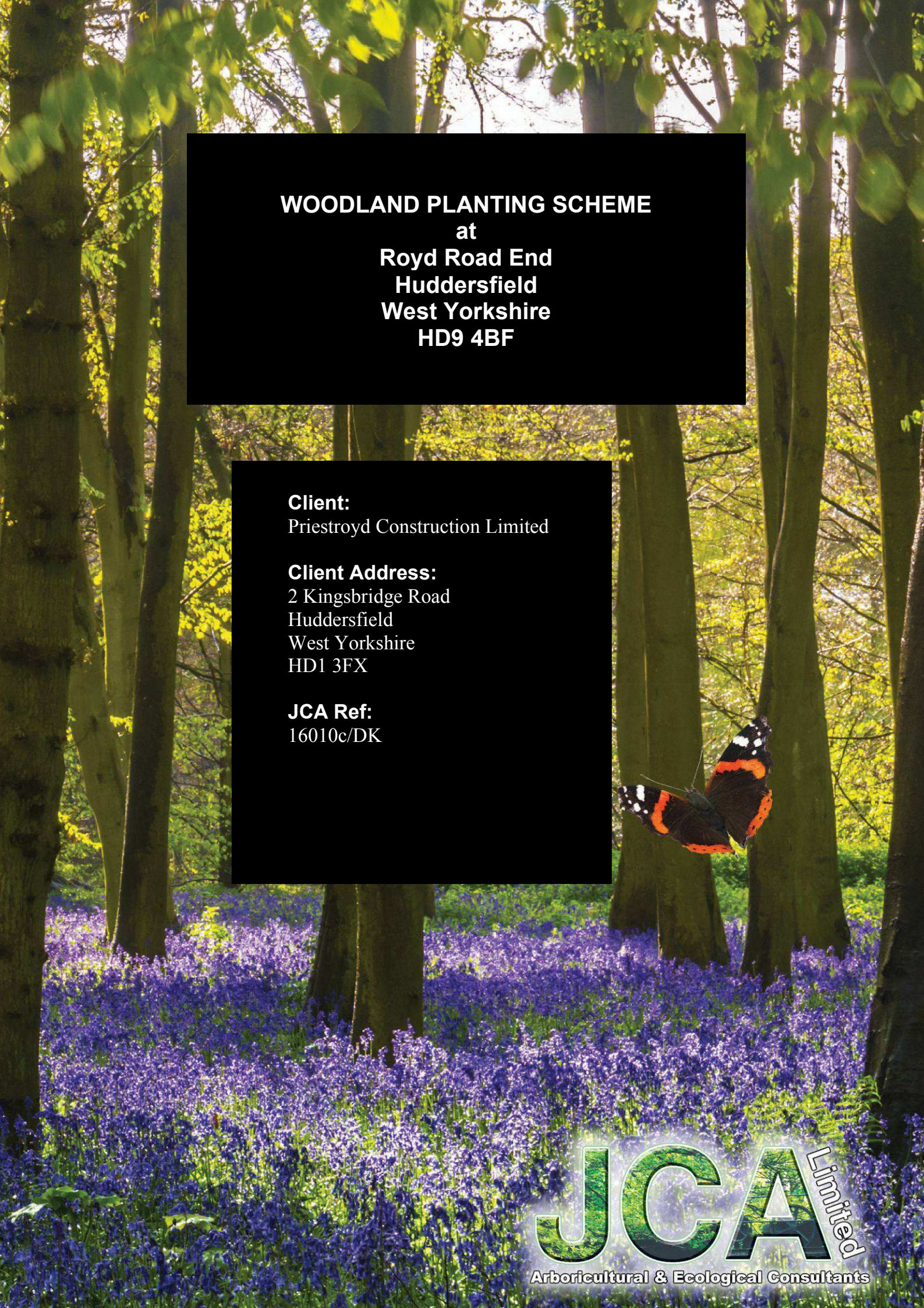

WOODLAND PLANTING SCHEME
at
Royd Road End
Huddersfield
West Yorkshire
HD9 4BF

Client:
Priestroyd Construction Limited

Client Address:
2 Kingsbridge Road
Huddersfield
West Yorkshire
HD1 3FX

JCA Ref:
16010c/DK

JCA Limited
Arboricultural & Ecological Consultants

Contents

1 Introduction

1.1 Objectives of the Planting Scheme

1.1.1 Our client has requested a woodland planting scheme in order to improve the ecological value of the land.

1.2 Terms of Reference

1.2.1 For this purpose a plan has been created to illustrate the planting scheme.

1.3 The Site and the Existing Tree Population

1.3.1 The site is a field forming a corner plot with Holmfirth Road (B6107) to the northeast, Coniston Road forming the north western boundary. The field area extends further to the west beyond a relatively new wooden post and rail fence which forms the west boundary of the site, this extends from the north to the south boundary. A long narrow area of woodland forms the south boundary, dominated by early-mature to mature Sycamores, rising up to Royd Road. The entrance to the site is currently from the south east corner, Holmfirth Road and extends down to the west to a small stone bridge over a river, *Roy Edge Clough.*

1.3.2 The site slopes fairly steeply down from both the north and south sides. The area in between is generally level.

1.3.3 The proposed planting area is formed from the south west to north east along the boundary with Coniston Road, with an existing single mature Sycamore tree growing towards the west end of the site and a semi-mature Oak in the central area and with some other relatively young trees, including Common Ash and Willows, around the northeast and east side boundary areas of the site.

1.3.4 This planting scheme will introduce trees to create a wider species diversity, a greater age range, good habitat and ecological value whilst helping to improve the site's visual ecological value. A range of trees has been included to provide longevity and to help establish a fairly narrow woodland area with a mix of varying growth sizes. The quantity and varying species will allow for failures if some species are not suited to the area and to see which species will thrive helping to provide an important preliminary stock of trees enabling further enhancements to be made over the coming years particularly as the woodland becomes established and begins to mature.

2 Tree Planting Schedule

2.1 Tree Planting Positions

2.1.1 Planting positions should be random. All the trees should be planted approximately two metres apart from one another across the zoned/hatched area shown on the plan included at **Appendix 1** in order to achieve an even density of planting across the whole area.

2.1.2 Each species should be distributed across the zoned/hatched area relatively evenly, to avoid any one species being overly dominant in any particular area of the woodland planting scheme.

2.1.3 Additionally, as a general guide when planting:

- A view to planting three of the same species adjacent to one another shall be used to at least a moderate extent so as to allow for failures of any of the particular species being planted and so each of the species has a chance of getting established in those particular areas of the planting scheme.

- The planting positions of the larger growing tree species, particularly the Oaks, Limes and Beech shall be more dominantly planted towards and in the more northern and eastern areas of the planting site, although not entirely in these locations.

- The larger growing species, the Oaks, Limes and Beech, should not be planted within ten metres of any hard landscape on the site and should ideally be at least fifteen metres from any hard landscape and the footings of buildings on the site.

- The final distribution of tree species should allow for those species with a greater potential to grow high to be growing to the north and east sides of the area being planted and those smaller growing species be planted in great numbers to the south west area of the planting area. This should be done, so all the species remain fairly evenly distributed throughout the planted area when the planting is completed and with a view to the potential growing heights of the trees, in general, diminishing from the north and east sides of the planting area to the south and west sides of the planting area.

- Formal planted lines of trees shall be avoided as much as possible and the south east boundary of the planted area shall have a scalloped finish, shall not be a straight line as shown on the plan at **Appendix 1**.

2.1.4 A distance equal to three metres has been designated along the north west and eastern boundaries of the site to allow access. A wooden fence similar to that which is present on the west boundary of the planting site shall be constructed along this point. This will help define the edge of the woodland when planted, enable access along the north and east sides of the woodland and reduce the risk of issues being caused between the trees and the neighbouring land.

2.1.5 Further height protection to fencing, to a height of two metres, may be necessary to prevent deer accessing the planted site. This may be in the form of an electric fence or other suitably robust fencing, perhaps extending the height of existing fencing. This is particularly in relation to the existing fencing along the western side.

2.1.6 The plan at **Appendix 1** has been drawn up with the planting areas to help illustrate points mentioned above.

2.2 Species Selection Objectives

2.2.1 The species have been selected for the following reasons:

- **The species are native to Britain.** The following is a list of these species. These have been provided in a generally descending order of potential growth sizes (English and Sessile Oaks, Common Beech, Small-leaved Lime, Hornbeam, Scots Pine, Whitebeam, Downy and Silver Birch, Hawthorn, Crab Apple, Rowan, Hazel and Guelder Rose).

- **To improve the amenity value of the site:** A wide variety of species have been selected These species offer a wider range of autumnal colours, attractive berries, spring flowers, interesting bark and leaves. As such, the site should be attractive throughout the seasons.

- **To establish long term tree cover:** The chosen species, such as the Oaks, Hornbeams and Limes, have a long life expectancy and will therefore provide the site with long term tree cover.

- **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 provide flowers, fruit, berries, seeds or nuts for wildlife, as well as offer shelter and/or nesting opportunities.

- **Safety:** Poisonous species, for example Laburnum and Yew, have been avoided, as have relatively brittle species which may more easily shed branches, for example Willows and Poplars.

- **Pest and Disease resilience:** The native trees chosen are considered to be robust for the soil and climatic conditions they need to grow in. Species prone to significant known diseases, such as Elms and Dutch Elm Disease and Ash and Ash Dieback, have been avoided.

2.3 Tree Specifications

2.3.1 The following table details the specification for all the trees. Consideration is given to availability, ease of installation, suitability to the site conditions and likelihood of successful establishment.

2.3.2 Trees should be 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

Total Square Metres to be Planted:		**1000**	
Botanical Name	**Common Name**	**Size at Purchase**	**No. Required**
Quercus robur	Pedunculate Oak	Whip	36
Quercus petraea	Sessile Oak	Whip	36
Fagus sylvatica	Common Beech	Whip	36
Tilia cordata	Small-leaved Lime	Whip	36
Carpinus betulus	Hornbeam	Whip	36
Pinus sylvestris	Scots Pine	Whip	36
Sorbus aria	Whitebeam	Whip	36
Betula pubescens	Downy Birch	Whip	36
Betula pendula	Silver Birch	Whip	36
Sorbus aucuparia	Rowan	Whip	36
Malus sylvestris	Crab Apple	Whip	36
Sorbus aucuparia	Rowan/Mountain Ash	Whip	36
Corylus avellana	Hazel	Whip	36
Viburnum opulus	Guelder Rose	Whip	36
		Total	**504**

2.4 Whip Planting Specification and Immediate Aftercare

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) and early Spring (March to April/May) for Conifers.

- Whilst it is best to transplant trees immediately after purchase, whips may be kept in their original unopened packaging, loosely packed to avoid root damage and in a cool, dark location and stored in an upright position, if not being planted immediately for a few days at least,

- Whips may also be removed and healed gently into a trench with fine soil which will accumulate around their rooting areas. Tied bundles of whips should be left tied when doing this. During dry periods, watering is essential as roots can dry out rapidly even when only exposed for a very short period, for example during transplanting,

- Bare rooted trees, roots without a root ball/without soil covering their roots, may be notch planted,

- Ideally, don't create notches, dig holes or trenches until the day of planting as they could fill with water or dry out,

- Don't soak or place the roots into water before you plant, unless using a mycorrhizal or other root dip,

- Water the trees immediately after planting, ideally with at least a bucketful of water per tree,

- Ensure the holes, or notches, are big enough to take the roots so no roots are bent or broken,

- A bare root plant should be planted to the same depth from which it came, this may be seen by the soil mark on the root collar,

- Notch planting is a quick method of planting a lot of trees. Heavy machinery is not required which means soil compaction can be avoided. Soil compaction is a serious problem to trees in general as it creates impermeable soil preventing the exchange of soil moisture and soil nutrients and asphyxiating trees,

- Notch planting should be done with a sharp spade. Placing the blade into the ground vertically to the depth of the spade's spit. This may be enough but the trees root system must be completely inserted downwards into any notch made and gently pulled up

slightly when done so as to relieve the roots in the notch. A second notch may be made across the first to provide increased rooting allowance,

- **Note:** *Cultivating (loosening) the soil around the notch and potential rooting zone will provide better conditions and more chances for the tree's roots, transfer of soil moisture and nutrients, allowing the tree's roots and tree to get better/more quickly established,*

- Tread the soil in around the plant after planting to firmly secure the plant and anchor the roots. You can check the firmness by pulling gently on the stem. If the plant loosens, it is not planted firmly enough. All plants should be checked again within the first month of planting, and firmed in again if necessary. Further, regular checks will help ensure the trees remain in the condition they were planted in,

- Whips should be supported and protected from animals especially deer, rabbits and rodents as they eat the young bark and growing tips causing long term damage to new trees or leading to the trees death. This is usually done using a combination of both a suitable wooden stake, normally a square, oak stake, and a biodegradable tree tube, the latter which is tied using a pull grip to the stake after the stake has been inserted firmly and vertically into the ground on the leeward side of the tree. The tree tube should cover the whole tree above ground so as to provide a micro climate like that of a greenhouse which will encourage positive phototropic growth helping each tree to become established and protecting each tree from animal damage,

- **Note:** *Ensure that tree tubes are the correct way up. They usually have a outwardly facing flange around the top to help reduce contact damage to the tree and the base may be firmed downwards to help secure the tube in place,*

- The stakes, tubes and ties should be regularly checked as the tubes or stakes may become lose in the ground or may not remain vertical or the ties may become loose. The more attention that is given to the trees, then the potential for higher survival rates will increase,

- Plants, including grasses and other wild plants around the base and within about a metre or so radius of each tree will be using vital soil moisture and nutrients which the trees often need to survive. Maintaining these areas clear of plants (leaving the areas as bare soil) will help reduce this to a reasonable extent. This can be intensive and/or costly especially on a lot of trees whilst cutting vegetation down to ground level can encourage extensive and vigorous regrowth which will add to the competition. A balance is therefore best met by keeping long growth cut back occasionally to prevent it maturing, producing seed, and preventing unwanted growth appearing inside the tree tubes for example,

- Using mechanical machines such as strimmers close to trees should be avoided as they may strip the bark or sever the tree causing irreparable damage to otherwise important and even fairly robust outer protective parts of a tree,

- Whilst no mulching and the need for regular watering is less important for whips/notch planting as it is for other types of tree planting, regularly checking the condition and caring for the trees will ensure they have the maximum chances of survival. A 10% failure rate is normally expected from new planting stock and this should be accounted for when noting any dead or dying trees.

3 Additional Care and Protection Measures

3.1 All newly planted whips 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, all trees should be inspected on an annual basis for signs of poor condition or damage. Any whips that die within the first 5 years after planting shall be replaced with whips of the same species and size. Around a 10% death rate is normally expected from planted stock although all stock should be of optimum health and condition when purchased.

3.3 All tree works should be carried out between August and February, to avoid interference with the bird nesting period.

3.4 Ideally, any weeds found growing around the newly planted trees and shrubs 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 and tubes should be inspected regularly and adjusted if required. The stakes, tubes and tree ties may be left in-situ for three to five years minimum, until the trees look to be outgrowing the tubes. Essentially, the tubes should remain as long as possible to prevent animal damage.

3.6 Whilst not essential, new bark mulch may 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 help to conserve water close to the soil surface and help to inhibit weed growth where the areas are left bare of other plant growth around each tree.

4 Supply and Planting Assistance

4.1 In addition to preparing bespoke tree and shrub planting schemes, JCA can also arrange for the supply and planting of trees, shrubs and hedges for all sized projects, be it a single specimen or a large scale planting scheme.

4.2 Please contact JCA should you require information or advice relating to the supply and planting of trees, shrubs and hedges.

Appendices

Appendix 1: Planting Scheme Plan

Total Square Metres to be Planted:		1000	
Botanical Name	**Common Name**	**Size at Purchase**	**No. Required**
Quercus robur	Pedunculate Oak	Whip	36
Quercus petraea	Sessile Oak	Whip	36
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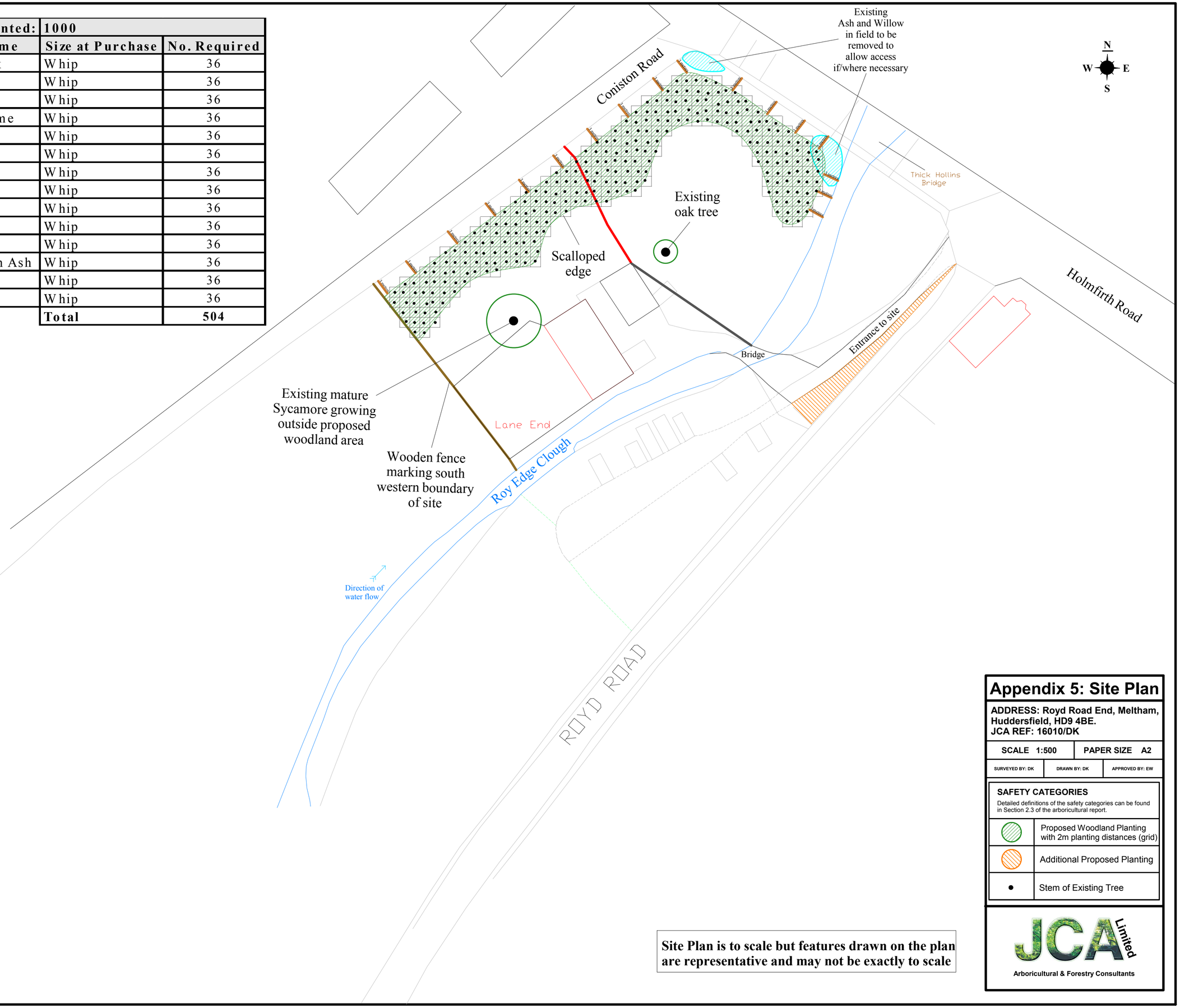
		Total	**504**



Site Plan is to scale but features drawn on the plan are representative and may not be exactly to scale

Appendix 5: Site Plan

ADDRESS: Royd Road End, Meltham, Huddersfield, HD9 4BE.
JCA REF: 16010/DK

SCALE 1:500	PAPER SIZE A2

SURVEYED BY: DK	DRAWN BY: DK	APPROVED BY: EW

SAFETY CATEGORIES

Detailed definitions of the safety categories can be found in Section 2.3 of the arboricultural report.

	Proposed Woodland Planting with 2m planting distances (grid)
	Additional Proposed Planting
●	Stem of Existing Tree

JCA Limited

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

.....

Daniel Kemp (*FdSc Arboriculture*)

19th October 2020

For and on behalf of ***JCA Ltd***

Registered Office:

Unit 80
Bowers Mill
Branch Road
Barkisland
Halifax
HX4 OAD

Tel. 01422 376335
Fax. 01422 376232

www.jcaac.com

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- 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:

Unit 80 Bowers Mill,
Branch Road,
Barkisland,
Halifax, HX4 0AD.

Tel: 01422 376335

Website: www.jcaac.com

Company Reg No. 05005041
VAT No. 686 4674 78