	7.5	4	5	4	3.5	350	1	2.5	3 E	Middle aged	Fair	Fair	4.2	10-20	C - Low	Mechanical damage to basal area. Low bud/leaf density. Minor/ small diameter deadwood retained in canopy. Branches restricting highway light.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	12	10	A
11	Japanese cherry <i>Prunus serrulata</i>	9.5	2.5	2	2.5	2	210	1	3	2 E	Middle aged	Fair	Fair	2.5	20-40	B - Moderate	No major visible defects.	This tree is in conflict with the proposed	None	12	11	A

Tree No.	Species Common Name Latin Name	Height (M)	Crown Spread (M)				Trunk Dia (MM)	No. Of Stems	Height Of Lower Canopy (M)	First Sign Branch (M) (Position)	Age	Physiological Condition	Structural Condition	Root Prot Area Radii (M)	Estimated Remaining Contribution (Years)	Tree Quality Assessment	Comments	Maintenance	Bat Roost Potential	Ultimate Size For Species (M)		Priority
			N	S	E	W														Height	Spread	
																Elder growing at base.	design layout and will need to be removed to facilitate the development.					
12	Cockspur Thorn <i>Crataegus crus-galli</i>	4	2.5	1.5	2.5	1.5	220	1	2	2 NW	Middle aged	Fair	Poor	2.6	<10	U - Unsuitable for retention	Leaning East. Large open cavity in stem.	This tree is in conflict with the proposed design layout and will need to be removed to facilitate the development.	None	8	6	A

# Appendix 2(1)

## Glossary of Terms

- 1 Reference number:** An individual identifying number
- 2 Species:** Species identification is based on visual field observations and lists the common name. In some cases the botanical name will be used where there is no common alternative. On in-depth surveys the botanical name only may be used
- 3 Height:** Height is estimated to the nearest metre. On computerised surveys this may be within a range of heights. When measured height is required, a clinometer is used to measure to the nearest metre
- 4 Diameter:** Trunk diameter measured at 1.5 metres from ground level and recorded in millimetres. In some surveys this is indicated as a range
- 5 Spread:** Measurement of canopy from the trunk to the nearest metre in four directions, North, South, East, and West in metres
- 6 Lower crown Clearance:** Height in metres of crown clearance above adjacent ground level
- 7 Age:** Either an estimate (or statement if accurately known) of the age of the tree, classified as:
  - Y** = Young tree, established tree usually up to one third of expected ultimate height & spread
  - MA** = middle aged, usually between one third and two thirds of ultimate height & spread
  - M** = Mature, more or less at full height but still increasing in girth & spread
  - OM** = Over mature, grown to full size and becoming senescent,
  - V** = Veteran tree, individuals surviving beyond the typical age range for the species
- 8 Physiological Condition:** Good = Healthy tree with good vitality,  
Fair = Moderate health and vitality normal or slightly less for species and age  
Poor = Poor shape or form - signs of decline in crown, may have structural weakness.  
Dead = dead or dying tree
- 9 Structural Condition:** Good = No visible structural defects  
Fair = Only minor structural defects  
Poor = Defects which may need to be rectified or regularly monitored  
Remove = Severe defects which may result in imminent failure or collapse
- 10 Management Recommendations:** General comments on the condition of the tree or group and any action required. potential for wildlife habitats
- 11 Estimated Remaining Contribution:** Safe Useful Life Expectancy (SULE): in some cases the age ranges are modified  
Short: 0 – 10years                      Medium: 10– 20 Years  
Intermediate: 20-40                      Long: 40 + years
- 12 Tree Quality:** Assessment of tree quality see following cascade chart for details
- 13 Priority:** A - Works to achieve an acceptable level of safety or required to facilitate the development  
B - Works to achieve higher levels of arboricultural management.  
C - To improve the aesthetic appearance.
- 14 Ultimate Size:** Based on site specific features and the individual specimen in its surroundings. Measured to nearest metre (m)
- 15 Root Protection Area:** The distance at which the protective barrier should be erected measured in a radii from the centre of the trunk in metres.
- 16 Pruning:** Pruning shall be defined as the removal of living or dead parts of a plant by the Contractor. Such parts may be soft growth, twigs, branches, limbs or sections of the tree trunk. The cut material may vary from small to large in size.

- 17 Crown Cleaning:** Cleaning out is defined as the removal of dead, dying or diseased branchwood, broken branches or stubs left from previous tree surgery operations (see also 16 Deadwooding) together with all unwanted objects, which may include ivy (if specified) and/or other climbing plants, nails, redundant cable bracing, rope swings, tree houses and windblown rubbish from the tree, and any such debris from any cavities within the tree.
- 18 Deadwood Removal:** Dead-wooding shall be defined as the removal of all dead and dying branches and limbs from the tree.
- 19 Crown Lifting:** Crown lifting shall be defined as the removal of all soft growth and branches or parts thereof which are below or which extend below the height specified in the tender documents. It is recognised that the resultant canopy base might not be one single level but might be stepped to allow for different clearances, for example where a tree overhangs both the footway and the road where different height clearances are required.
- 20 Crown Reduction:** Crown reduction shall be defined as the reduction of the complete outline dimension of the canopy, from the tips of limbs and branches to the main trunk, by pruning growth to an acceptable branch, twig or but to leave a flowing silhouette.

## Appendix 2(11) Cascade Chart For Assessing Tree Quality

Category and definition  Trees to be considered for retention	Criteria – Subcategories			Identification on plan
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values, including conservation	
<p><b><u>Category High = A</u></b></p> <p><b>Trees of high quality</b> with an estimated remaining life expectancy of at least 40 years</p>	Trees that are particularly good examples of their species, especially, if rare or unusual, or those that are essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation historical, commemorative or other value (e.g. veteran trees or wood – pasture)	Green
<p><b><u>Category Moderate = B</u></b></p> <p><b>Trees of moderate quality</b> with an estimated remaining life expectancy of at least 20 years</p>	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	Blue
<p><b><u>Category Low = C</u></b></p> <p><b>Trees of low quality</b> with an estimated remaining life expectancy of at least 10 years; or young trees with a stem diameter below 150mm</p>	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/ or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural benefits	Yellow
<p><b><u>Category = U Trees unsuitable for retention</u></b></p> <p>Those of such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<p>NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation</p> <ul style="list-style-type: none"> <li>• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other U category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>• Trees that are dead or are showing signs of significant, immediate and irreversible overall decline</li> <li>• Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease) or very low quality trees suppressing adjacent trees of better quality</li> <li>• Habitat reinstatement may be appropriate (e.g. U category trees used as a bat roost- installation of bat box in nearby tree)</li> </ul>			Red

**Appendix 2(111)**  
**Guidelines for the Planning, installation and**  
**Maintenance of utility services in proximity to trees-**  
**Based on information from National Joint Utilities**  
**Group (NJUG)**

Ideally all services should be placed outside of the trees root protection area, but in some situations this is not feasible due to the confines of the site. If services must be laid within the root protection area acceptable techniques are detailed below in order of preference.

- **Trenchless-** by use of thrust boring or similar techniques. The pit excavations for starting and receiving the machinery should be located outside of the root protection area.  
To avoid root damage, the mole should run at a depth of at least 600mm.  
Use of external lubricants on the mole other than water (e.g. oil or bentonite) should be avoided.
- **Broken trench-** by using hand dug trench sections together with trenchless techniques. It should be limited to practical access and installation around or below the roots. The trench must be dug by hand (see following comments re continuous trenching) and only be long enough to allow access for linking to the next section. The open sections should be kept as short as possible.
- **Continuous trench-** the trench is excavated by hand and retains as many roots as possible. The surface layer is removed carefully and hand digging of the trench takes place. No roots over 2.5cm diameter or clumps of smaller roots (including fibrous) should be severed. The bark surrounding the roots must be maintained. Cutting of roots over 2.5cm diameter should not be attempted without the advice of a qualified Arboriculturalist.  
If roots have to be cut, a sharp tool (defined as spade, narrow spade, fork, breaker bar, secateurs, handsaw, post hole shoveller, hand trowel) should be used.

#### **Backfilling**

Reinstatement of street works must comply with the code of practice New Roads and Streetworks Act 1991 (Specification for the reinstatement of openings in highways), but where tree roots are involved backfilling should be carefully carried out to avoid direct damage to retained roots and excessive compaction of the soil around them.

The backfill should incorporate an inert granular material mixed with top soil or sharp sand (not builders sand) around the retained roots. This will allow a measure of compaction for resurfacing whilst creating an aerated zone around the roots.

Roots and in particular fine roots, are vulnerable to desiccation on exposure to air. The roots are at greatest risk when there are rapid fluctuations in the air temperature around them (especially winter diurnal temperatures). It is vitally important that the roots are covered with sacking whilst the trench is open. The sacking should be removed once the trench is backfilled.

#### **Planning of services**

When laying new or replacement services it is wise to plan ahead to prevent future direct damage to the services from root growth by placing the services within a duct.

If roots have grown into a drain or duct and proliferated to cause a blockage, removal of the root mass will only have a temporary affect and the root will regrow. The fault is in the pipe or duct, not the tree roots and the only answer is to repair or replace the damaged area. Particular problems occur with old salt glazed pipes where clay has been used to seal the joints and has subsequently dried out leaving a gap for the roots to infiltrate.

A popular myth has arisen that tree roots are attracted to water or nutrients within piped systems, this is not so. Roots are adventitious and grow in all directions proliferating in areas where moisture or nutrients are present. They tend to grow near to the pipe to make use of the condensation or moisture build up on the outside of the pipe but will enter the pipe through any crack or damaged joint. They are not capable of breaking into sound pipes.





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