

TREE PLANTING SCHEME
at
James Durrans and Sons Limited
Phoenix Works
Penistone
South Yorkshire
S36 9QU

Client:
Nationwide Structures Ltd

Client Address:
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Wakefield
WF1 5PE

Client Telephone:
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JCA Ref:
14090b/ChC

JCA Limited
Arboricultural & Ecological Consultants

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1 Introduction

1.1 Objectives of the Planting Scheme

- 1.1.1 A planting scheme has been requested by Barnsley Metropolitan Borough Council for the development at James Durrans and Sons Limited, Phoenix Works, to mitigate the loss of the two Sycamore trees which require removal to facilitate the proposed scheme.
- 1.1.2 As a result of this scheme, additional benefits for the site and local area include:
- Introduce trees onto a site which currently does not have a significant tree population.
 - To introduce a wider variety of tree species into the site and surrounding area, as the most commonly observed species in the local area was Sycamore.
 - To plant within the gaps between the recently planted trees beyond the boundary fence.
 - Increase the overall amenity of the site and local area, and also offering natural screening value from the adjacent main road in the future, as the trees mature.

1.2 Terms of Reference

- 1.2.1 For the purpose of designing a tree planting scheme and report, I have used a Google Earth image overlay, which shows the existing site and surrounding area, as it is at present. This plan can be found at **Appendix 1**, and it shows the location of the proposed trees.

1.3 The Site and the Existing Tree Population

- 1.3.1 The site which is proposed to be developed is a sloping piece of land and once the industrial building has been constructed; there will not be appropriate space for tree planting. As such, to mitigate the loss of two trees to be removed on this our client has agreed to plant several trees on an adjacent piece of land which they own.
- 1.3.2 The meadow area, which is not used at present, has a reasonably good tree cover on the east, west and southern boundaries; however there is a large retaining wall on the northern boundary, with no vegetation here.
- 1.3.3 This piece of land is fenced off 10m away from the retaining wall so the buffer/strip beyond the fence and in between the fence and the northern wall is not owned by our client. As such, planting is proposed close to the fence.
- 1.3.4 The majority of the trees growing on this site and in the immediate vicinity are of an early-mature and mature age. Although these trees have stature, a more staggered age class would provide the site with a longer term tree cover.

- 1.3.5 The most commonly observed species of tree on site was Sycamore. The site also contained Lime and Horse Chestnut.
- 1.3.6 This planting scheme will introduce trees to create a wider species diversity, a greater age range, more habitat and ecological value and opportunities, so improving the site's visual amenity, ecological value and providing a natural screen in the future from the adjacent main road, which will be of benefit to the passing public.

2 Tree Planting Schedule

2.1 Tree Planting Position

- 2.1.1 Tree planting positions are shown on the attached plan at **Appendix 1**.
- 2.1.2 Trees have also been positioned so that they are unlikely to conflict with the other trees on the other side of the fence as they attain their mature height and spread.
- 2.1.3 The trees have been positioned where they will be visible by the passing public, so providing the highest amenity and screening possible in the future.

2.2 Species Selection Objectives

- 2.2.1 The species have been selected for the following reasons:
 - **To be in harmony with the existing trees on site and those within the surrounding area:** The chosen species are native to Britain and are in harmony with the local landscape.
 - **To establish long term tree cover:** The chosen species, such as the Hornbeam and Lime have a long life expectancy and will therefore provide the site with long term tree cover.
 - **To improve the amenity value of the site:** The species offer a wider range of autumnal colours, interesting bark and leaves. As such, the site should be more attractive throughout the seasons.
 - **To encourage and support wildlife:** Native species have been selected with a known attraction or benefit to local wildlife, with the aim of enhancing the ecological value of the site. Species selected will also offer shelter and/or nesting opportunities.
 - **Safety:** Poisonous species e.g. Laburnum and Yew have been avoided, as have species which commonly drop branches e.g. Willows and Poplars.
 - **Screening:** To provide useful screening where appropriate.

2.3 Tree Specifications

- 2.3.1 The following table details the specification for the replacement trees. Consideration is given to availability, immediate impact, ease of installation and likelihood of successful establishment.
- 2.3.2 Trees should be container grown and selected according to guidelines BS: 3936: Part 1: 1992 - Nursery Stock. This will ensure that they are of good form and in good condition.
- 2.3.3 The following table details the specification for the newly planted trees:

Table 1: Individual tree planting

Botanical Name	Common Name	Size at Purchase	No. Required
<i>Carpinus betulus</i>	Hornbeam	Heavy Standard	2
<i>Tilia cordata</i>	Small-leaved Lime	Heavy Standard	2
<i>Acer campestre</i>	Field Maple	Standard	2
Total			6

2.4 Tree Planting Implementation

- 2.4.1 Recommendations for good tree planting practice are given below:

- **Timing:** Planting should be carried out during the dormancy period for deciduous species (November to February).
- **Ground Preparation:** To increase the survival chances and establishment of the planted trees, the planting areas should first be made up using a quality soil to a depth of 900mm (300mm topsoil and 600mm subsoil).
- **Planting Holes:** Planting holes will be excavated twice the diameter of the rootball and to a depth of 200mm below the bottom of the root ball. The sides of the hole will be roughened with a spade and no-fines aggregate laid at the base of the planting pit (to a depth of 200mm) to assist with drainage.

The new trees will be offered into the holes and backfilled using the excavated soil material. Soil ameliorants such as compost should not be added as this has been shown to be detrimental to successful establishment.

To avoid possible root damage being caused to the existing trees, the planting holes will be achieved using hand tools only. No mechanical rotavation is to be undertaken in the specified tree locations.

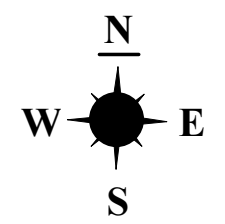
- **Staking:** Staking will be required in order to secure the tree and prevent losses within the first years of establishment. It may be necessary to angle the stakes in order to avoid damaging the rootball. All trees are to be staked at a height of no more than 1 metre.

- **Tree Ties:** Adjustable and flexible tree ties will be used. These are to be attached at a point no more than one third of the way up the stem. Ties should be inspected after one year and adjusted as required. Only if establishment is particularly slow should stakes remain in place longer than three growing seasons.
- **Tree Guards:** Tree Guards are to be incorporated around the base of each stem in order to reduce pest damage throughout the winter months and to prevent mechanical damage from e.g. strimmers and mowers. For individually planted trees, spiral type guards are to be used.
- **Mycorrhizae Application:** Mycorrhizal fungus should be applied to each new tree either in the form of powder, granules or spikes. Powder and granules should be applied over the exposed roots of the transplanted tree and spread over the newly dug hole. Spikes should be pushed into the rootball once the tree has been planted. This symbiotic fungus will aid the newly planted tree in acquiring water and nutrients from the soil, and thus enhance growth and reduce mortality.

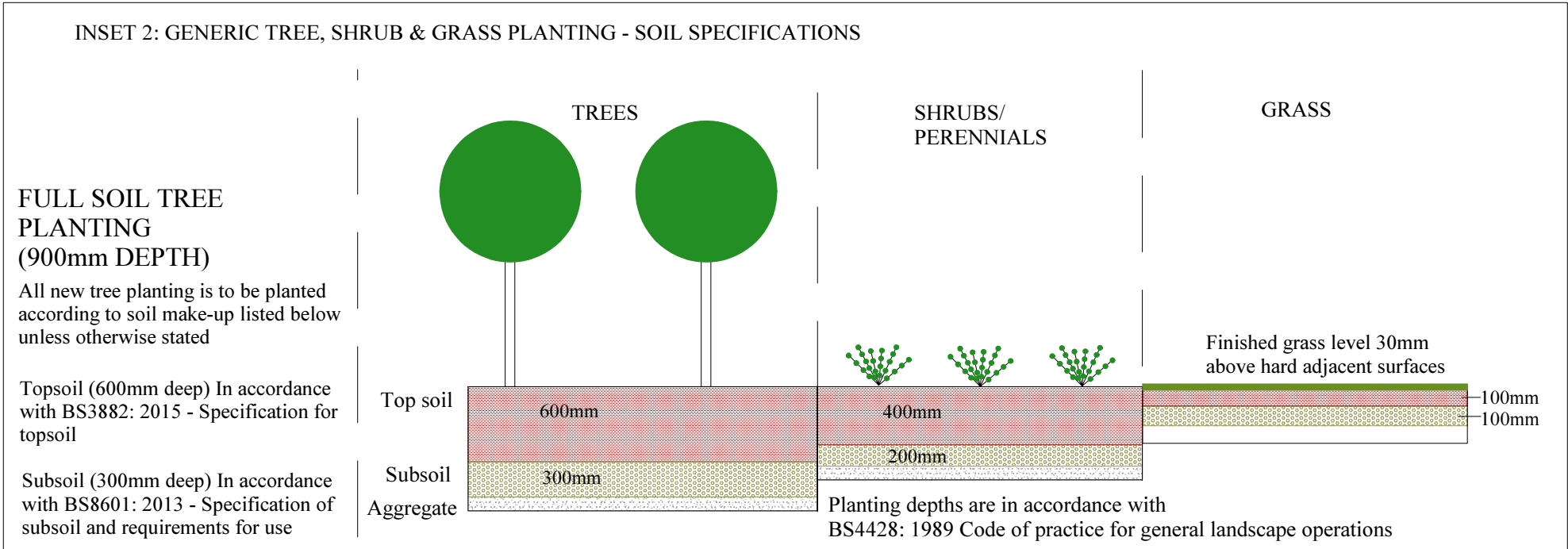
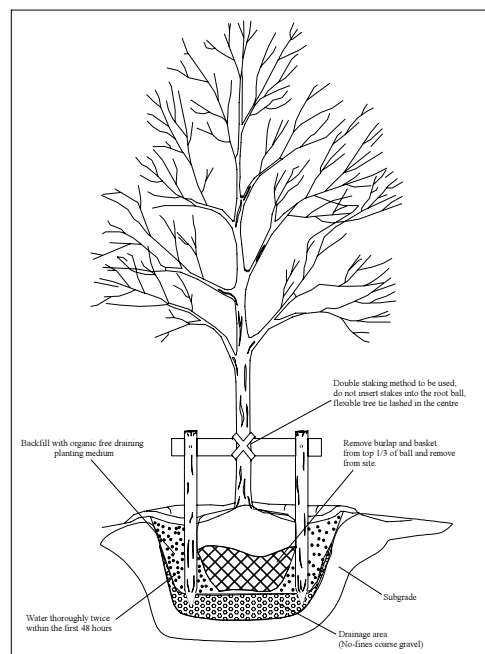
3 Aftercare

- 3.1 All newly planted trees are to be thoroughly watered immediately after planting (twice within the first 48 hours) and during any prolonged periods of dry weather.
- 3.2 Once planted, trees should be inspected on an annual basis for signs of poor condition or damage. Any trees that die within the first 5 years after planting will be replaced with trees or shrubs of the same species and size.
- 3.3 All future tree works on the planted trees should be carried out between September and February, to avoid interference with the nesting bird period.
- 3.4 Any weeds found growing around the newly planted trees should be removed, annually in subsequent years after planting. This will help with the uptake of valuable resources such as water, nutrients and light. This must be done manually without the use of herbicides.
- 3.5 Tree ties should be inspected annually, and adjusted if required. Tree ties and stakes should be removed within three years of planting unless establishment is deemed to be unusually slow.
- 3.6 New bark mulch should be applied around the base of each tree to a depth of no less than 75mm, each year for at least the first three years. This will conserve water close to the soil surface and inhibit weed growth.

Appendices



Inset 1: an example of planting a tree in an open area or grass strip



**Appendix 1:
Planting Scheme Plan**

ADDRESS: James Durrans & Sons Limited,
Phoenix Works, Penistone, S36 9QU.
JCA REF: 14090b/ChC

SCALE: 1:500 PAPER SIZE : A2

TREE PLANTING	
	Carpinus betulus (Hornbeam) x 2 Size: Heavy Standard
	Tilia cordata (Small-leaved Lime) x 2 Size: Heavy Standard
	Acer campestre (Field Maple) x 2 Size: Standard

Arboricultural & Forestry Consultants

I hope that this scheme and methodology provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed



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Charles Cocking *FdSc (Arboriculture)*.

24th April 2018

For and on behalf of **JCA Ltd**

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Professional Tree and Ecology Advice nationwide

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Guidance for Architects and Developers

- British Standard 5837 Tree Surveys
- Arboricultural Implication Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

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- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
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- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected Species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)

HEAD QUARTERS:

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