# WOODHEAD HALL FARM

*Landscape Management Plan*

CLIENT:

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PRODUCED BY:

PWP DESIGN

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# 1 INTRODUCTION

## 1.1 CONTEXT

This Landscape Management Plan has been produced for Woodhead Hall Farm located in Blacker Hill, Barnsley off Wentworth Road by PWP Design on behalf of Thomas Daley Homes.

The Landscape Management Plan covers general landscape maintenance and management for the privately managed communal/shared hard and soft landscape areas and access tracks and all areas located within the wider ownership curtilage of Woodhead Hall. The aforementioned areas are all located outside of domestic ownership within the proposed development. This includes:

- Trees
- Mixed native planting
- Mixed species native hedge
- Single species flowering hedge
- Mixed ornamental planting
- Mown amenity grass/lawns
- Meadow seeding
- Existing retained soft landscape

## 1.2 RELEVANT DRAWINGS

The Landscape Management Plan is to be read in conjunction with the following drawings, produced by PWP Design Ltd:

- PWP 911 001 Outline Landscape Masterplan & Specification. Refer to Appendix B:
- PWP 911 002 Curtilage & Ownership Boundaries. Refer to Appendix C:

## 1.3 RELEVANT DOCUMENTS

The Landscape Management Plan is to be read in conjunction with the following documents, produced by others:

- Biodiversity Enhancement Management Plan (BEMP) prepared by Middleton Bell to assist in the discharge of condition 23. Refer to Appendix D: for full details of the decision notice.

## 1.4 PLANNING CONDITIONS

The Landscape Management Plan provides detail to assist in the discharge of condition 10 associated with Grant of Planning Permission ref: 20221234. Refer to Appendix D: for full details of the decision notice. See below for the requirements included within planning condition 10:

*Planning Condition No. 10*

*A landscape management plan, including long term design objectives, management responsibilities and maintenance schedules for all landscape areas, shall be submitted to and approved by the Local Planning Authority prior to the occupation of the*

*development or any part thereof, whichever is the sooner, for its permitted use. The landscape management plan shall be carried out in accordance with the approved plan. Reason: In the interests of the visual amenities of the locality and in accordance with Local Plan Policy BIO1 Biodiversity.*

## 1.5 APPLICATION SITE

The application site is a residential development, situated between Wentworth Road and Woodhead Lane to the east of Blacker Hill, to the south of Barnsley.

The development consists of the refurbishment of Woodhead Hall, the conversation and extension of a number of existing barns and outbuildings and the construction of new dwellings within the estate and farmstead of Woodhead Hall. Primary vehicular and pedestrian access is gained via 2 existing tracks, one to the west Wentworth Road in Blacker Hill and to the other from the east off Woodhead Lane.

Where feasible existing vegetation, including hedgerows, scrub, trees and grassland are to be retained within the proposed site. All trees and vegetation is to be retained and protected in accordance with BS 5837 and arboricultural recommendations. The proposed soft landscape scheme aims to enhance and increase the retained habitats and consists of native scrub, native trees, native hedgerows and meadow seeding, aswell as the areas associated within the domestic curtilage that is more ornamental in nature. Refer to Figure 1 below and Appendix B:

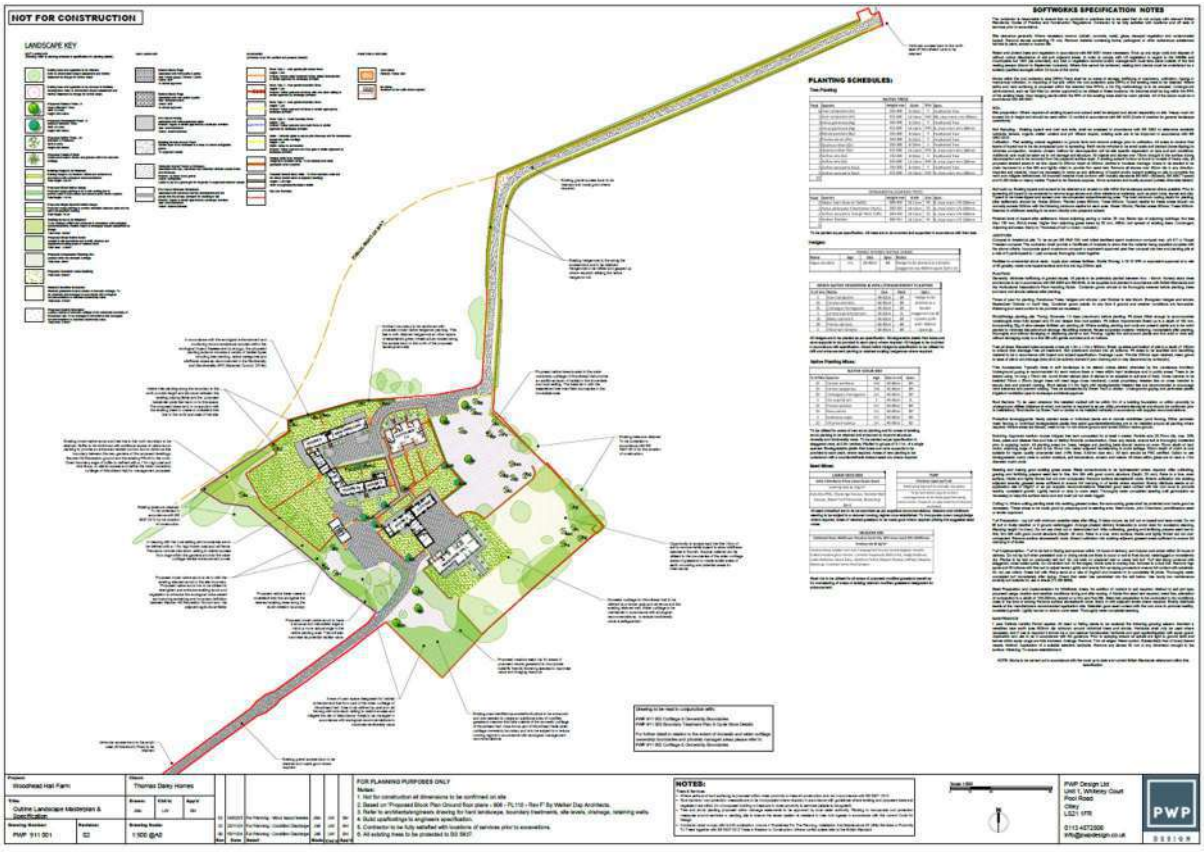



*Figure 1. PWP 911 001 Outline Landscape Masterplan & Specification*

# 2 CLIMATE CHANGE AND BIODIVERSITY STATEMENT

It is vital that wherever possible the landscape management principles promote the enhancement of biodiversity within the site. This can be achieved through reduced maintenance interventions to the landscape where possible, promoting habitat enhancement and 'rewilding' of appropriate areas. For example, wildflower / meadow areas replace lawns in some areas to reduce mowing regimes. Ecology features such as log piles and bird and bat boxes are included within the scheme. Areas with habitat value should be recognised and enhanced through positive management proposals.

This landscape management plan also promotes the importance of reducing carbon emissions when maintaining the outdoor environment. This will contribute to tackling climate change. Best practice in landscape maintenance should be promoted to achieve this. The following interventions are promoted by this plan; the use of electrical equipment over petrol or diesel-powered equipment when carrying out maintenance tasks. Reducing the number of vehicles that travel to the site to conduct maintenance tasks, and the use of electric or hybrid vehicles where possible.

# 3 MANAGEMENT AIMS AND OBJECTIVES

## 3.1 SECURING MANAGEMENT IN PERPETUITY

This landscape management plan is to be used as a basis for guiding the long-term management of the application site and will need consideration as to how it co-exists amongst existing local authority maintenance regimes that may overlap geographically (such as litter bin emptying / street cleansing) or concurrently in the wider area (such as grass cutting, tree watering), to ensure that a holistic approach is achieved and that delivery of maintenance is of a consistent high quality.

## 3.2 MANAGEMENT OBJECTIVES

Implementing the correct maintenance procedures for any landscape design project is vitally important to ensure the longevity and appearance of a scheme is upheld. In particular the softworks elements of the scheme are the areas that require the most attention to maximise their potential. Planting schemes by their definition are an ever-changing element that require a real commitment to ensure the planting beds remain healthy, vigorous and attractive.

The following aims and objectives set out a framework for guiding the management and maintenance operations of the site.

## 3.3 MANAGEMENT AIMS

*AIM 1: TO ENHANCE THE AESTHETIC QUALITY OF THE LANDSCAPE.*

*Management & Design Objectives:*

- To maintain a high level of visual amenity appropriate to the rural setting of the site
- To demonstrate a high level of horticultural awareness that considers the qualities of the specific plant species used, timing works in accordance with their growth and flowering cycles.
- To understand the specific needs of the various planting conditions included within the scheme.
- To maintain an appropriate density of plant species, dividing / thinning as required so to create good ground cover and a healthy level of competition encouraging strong growth and form.

*AIM 2: TO BE SENSITIVE TO THE SETTING AND CREATE AN ATTRACTIVE ENVIRONMENT.*

*Management & Design Objectives:*

- To maintain a high-quality landscape that relates to the residential setting of this development.
- To maintain a high-quality natural landscape setting that relates to the immediate the wider landscape setting associated with the application.
- To maintain a visually attractive setting.

*AIM 3: TO MANAGE THE SITE IN AN ECOLOGICALLY SENSITIVE AND SUSTAINABLE MANNER*

*Management & Design Objectives:*

- To consider bio-diversity in the long term.
- To maximise the sustainability of site maintenance through efficient use of resources, coordinated planning of operations and minimising the environmental impact of maintenance operations.
- To promote a cost-effective management strategy.
- To comply with all statutory duties and demonstrate use of best practice.
- To promote an ecological based best practice management approach.
- Replace all native planting with like for like in the event of failure.
- To ensure that undesirable invasive and dominating plant species are prevented from establishing in the newly designed landscape.

## 3.4 MAINTENANCE RESPONSIBILITIES

The applicant is to appoint an appropriate Landscape Management and Maintenance Company to ensure long-term management and maintenance of the shared/communal areas within the development.

# 4 MANAGEMENT OPERATIONS

The following section provides an overview of detailed management prescriptions required for the ongoing management of the site. Frequency tables are located at the end of the document in Appendix A:These operations should be used as the basis for determining subsequent landscape management plans.

## 4.1 DESIGN AND MANAGEMENT CONSTRAINTS

The following restrictions apply in respect of the approval and timing of specific operations:

- No works to trees, woodland, hedging, or scrub is to take place between March and September inclusive to avoid bird-nesting season without prior written consent of the Local Planning Authority.
- Use of mechanical equipment is not permitted outside the hours of 8am to 6pm Monday to Friday and 9am to 1pm Saturday, unless otherwise approved.
- No on-site chipping / shredding of arisings or tipping of green waste without prior approval.

## 4.2 SITE CLEANSING AND INSPECTIONS

### 4.2.1 Cleansing Operations

Litter and debris lodged in planting, meadow/grassland areas, paths and tracks should be removed as part of regular cleansing operations throughout the year. This is to ensure a tidy, clean appearance and to mitigate risk on the environment. Any litter collected is to be carted off-site during each maintenance visit and is to be disposed of in accordance with current and relevant Waste Management Regulations.

### 4.2.2 Fly Tipping

Fly tipping may occur from time to time, and it is important this is removed as soon as possible in order to discourage further incidences. Fly tipped material is defined as any material or object of such weight or proportion that it cannot be removed by one maintenance operative, for instance, whole furniture, household appliances or tipping of bulk materials. Small amounts of builders' DIY refuse or glass of less than 0.1 cubic metre should be considered as normal litter.

Any fly tipped material deposited on-site following approved completion of the initial cleansing should be reported to the team manager prior to any action being taken.

### 4.2.3 Disposal of Material Arising

All litter should be removed from site and disposed of in an authorised manner. No bags or piles of loose collected material should remain on-site overnight.

### 4.2.4 Activities of Other Contractors

The maintenance operative is encouraged to be pro-active in reporting instances of other contractors not removing their own rubbish or arisings.

#### 4.2.5 Narcotics, Solvents, etc.

Narcotic substances, solvents and associated equipment found in landscaped areas are to be removed and disposed of in accordance with current and relevant Hazardous Waste Regulations. Incidents are to be reported to the police or the relevant local authority department.

#### 4.2.6 Surfaced Areas / Footpaths

Footpaths shall be inspected on a regular basis (3 monthly) to ensure it is kept litter free. Litter removal shall include all rubbish, leaves dust and accumulated grit. Any stains (e.g. Oil spills, graffiti etc.) shall be removed by suitable means avoiding the use of chemicals unless they have environmentally sound credentials.

Ensure surfaces are maintained in a good state of repair, free from potholes and ruts or low areas which hold water. Repair as necessary ensuring that repairs are made using material to match the existing surface.

#### 4.2.7 Cleaning / Maintaining Furniture, Features & Boundary Treatments

Furniture and fittings such as benches, walls, fences and litter bins (where present) are to be cleaned every 2 months or as and when flagged up by the client or at a site inspection.

Equipment is to be cleaned with soapy water or low-pressure jet wash in accordance with the manufacturer's instructions to keep the surfaces free of dirt and marks. Any graffiti is to be removed with a proprietary cleaning agent in accordance with the furniture manufacturer's recommendations.

If any item requires necessary repair, Landscape Management Company is to be informed and approval sought from the client / developer.

#### 4.2.8 Site Inspections

A high standard of site management is crucial to the success of the site as a whole, and close co-operation within the management team is essential to fulfil the aims and objective of the management plan. The landscape maintenance provider will be encouraged to be pro-active in managing the site with regular reports provided to the client. These reports should explain current works which may be underway and give deadlines for completion along with identification of any additional works required as detailed. Where required or where there are significant cost implications for repairs, a dated photo should accompany the report. The scope of this plan does not include litter picking or cleansing of paving / furniture (to be carried out by others), however the landscape site inspections provide an opportunity to highlight any related issues to the client.

## 4.3 PROPOSED SOFT LANDSCAPE MANAGEMENT

### 4.3.1 PLANTING GENERALLY

Generally, maintenance to all planting must take into account:

- Watering in drought periods, including frequency and method of application.
- Weed controls, primarily carried out by hand with the use of chemical methods of removal, such as residual and spray herbicide applications, to be avoided and kept to a bare minimum (NOTE: strimming machinery is to be avoided due to damage to plants)
- Thorough regular inspections, including making good losses with replacement planting stock
- Firming-in and possible pruning of wind-rocked plants
- Maintenance of all 1m dia. mulched surrounds to trees planted in grass areas
- Incorporating slow-release fertiliser where appropriate to tree pits
- Extension or strengthening of fencing or other barriers to be carried out where planting is becoming eroded trampled or damaged
- Adjustment checks of tree ties, stakes and guards, protective fencing and their timed removal to ensure ongoing health of trees
- Inspection for pests, vermin and plant diseases, including proposed remedial actions
- Removal of litter to all areas of planting

### 4.3.2 TREES

Native and ornamental tree planting has been proposed throughout the proposed development. Native trees are located within the areas designated for habitat retention and enhancement to complement and enhance/compliment the existing retained habitats and trees in the site. Tree planting promotes habitat connectivity across the proposed development and within the wider setting. Trees have been specified / selected taking into consideration position in proximity to the proposed development layout including the adjacent road network/hard surfaced areas. Ornamental/Native cultivar trees are located within the domestic curtilage and streetscape. These provide height, structure and seasonal interest. Species have been selected in relation to their location and proximity to the proposed dwellings/domestic setting.

Native trees are included within the proposed scheme in these areas. Species include:

*Native Trees:*

- *Acer campestre*
- *Alnus glutinosa*
- *Betula pendula*
- *Prunus avium*
- *Quercus robur*
- *Sorbus aria*
- *Sorbus aucuparia*

*Ornamental/Native Cultivar Trees:*

- *Malus 'John Downie'*
- *Pyrus calleryana 'Chanticleer'*
- *Sorbus aucuparia 'Joseph Rock'*
- *Sorbus 'Embley'*

The overriding aim is to maintain the healthy appearance of all trees, appropriate to the form and growth habit of the species concerned. Any failed trees should be replaced in accordance with section 4.7.

### *TREES GENERALLY*

At a minimum, the following specifications should be considered for all arboricultural works on-site:

- An appropriately qualified operative such as Arboriculturist or Tree Surgeon should be consulted prior to undertaking any major tree works on-site. All work carried out to proposed of existing trees and vegetation is to be to BS 5837:2012 & BS 3998:2010 (or the latest version) where appropriate.
- Formative tree works are to be undertaken during the winter months, preferably January and February and outside of the bird-breeding season (March - September).
- Where bat roosts may be present, tree works must be authorised and supervised by an appropriately qualified ecologist.
- Wood under 250 mm diameter collected from thinning, brashing, or coppicing should, wherever possible, be chipped and used on-site for mulching, either by blowing directly back into planting areas or by storing on-site for future use.
- Epicormic growth following works to the crown should be removed where considered to be visually inappropriate.
- Watering / irrigation should be carried out to ensure proper establishment. Additional watering of young trees may be required during periods of drought and should be assessed through site inspections. Particular care should be taken during such periods to ensure sufficient watering is carried out to facilitate healthy growth. Operations are to cease during times of local water restrictions.
- Where tree works are required on trees with either bird or bat habitat boxes mounted upon them, all work must be carried out outside bird breeding and bat breeding season and advice must be sought from an appropriately qualified ecologist.
- Mulch systems are to be topped up frequently through the year, as and when required to a minimum depth of 75mm (50mm minimum depth if higher grade of mulch used). All trees planted within grass are to include a 1m diameter mulch circle.
- No strimming is to take place around the base of trees due to the risk of bark stripping, which has the risk of causing permanent damage to a tree's health.

### *SPECIMEN / INDIVIDUAL TREE PLANTING*

This refers to those trees planted as sized standard (or greater), or pot grown. This excludes trees that are part of the woodland feathered tree matrix.

#### *Mulch, Weeding & Fertilisers*

The mulch layer should be topped up during the first three years of management as required to maintain a minimum depth of 75mm (50mm minimum depth if higher grade of mulch used). This is to ensure the prevention of weed growth, the retention of soil

moisture and the prevention of strimming around the base of the trees. Between April and September undesirable weeds should be removed by hand weeding.

Where required, evenly spread a slow-release fertiliser to enhance tree growth, in accordance with manufactures / supplier instructions.

*Support & Protection*

Where tree guards and tree ties are used, products should be made from biodegradable materials.

All above ground staking and underground guying should be checked at least annually to ensure that the root system remains stable and firm in the ground, and that ties are still effective and not causing any damage to the tree. Any broken or damaged stakes should be replaced and hessian ties re-fixed at a slightly lower position, allowing for growth since planting.

Stakes / guards should be removed as deemed necessary, between 18 months – 3 years, once the tree is suitably established and its root system is strong enough to anchor it in situ. Where trees, particularly replacements, are still considered to require support, stakes shall be left in place and re-inspected the following year. The ideal is to have all stakes removed by the end of Year 5 after planting so that trees develop sufficiently robust stems and do not become over reliant on support.

Wires or straps used in underground guying systems that could cause damage to the growing stem or structural roots should be cut as soon as the tree is self-supporting.

*Pruning, Thinning & Coppicing*

Young trees will require formative pruning to maintain a desirable shape as well as to maintain health and vigour.

Crown pruning will be required occasionally to ensure the canopy is not too low to injure people or encourage vandalism of low-lying branches. Dead or severely damaged trees should be felled and replaced accordingly.

*Watering*

Watering should be carried out to ensure proper establishment. Regular watering (weekly) should be carried between April to September for the first 3 years. Trees should receive at least 50 litres of water to ensure they resist any drought conditions; this may need to be extended subject to climatic conditions over the initial 3-year period. Particular care should be taken during such periods to ensure sufficient watering is carried out to facilitate healthy growth. Operations are to cease during times of local water restrictions and proposals are to be submitted for an alternative source of water.

*Health*

A formal assessment and reporting of young tree health and development should be carried out annually. This assessment should include foliar appearance (i.e. lack of leaf chlorosis and / or necrosis), leaf size and leaf canopy density, extension growth and incremental girth development. Continual assessment on an ad hoc basis should be carried out throughout the year, to inform maintenance requirements.

It is possible to assess young tree performance in the field using both leaf fluorescence and leaf chlorophyll content. These tests should be carried out wherever practicable.

All trees should be checked on a regular basis for mammal, human and other external damage. Remedial action should be implemented as soon as practicable following discovery.

All trees should be checked on a regular basis for pests and diseases. Remedial action should be taken promptly on discovery, where necessary.

N.B. Chlorophyll content is seasonal. This needs to be considered if chlorophyll content tests are being used.

If visual inspection reveals symptoms of nutrient or watering deficiency such as leaf scorching, pale foliage, or necrotic spots, then further investigation will be necessary with remedial action taken. Remedial action may, in addition to fertilizer application, include pH testing, assessment of organic content and levels of compaction. Unless specific nutritional deficiencies are identified, no fertilizer should be applied to newly planted trees in the first season.

In general fertiliser shall only be applied to correct known nutrient deficiencies. Ongoing monitoring of tree health shall identify the need for testing and determine possible soil deficiency issues. A proposal for adding nutrients to the soil will then be developed and implemented subject to approval by the current managing agent or representative.

*Replacement Planting*

Replace all failures, dead or dying, to the original specification during the next planting season in accordance with section 4.7.

*WOODLAND TREE PLANTING*

This refers to those trees that are part of the woodland feathered tree mix.

Areas of woodland are to be managed to maximise biodiversity benefits as well as to ensure landscape and aesthetic value within the green space. Management should aim to facilitate tree establishment and canopy closure.

*Mulch, Weeding & Fertilisers*

Provide and maintain a biodegradable mulch matt (0.5m diameter) to all tree whips / feathers.

Quarterly inspection of woodland areas to ensure matts and tree guards are not damaged or missing, replace where required. Mulch pegs reaffirmed where required to keep mulch matts flush with ground.

2 x yearly hand weed and spray to planting circles of approx. 1m, including area below biodegradable mulch mats, at base of trees.

Where hand weeding is unsuccessful, a spot treatment application of an appropriate weed killer may be required to noxious weeds such as docks, thistles and rosebay willowherb infestations during the growing season.

Where required, evenly spread a slow-release fertiliser to enhance tree growth, in accordance with manufactures / supplier instructions.

*Support & Protection*

Biodegradable tree guards should be installed on all woodland trees. Inspections of guards to take place quarterly and any damaged to be replaced if the tree is still young enough to benefit from it. Remove any vegetation between guard and tree.

Guards must be fully removed and disposed of after at least 3 years or when tree diameter reaches 30mm.

Trees to be assessed annually by an appropriate arboricultural consultant and recommended remedial works to be carried out.

*Pruning, Thinning & Coppicing*

Once established, thin tree specimens as necessary to maintain glades and rides and prevent excessive shading of ground flora. Selective thinning of the whole woodland to take place every 15 years in line with arboricultural specialist recommendations.

*Watering*

During establishment sufficient watering should be implemented to ensure a high rate of establishment amongst the planting.

*Health*

A formal assessment and reporting of young tree health and development should be carried out annually. This assessment should include foliar appearance (i.e. lack of leaf chlorosis and / or necrosis), leaf size and leaf canopy density, extension growth and incremental girth development. Continual assessment on an ad hoc basis should be carried out throughout the year, to inform maintenance requirements.

It is possible to assess young tree performance in the field using both leaf fluorescence and leaf chlorophyll content. These tests should be carried out wherever practicable.

All trees should be checked on a regular basis for mammal, human and other external damage. Remedial action should be implemented as soon as practicable following discovery.

All trees should be checked on a regular basis for pests and diseases. Remedial action should be taken promptly on discovery, where necessary.

N.B. Chlorophyll content is seasonal. This needs to be considered if chlorophyll content tests are being used.

If visual inspection reveals symptoms of nutrient or watering deficiency such as leaf scorching, pale foliage, or necrotic spots, then further investigation will be necessary with remedial action taken. Remedial action may, in addition to fertilizer application, include pH testing, assessment of organic content and levels of compaction. Unless specific nutritional deficiencies are identified, no fertilizer should be applied to newly planted trees in the first season.

In general fertiliser shall only be applied to correct known nutrient deficiencies. Ongoing monitoring of tree health shall identify the need for testing and determine possible soil deficiency issues. A proposal for adding nutrients to the soil will then be developed and implemented subject to approval by the current managing agent or representative.

*Replacement Planting*

Replace all failures, dead or dying, to the original specification during the next planting season in accordance with section 4.7.

*LONGER TERM MANAGEMENT*

The following section has been provided as a guide, but is to be reviewed at the end of the initial 5-year management period:

- Inspect any remaining trees which are still staked / have guards and where trees have sufficiently well established, these shall be removed. Where trees, particularly replacements, are still considered to require support, stakes shall be left in place and re-inspected the following year (to be included in the subsequent Management Plan). The ideal is to have all stakes removed by the end of Year 5 after planting so that trees develop sufficiently robust stems and do not become over reliant on support.
- Pruning works to encourage upwards growth. This should be carried out in winter months when the trees are dormant or if the trees are sap producing, this should be carried out in summer.
- Check trees for disease on a regular basis when carrying out other tree works.

### 4.3.3 HEDGES

Hedge planting is proposed to the boundaries of the proposed development and to the boundaries of some plots. Hedge planting promotes habitat connectivity across the proposed development, extends and links into existing groups of vegetation and hedgerows and also provides connectivity within the wider landscape setting. Hedge plants have been specified / selected taking into consideration position in proximity to the proposed development layout and appropriateness for scheme. Mix is to be utilised to improve and enhance existing retained hedgerows where required.

The following species are:

*Mixed Species Native Hedge:*

- *Acer campestre*
- *Corylus avellana*
- *Crataegus monogyana*
- *Lonicera periclymenum*
- *Malus sylvestris*
- *Prunus spinosa*
- *Viburnum lantana*

*Single Species Hedge:*

- *Fagus sylvatica*

*MIXED SPECIES NATIVE HEDGE*

The management objectives for a mixed native hedge are to: Ensure the satisfactory establishment and growth of new planting; Maintain planting in a healthy and diverse condition and enhance both the value of planting as a food source and habitat for wildlife.

*Mulch, Weeding & Fertilisers*

Hedgerow to be mulched and a metre wide weed free strip is to be maintained to the base of the hedge for a minimum of 3 years, to reduce competition from grass and weeds for moisture and nutrients. Where weeds are present these are to be removed by hand as necessary to ensure weed free planting areas. To be carried out six to eight visits per growing season, occurring monthly subject to weather conditions, from April to October, with an additional visit during December or January to inspect the condition of the planting.

*Support & Protection*

After severe frosts and winds secure and firm in around the base of each plant and ensure that any remaining tree stakes and ties and shelters are secure.

Tree ties are to be checked annually to avoid tight tree ties from damaging the stem. Any broken or damaged supports should be replaced and hessian ties re-fixed at a slightly lower position, allowing for growth since planting. To be removed as per guidance included in trees.

Shrub tubes / guards and cane supports are to be checked frequently to ensure they are sound and secure, to be replaced as necessary. All non-biodegradable guards and supports can be removed once the plants are both established and strong enough, between 2-3 years, and the hedge has begun to bush out laterally at the base of the hedgerow. To be disposed of appropriately off-site in accordance with regulations.

*Pruning*

In the first spring after planting trim all lateral branches back by 50%. Prune damaged, diseased or dead wood immediately after first leaf break. Follow with a light trim every second or third year, allowing the hedge to increase in size each time whilst still encouraging lateral growth. All pruning is to be carried out outside the bird nesting season (March to September). All hedges should be inspected to ensure no nests are damaged prior to works commencing.

Established native hedgerows will be managed on a rotational basis, with either one side of the hedgerow annually or, selected hedgerow lengths cut both sides equating to no more than 1/3rd of the total resource in any one year. This will ensure a continuous supply of foraging for local fauna throughout the year. For ongoing management of more mature hedgerows, these are to be sided and topped to create a hedge with an ‘A’ shaped profile once every two years. Care will be taken to avoid damage to potential future mature hedgerow trees during cutting to enable their successful growth. All

arisings will be cleared to a designated composting area or designated areas of habitat brashings, with any diseased material being removed and disposed of off-site in accordance with regulations.

*Watering*

Watering should be carried out to ensure proper establishment. New planting shall be watered regularly for the first three (3) years during June, July, August and September as necessary. Additional watering of planting might be required during periods of drought. Particular care should be taken during such periods to ensure sufficient watering is carried out to facilitate healthy growth. Watering responsibilities to be undertaken by the school facilities management team. Must be carried out for 12 months for the year, not just during term time.

*Replacement Planting*

Replace all failures, dead or dying, to the original specification during the next planting season in accordance with section 4.7.

*LONGER TERM MANAGEMENT*

The following section has been provided as a guide, but is to be reviewed at the end of the initial 5-year management period. For long-term management and monitoring in areas designated for habitat retention and enhancement in the wider curtilage of Woodhead Hall refer to BEMP by Middleton Bell.

Management and maintenance for native hedgerows must respond to the conditions of the hedgerow at that point in time. The main aims are to manage the hedgerow going forward to slow down the natural development of the hedgerow into trees / taller individual species without over management which can result in the hedgerow becoming 'stressed'.

- In accordance with good practice all maintenance activities must be carried out outside of bird nesting season (September – March) to ensure that wildlife can take advantage of nut and berries produced in Autumn. All hedges should be inspected to ensure no nests are damaged prior to works commencing.
- Young or newly copied / laid hedgerows will require a light annual trim for up to 10yrs to train into a good A shape.
- Some stems that are straight and arise directly from the ground should not be coppiced. They should be left to grow on as tall standard trees within the hedgerow.
- Following establishment of a healthy, dense hedgerow that is 2m+ in height, hedgerow to be trimmed on a 2-3yr rotation
- To maintain health or where the following has occurred heavy / too frequent maintenance, over trimmed, bases are gnarled or rotting, hedgerows are to be coppiced and gapped up / infilled.
- Where hedges have lacked maintenance and allowed to grow up to a height of more than 4m or the base has become bare, hedges are to be reduced in height and then re-laid.
- Coppicing to take place at least every 20yrs to rejuvenate and reinvigorate growth.

- Litter picking and rubbish clearance to all hedges / hedge-lines

*SINGLE SPECIES/ORNAMENTAL HEDGES*

*Mulch, Weeding & Fertilisers*

Hedgerow to be mulched to a depth of 75mm and a metre wide weed free strip is to be maintained to the base of the hedge for a minimum of 3 years, to reduce competition from grass and weeds for moisture and nutrients. Where weeds are present these are to be removed by hand as necessary to ensure weed free planting areas. To be carried out six to eight visits per growing season, occurring monthly subject to weather conditions, from April to October, with an additional visit during December or January to inspect the condition of the planting.

*Pruning, Thinning & Coppicing*

Hedges are to be cut twice a year at a time appropriate for the species. Typically, this will be carried out after the first flush of growth and again at the end of the growing season. All pruning to be carried out outside the bird nesting season (March to September). All hedges should be inspected to ensure no nests are damaged prior to works commencing.

Hedges are to be cut to a neat shape with vertical sides and horizontal top to consistent lines and generally to a height of 1.5m. All arisings are to be removed from site.

*Watering*

Watering should be carried out to ensure proper establishment. New planting shall be watered regularly for the first three (3) years during June, July, August and September as necessary. Additional watering of planting might be required during periods of drought. Particular care should be taken during such periods to ensure sufficient watering is carried out to facilitate healthy growth.

*Replacement Planting*

Replace all failures, dead or dying, to the original specification during the next planting season in accordance with section 4.7.

*LONGER TERM MANAGEMENT*

The following section has been provided as a guide, but is to be reviewed at the end of the initial 5-year management period.

*Single Species Hedges:*

- In accordance with good practice all maintenance activities must be carried out outside of bird nesting season (September – March) to ensure that wildlife can take advantage of nut and berries produced in Autumn. All hedges should be inspected to ensure no nests are damaged prior to works commencing.
- Ornamental / single species hedges are to be regularly trimmed to control the sides and keep growth / structure dense.
- Tapered hedge shape to be retained so that the bottom is wider than the top to ensure the base of the hedge receives ample sunlight.
- Mulch to a depth of 75mm the base of the hedge annually in winter or early spring with a layer or organic matter
- Gap-up / infill any areas where the hedge has failed with like for like species and where feasible size / height to ensure a consistent hedgerow is reinstated.
- Litter picking and rubbish clearance to all hedges / hedge lines

### 4.3.4 Mixed Native Planting

Mixed native scrub planting is proposed along the western edge of the proposed development. The planting provides a buffer between the site and adjacent development plots whilst promoting habitat connectivity through the development and with the wider setting. The plants have been specified / selected taking into consideration position in proximity to the proposed development layout and appropriateness for scheme.

The following species are:

*Mixed Native Planting:*

- *Corylus avellana*
- *Cornus sanguinea*
- *Crataegus monogyana*
- *Ilex aquifolium*
- *Prunus spinosa*
- *Rosa canina*
- *Sambucus nigra*
- *Viburnum opulus*

The management objectives for mixed native planting are to:

- Ensure the satisfactory establishment and growth of new planting
- Maintain planting in a healthy and attractive condition and enhance the value of planting as a food source to wildlife
- Maintain as thick and as bushy as reasonably practical to give the best benefits to wildlife
- Ensure continuity of the design approach and amenity value of planting.

*Mulch, Weeding & Fertilisers*

Weed growth to be removed by hand as necessary to ensure weed free and tidy planting areas. To be carried out six to eight visits per growing season, occurring monthly subject to weather conditions, from April to October, with an additional visit during December or January to inspect the condition of the planting.

Within the first three to five years of establishment, mulch should be laid around the base of all young plants and be maintained to a minimum depth of 75mm. Maintain mulch areas to ensure that they are effective at suppressing weed growth around the stems of all plant material to a diameter minimum of 300mm. Between April and September frequent inspections of these areas should be undertaken, removing weeds wherever necessary by hand pulling to assist the successful establishment of plants. The use of chemical treatments for weed control is to be avoided where possible, however if required, application should be limited to spot application.

*Support & Protection*

Inspect tree stakes and spiral guards / tubes at the end of Year 3 and, where trees have sufficiently well established, they shall be removed. Where trees are still considered to require support or rabbit protection, stakes and guards shall be left in place / repaired or replaced as necessary and re-inspected annually until appropriate to remove.

Check all tree / shrub protective spiral guards / tubes and replace defective ones where required to ensure plants continue to thrive. Where plants are sufficiently established and growth is being constrained, remove the spiral guards / tubes, ensuring plants remain undamaged by the end of Year 3. Clear all arisings from site.

*Pruning, Thinning & Coppicing*

Pruning of native planting should be carried out in the period between September to March in accordance with sound horticultural practices, pruning back to a node, shoot or bud; prune out dead, leggy and broken branches, without damage to the natural habit or appearance of plant without box clipping or rounding off plants. Prune out crossover branches, invasive suckers, dead wood, damaged stems, any spindly growths and any epicormic growth that will weaken the plant. Prune back quick growing and leggy growing plants, such as *Rosa*, much harder than other species, but prune back by no more than 30% in any one-year. Annually, prune *Sambucus* varieties back hard in spring to maintain large leaves and a shrubby habit, whilst still retaining any young growths. Extensive pruning works, thinning or coppicing works should however be carried out outside the bird nesting period e.g. between September and March. All hedges should be inspected to ensure no nests are damaged prior to works commencing.

Thinning and coppicing will allow trees and shrubs to develop diversity of form and different types of nesting, feeding and foraging habitat and extend the potential life of individual plants. Additional thinning of the buffer planting areas may be required at intervals following an initial selective thin. The timing of thinning should be informed by the arboricultural survey, which should include a visual inspection, checking if crowns are overlapping and thinning is needed. Any trees, apart from understorey species, which have failed to reach the canopy and have been suppressed, will need removal. Thin on a phased basis in blocks. The aims should be to create a ‘ring of sky’ around each tree that is retained, into which it can spread. Protect coppice stools from deer / rabbit browsing by piling brash over them.

Monitor coppice periodically, noting any stools that fail to regrow and replant the following autumn. Remove weeds and invasive species as required. A competent person, such as a qualified arboriculturist should plan thinning and coppicing operations in advance by identifying and marking all trees for removal and coppicing in

winter. All thinning operations should be undertaken outside of nesting season, between October and February.

Cut and clear grass, herbaceous vegetation and non-native or undesirable / competitive species from the planted areas by mowing or strimming two times annually.

Whilst carrying out pruning works to the areas of mixed planting care should be taken to ensure members of the public / staff / drivers etc are aware of the operation taking place. Warning signs and cones shall be placed to protect those gaining entry into and in closed proximity of the working area. Prune all damaged or broken branches. Hard prune all shrub and understorey in Year 3 after planting to promote bushiness. Low piles of deadwood / piles of brashings (roughly 1 x 0.5m in size) should be retained, to create insects / habitat piles within the site.

*Watering*

Watering should be carried out to ensure proper establishment. New planting shall be watered regularly for the first three (3) years during June, July, August and September as necessary. Additional watering of planting might be required during periods of drought. Particular care should be taken during such periods to ensure sufficient watering is carried out to facilitate healthy growth.

*Replacement Planting*

Replace all failures, dead or dying, to the original specification during the next planting season in accordance with section 4.7.

*LONGER TERM MANAGEMENT*

The following section has been provided as a guide, but is to be reviewed at the end of the initial 5-year management period.

Species within the mixed native and buffer planting areas should be allowed to establish with minimal intervention over the first 5 years, whilst the areas of native planting mature and establish. Specifically, the following will be required:

- Regular thinning of mass planted vegetation where climax trees are emerging.
- Management of understorey at 5 and 10+ years onward; periodic coppicing and formative pruning will be required. Only prune trees that are planned to be retained within the thinning strategy.
- 10-15yrs some trees will be tall enough to consider pollarding.
- Regularly timed inspection for failed plantings, and programmed replacement.
- Litter picking and rubbish clearance.
- Where individual trees / species are still staked / have guards and are sufficiently well established, these shall be removed. Where trees, particularly replacements, are still considered to require support, stakes shall be left in place and re-inspected the following year (to be included in the subsequent Management Plan). The ideal is to have all stakes removed by the end of Year 5 after planting.
- For long-term management and monitoring in areas designated for habitat retention and enhancement in the wider curtilage of Woodhead Hall refer to BEMP by Middleton Bell.

### 4.3.5 Ornamental Planting

For the management of the planting beds and large feature shrubs, the approach should focus on maintaining a neat and tidy appearance, which will also encourage 'free form' (naturalistic) plant growth. Any failed plants should be replaced as necessary using like for like species as specified. In the first year this will be the responsibility of the incumbent contractor.

*Mulch, Weeding & Fertilisers*

Within the first five years of establishment, mulch should be laid around the base of all young plants and be maintained to a minimum depth of 50mm. Between April and September frequent inspections of these areas should be undertaken, removing weeds wherever necessary by hand pulling to assist the successful establishment of plants.

Shrub beds shall have a general planting plus fertiliser applied in March of each year. A 5-18-10 general fertiliser shall be spread at 75grms per m2.

*Pruning, Thinning & Coppicing*

Pruning of ornamental shrubs should be undertaken in order to clear deadwood, promote healthy growth and produce desired growth of flowers, fruit, foliage or winter colour as appropriate. Pruning should also include for clearing out crossing and damaged branches. Where the pruning is limited to the extent of the current year's growth, work can be carried out at any time of year. Extensive pruning works, thinning or coppicing works should however be carried out outside the bird nesting period e.g., between September and March.

Whilst carrying out works to the planting care should be taken to ensure members of the public are aware of the operation taking place. Warning signs and cones shall be placed to protect members of the public gaining entry into the working area.

*Watering*

Watering should be carried out to ensure proper establishment. New planting shall be watered regularly for the first three (3) years during June, July, August and September as necessary, on agreement with the Landscape Architect and Client. Additional watering of planting might be required during periods of drought. Particular care should be taken during such periods to ensure sufficient watering is carried out to facilitate healthy growth. Watering responsibilities must be carried out for 12 months for the year.

*Replacement Planting*

Replace all failures, dead or dying, to the original specification during the next planting season in accordance with section 4.7.

*LONGER TERM MANAGEMENT*

The following section has been provided as a guide, but is to be reviewed at the end of the initial 5-year management period:

- Regularly timed inspection for failed plantings, and programmed replacement.
- Litter picking and rubbish clearance.
- Pruning of ornamental shrubs, herbaceous plants and grasses

- Regular hand weeding. Spot treatment with glyphosate free weed spray to minimise encroachment used where absolutely necessary.
- Annual fertiliser

### 4.3.6 Mown Grass Areas & Mown Paths / Glades

Amenity grass should be managed as required to allow safe access and maintain a tidy appearance.

*Mowing Regime*

All amenity grassed areas and mown paths / glades should be mowed with appropriate machines every 3 to 4 weeks to around 75-100mm. Grass clippings should be removed from site immediately and any grass blown on to the adjacent areas of hardstanding should be removed immediately. Where appropriate verges and embankments alongside native planting / hedgerows shall be allowed to grow longer to create informal edges to more formal grass cutting and to improve habitat value by reducing their mowing regime to once per year in September.

Care and consideration shall be taken whilst carrying out the grass cutting operation. Care shall be taken whilst working near parked cars / vehicles. Whilst the above operation is taking place, appropriate signage should be in place to ensure staff / public are aware of the operation taking place.

All necessary preliminary inspections of the areas should be undertaken prior to each cutting operation, removing isolated items of obstruction which might damage machines or create a possible hazard to persons or property and carry out a litter picking operation prior to each cut.

*Weed Control*

Weed control to grassland may be used during spring / summer as necessary for the first 3 years. The use of chemical treatments is to be avoided where possible, however if required, application should be limited to localised wiping / spraying with a glyphosate free weed treatment.

Any bramble and ivy growth will be monitored, and excessive growth is to be removed as necessary to prevent stifling of the ground flora.

*Watering*

Provide protection and watering as necessary to promote successful establishment.

*Replacement Planting*

Reinstate all damaged and worn areas to original specification, with soil levels being tied to existing levels, removing large stones, raking to obtain tilth suitable for seed sowing, and applying grass seed evenly by hand and lightly raking in. The surface is then be consolidated by use of a light roller.

Replace all failures, dead or dying, to the original specification during the next planting season in accordance with section 4.7.

*LONGER TERM MANAGEMENT*

The following section has been provided as a guide, but is to be reviewed at the end of the initial 5-year management period:

- Amenity grass is to be maintained as per section 4.3.6 going forwards.
- Litter picking operation to be carried out prior to the annual cut.
- Overall maintenance to be limited to top dressing and reinstatement of patches of damaged sward with new seeding
- Where reseeding / reinstatement is required, see section 4.3.6 for initial establishment.
- Bramble and ivy growth to be monitored and excessive growth is to be removed as necessary to prevent stifling of the ground flora

### 4.3.7 Meadow Seeding / Grassland

Meadow seeding includes the following:

- Habitataid basic Wildflower Seed Mix 80/20%

*Sowing Season*

Seeds to be sown in Autumn to show higher diversity of germination in the first Spring, as the harder seed shells are softened throughout Winter by the regular freeze / defrost action. Spring-sown mixes will have a lower germination in the first Year, but after the first Winter, more species should start to germinate (see above).

*Mowing Regime*

Everybody involved should be aware that to achieve the best results, the newly-sown Wildflower area will need to be cut back every 3 to 4 weeks to around 75-100mm in Year 1, to keep grasses under control and to give wildflower the opportunity to concentrate on strong root growth, rather than trying to achieve a flowering bloom when the plants are immature and not strong enough to compete with the more vigorous grasses.

By adhering to the Year 1 maintenance plan, the client should expect little or no flowering for the first Year, but Year 2 and subsequent years will show much better results and be all the better for it.

- *Year 1 – Maintenance*

  The whole sward should be cut back to around 75mm-100mm every 3 or 4 weeks for the first growing season. Arisings should be collected and removed after each cut, to stop them from mulching down and enriching the soil, as the aim is to gradually reduce fertility of the soil, if possible – this will help to create an environment suitable for growing wildflowers, but with enough to keep grasses going, without giving them too much to grow on.

  In September / October, a final cut should be made and the arisings removed. If any wildflowers have flowered and developed seed heads at this stage, the clippings should be left in situ for a few days in order to allow seeds to drop, in order to establish and enhance future year's wildflowers on the site. Leaving the clippings will also allow any wildlife to clear the area before being taken away.

- *Year 2 (& Subsequent Years) – Maintenance*

  From Year 2 onwards, the whole sward can be allowed to grow unchecked throughout the growing season, as the wildflowers should now be strong enough to cope with some competition from grasses. If the client prefers, a 'tidying' cut may be carried out in early-Spring before the start of the proper growing season, in order just to 'tidy' things up a little, but this isn't a necessary action.

  Final cut of the year should be undertaken to a height of 100mm, in July/August. Arisings to be left in situ for a few days before collecting, to allow any final seeds to fall.

  Repeat.

Care and consideration towards active working hours and visiting members of trade / public shall be taken whilst carrying out the grass cutting operation. Care shall be taken whilst working near parked cars. Whilst the above operation is taking place, appropriate signage should be in place to ensure members of the public are aware of the operation taking place.

All necessary preliminary inspections of the areas should be undertaken prior to each cutting operation, removing isolated items of obstruction which might damage machines or create a possible hazard to persons or property and carry out a litter picking operation prior to each cut. Litter, debris and stones larger than 25mm in any dimension and all rubbish to be removed before mowing.

*Weed Control*

Ongoing control of weeds is also key to the establishment and long-term maintenance objectives for the wildflower meadow sward. Control of weed will be carried out in accordance with current best practice guidelines for each targeted weed.

Weeds which are required to be controlled fall under two categories; those included within the Weed Act 1959 and additional species present on-site which are deemed to be potentially detrimental to the long-term diversity and appearance of the swards.

*Weed Act 1959*

- Spear thistle (Cirsium vulgare)
- Creeping or field thistle (Cirsium arvense)
- Curled dock (Rumex crispus)
- Broad leaved dock (Rumex obtusifolius)
- Common ragwort (Senecio jacobaea)

*Additional targeted weeds under this contract*

- Common horsetail (Equestrium arvense)
- Vetch
- Goats rue
- Bristly ox tongue

Spot treat undesirable weed growth (such as docks and thistles) in all grassed areas, where removal cannot be achieved by hand. Weed control should be generally

managed by hand weeding regularly ensuring the weed and roots are entirely removed. Spot treatment with glyphosate free weed spray to minimise encroachment used where absolutely necessary.

Any bramble and ivy growth will be monitored across the site and excessive growth is to be removed as necessary to prevent stifling of the ground flora.

*Watering*

Provide protection and watering as necessary to promote successful establishment.

*Edging*

The margins of meadow seeding, and wildflower areas should be trimmed with a half-moon edging iron, or mechanical equivalent, to clean straight lines or smooth curve where the meadow interfaces hard surfaces or ornamental planting beds.

Where this operation is required to the paved margins of grass areas, the soil should not be drawn back as this operation is merely to redefine the hard edge. All arisings, including any soil and vegetation growing on the hard surface should be removed.

*Replacement Planting*

Reinstate all damaged and worn areas to original specification, with soil levels being tied to existing levels, removing large stones, raking to obtain tilth suitable for seed sowing, and applying meadow / wildflower seed evenly by hand and lightly raking in. The surface is then be consolidated by use of a light roller.

Plug planting of replacement plants to be undertaken if dead plants create significant gaps in planted area.

The above to be in accordance with section 4.7.

*LONGER TERM MANAGEMENT*

The following section has been provided as a guide, but is to be reviewed at the end of the initial 5-year management period:

- Going forwards the whole sward can be allowed to grow unchecked throughout the growing season, as the wildflowers should be strong enough to cope with some competition from grasses. After flowering and after seed heads have fully dispersed, 1 x annual cut should be undertaken to a height of 100mm, in July/August. Arisings to be left in situ for a few days before collecting, to allow any final seeds to fall.
- Litter picking operation to be carried out prior to the annual cut.
- Bramble and ivy growth to be monitored and excessive growth is to be removed as necessary to prevent stifling of the ground flora.
- Where areas require reseeding / reinstatement see section 4.3.7.
- For long-term management and monitoring in areas designated for habitat retention and enhancement in the wider curtilage of Woodhead Hall refer to BEMP by Middleton Bell.

#### 4.3.8 PRUNING

All pruning work, whether on newly planted material or existing vegetation, shall be conducted in accordance with BS 3998:2010 where applicable. Pruning and removal of branches shall be conducted using sharp, clean implements to give a clean cut with one flat face. Resultant wounds, over 20mm in diameter, shall be treated with approved fungicidal sealant.

All pruning of trees shall be conducted between November and March inclusive, where the following operations shall be carried out:

- All diseased tissues and any dieback shall be pruned to the nearest bud with clean wood.
- The removal of unsightly 'water shoots' and epicormic growth from standard, selected standard, heavy standard, and extra heavy standard trees.
- Formative pruning to remove branches that cross, are damaged or have malformed shoots, to maintain a balanced tree crown.

Broken and vandalised branches shall be cut back to the next joint, removing splinter wood, and treated with an approved sealant. If the tree, in the opinion of the Landscape Architect, is beyond pruning, it shall be removed by the Contractor and the ground made good.

In order to comply with UK legislation in regard to the Wildlife and Countryside Act 1981 (as amended), any tree or vegetation removal and / or management must take place outside of the bird nesting season (March to September inclusive). Where this cannot be achieved, nesting bird checks must be undertaken by a suitably qualified ecologist within 24 hours of the works.

Cut vegetation to be immediately removed following maintenance and not left piled up which would create further refugia for these species. Some of this material can be used elsewhere in the creation of the habitat homes. Suitable logs / brash arising from tree pruning operations can be retained on-site in habitat piles in suitable locations as agreed with the consultant landscape Architect / LPA, ecologist or Client. Where agreed with the aforementioned, arisings from pruning work may be chipped on-site and the resultant chippings used as mulch in the areas of new tree and shrub planting.

## 4.4 EXISTING SOFT LANDSCAPE MANAGEMENT

#### 4.4.1 OBJECTIVES

To protect, maintain, and enhance the value of the existing groups of trees and vegetation to the boundaries of the of the development site to maintain the development setting, ecological value and Green Infrastructure.

#### 4.4.2 EXISTING TREES AND VEGETATION

At the time this Management Plan comes into force, any required and approved works to the retained trees and vegetation in order to protect them during the construction of the site or required for health and safety reasons is to have been carried out and completed.

All retained woodland and trees are to be protected during the construction stage by Tree Protection Fencing in accordance with BS5837:2012, the specification for this

fencing is included in the Arboricultural Survey Impact Assessment & Method Statement prepared by Enzygo. For further detail in relation to the existing trees refer to Appendix E: for the Arboricultural Impact Assessment.

The existing trees and vegetation included in this are to be allowed to continue to grow and establish with minimum intervention in order to maintain visual aesthetics and promote continued wildlife potential. Habitat value to be enhanced via the introduction of enhancement planting, where required, to improve structural and species diversity and future proof ongoing health. Vegetation must be retained whilst monitoring health and condition of the trees and vegetation due to the proximity to residential properties, adjacent road network and publicly accessible open space. As such, the following shall be undertaken:

- Carry out a visual inspection of the trees and shrubs from ground level at each maintenance visit to assess for any signs of damage or potential problem. In the event that damage has occurred or any of the trees have, for example, dropped limbs, the Client shall be informed, and approval obtained to seek advice / repair from a qualified Arboriculturist / certified tree surgeon as required. Where the health and safety of any member of the public is at risk, the Management Company shall arrange for the area to be made safe / fenced off as required until repairs can be made.
- Carry out a routine inspection of the trees and scrubby vegetation annually, with the Client and a qualified Arboriculturist, to assess the trees and formulate a programme of necessary works to address any issues which have arisen. Undertake to carry out any recommendations made by the Arboriculturist on the grounds of health and safety within a period of 3 months from notification, or sooner if required and advised by the Arboriculturist.
- All tree works are to be carried out in accordance with BS 3998:1989 ‘Recommendations for tree work’, Health & Safety legislation and relevant best practice. Prior to the commencement of tree works the contractor shall provide full working method statement and risk assessments.

If any works are recommended, ensure they are carried out outside the bird nesting season (March to September inclusive) and undertake to carry out a bat risk assessment as required. Where bat activity is observed advise to be sourced from a qualified and licensed Ecological consultant, in terms of obtaining the relevant licences and timing of works.

### 4.4.3 HABITAT RETENTION & ENHANCEMENT

For areas designated for habitat retention and enhancement in the wider curtilage of Woodhead Hall, reference must be made to the Biodiversity Enhancement Management Plan (BEMP) prepared by Middleton Bell. This provides detail relating to long-term management and monitoring for all habitats/linear features created and or enhanced for a minimum of a 30 year period.

## 4.5 MONITORING

Simple monitoring reports against key measures should be submitted by the incumbent landscape maintenance provider to the client on an annual basis, together with relevant financial information.

The client should look to make periodic inspections of this site as follows:

- An annual site meeting and review with the management team.
- Formal site inspections with the management team
- Ad hoc unannounced inspections to be made as frequently as possible to review condition of landscape.
- Reference the BEMP by Middleton Bell for long-term management and monitoring for all areas of habitat creation and or enhancement.

The results of all of the above should be documented and any issues raised in writing.

## 4.6 INVASIVE SPECIES

Non-native invasive species (INNS) are those listed in Schedule 9 of the Wildlife and Countryside Act 1981 and The Invasive Alien Species (Enforcement and Permitting) Order 2019. The site is anticipated to be free of INNS, if such species are found during vegetation clearance or maintenance works, then works should stop immediately and the CA / Landowner / Client should be contacted for further advise.

Weed killing shall achieve total die-back of weeds and in the case of total weed control shall not allow any significant re-growth (less than 5%) within 6 months of application. In the case of selective weed control there shall be not more than 5% re-growth during the season.

Pernicious weeds such as willowherb, dock, thistle and nettles should be controlled where possible by manual pulling with arisings collected for composting. Spot treatment with glyphosate free weed spray to minimise encroachment used where absolutely necessary. Control mechanisms must be undertaken before the plant has set seed.

Weed control in and around the waterbodies and all associated inlets and outlets should be managed to avoid contamination of watercourses in accordance with the Control of Pollution Act 1974 and the Water Resources Act 1991. Hand weeding and cutting are preferred methods, but with approved safe herbicides as a last resort.

## 4.7 REPLACEMENT PLANTING STRATEGY

The applicant commits to ensuring a replacement strategy within a period of five years from the date of the planting of all proposed soft landscape. Any that are removed, uprooted or destroyed or dies, or becomes seriously damaged or defective within the five-year contractual period are to be replaced with another tree / hedge / shrub of the same species and size as that originally planted and shall be planted in the same location. This will be carried out as soon as reasonably possible and no later than the first available planting season.

All remedial / repair work required for grassed and wildflower areas shall be carried out in accordance with good horticultural practice, at the appropriate times of year and ground conditions and using an approved seed mix to match the existing sward.

# 5 HEALTH & SAFETY LEGISLATION

For all landscape management activities that take place, a risk and method statement shall be produced. Copies of these shall be readily available in each team's vehicle attending site. COSHH assessments shall be completed for all herbicides, fertilisers. Copies shall be again submitted to the Maintenance surveyor. High visibility waistcoats shall be worn at all times.

Vehicles and trailers shall be parked in the designated off-street maintenance bay only, so as not to cause parking issues. No machinery shall be left unattended at any time. All machinery shall be in a serviceable condition and be fit for its purpose.

All defective and vandalised areas shall be reported immediately. Areas that may cause harm shall be coned off and made safe.

All relevant legislation should be adhered to whilst carrying out management works with particular attention paid to the following:

- Control Of Pesticide Regulations 1986
- Health And Safety at Works act 1974.
- Wildlife and Countryside Act 1981.
- Control Of Substances, Hazardous to Health

# APPENDICES

## APPENDIX A: ANNUAL MAINTENANCE OPERATIONS PROGRAMME

*Note:* Timings by month are a guide and may vary due influencing factors, e.g. unseasonal / extreme weather, individual species requirements, client instruction, special events.

*Operation to be undertaken as required during specified period

### *GENERAL SITE INSPECTIONS, CLEANSING & MAINTENANCE*

*(Refer to Section 4.2 in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Undertake site inspections to all areas.** *Visits should include a check on the condition and performance of all areas of hard & soft landscape including existing retained trees and shrubs.* | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 15 |
| **Undertake litter pick to all areas** (ongoing throughout the year and carried out at each maintenance visit). | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Empty litter bins in POS areas** (ongoing throughout the year and carried out at each maintenance visit). *Litter removed from site and disposed of in accordance with current Waste Management Regulations.* | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Fly Tipping** (as required). *Obtain quote for removal* | * | * | * | * | * | * | * | * | * | * | * | * | N/A |

## *HARD SURFACES, STREET FURNITURE AND MISCELLANEOUS*

*(Refer to Section 4.2 in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Surfacing:** *Standard hard surfaced areas inc. concrete block, gravel & tarmacadam paved surfaces. Clean, remove stains and chewing gum (jet wash where required). To be replaced / made good within 1 week of identifying issue / damage. All replacements to match original specification. Top up loose gravel surfacing where required. Weed control.* | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Furniture & Features:** *All to be inspected and cleansed at each visit (e.g. bollards, street furniture, benches etc.), if site visit flags up damage or graffiti, this is to be reported immediately and actioned as soon as possible. Area to be secured for safety reasons where required. To be replaced / made good within 1 week of identifying issue / damage. All replacements to match original specification.* | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Boundaries:** *All fences, railings and gates to be inspected and cleansed at each visit. If site visit flags up damage or graffiti, this is to be reported immediately and actioned as soon as possible. Area to be secured for safety reasons where required. All replacements to match original specification.* | * | * | * | * | * | * | * | * | * | * | * | * | N/A |

*TREES*

*(Refer to Section 4.3.2 in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Weed Control** (first 5 years than as required). *Hand weed where possible. Spot treatment application with glyphosate free weed spray* to *noxious weeds such as docks, thistles and rosebay willowherb infestations during the growing season. Maintain weed free tree pit surface. Allow for ∅0.5m in soft areas. Where problems persist, alternative methos of weed removal can be carried out following the contractor gaining approval from the client.* | | | * | * | * | * | * | * | * | * | | | N/A |
| **Crown pruning** (As required). *To maintain form, health and vigour removing any branches below 2 metres.* | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Annual application of fertilizer to specimen trees** (Establishment period - first 5 years). | | | | | | | | | 1 | | | | 1 |
| **Undertake re-firming of proposed trees and a general check to facilitate the following years growth.** | * | * | * | | | | | | | * | * | * | N/A |
| **Remedial arboricultural works as required in response to annual inspection (for both existing and newly planted trees).** *Qualified tree surgeon/arboriculturist to carry out.* | * | * | | | | | | | | | * | * | N/A |
| **Watering** (Regular watering (weekly) should be carried between April to September for the first 3 years. Cease during times of water restrictions and proposals are to be submitted for an alternative source of water). *Watering should be carried out to ensure proper establishment. Trees should receive at least 50 litres of water to ensure they resist any drought conditions; this may need to be extended subject to climatic conditions over the initial 3-year period. Particular care should be taken during such periods to ensure sufficient watering is carried out to facilitate healthy growth.* | | | | * | * | * | * | * | * | | | | N/A |
| **All epicormic growth to the base of the tree shall be removed.** | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Support.** *Check guying and stability* | * | * | * | * | * | * | * | * | * | * | * | * | N/A |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mulch top-up to 50mm min.** *(Allow for trees planted in soft areas only)* | | | | | 1 | | | | | | | | 1 |

*HEDGE PLANTING*

*(Refer to Section 4.3.3 in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Weed Control** (first 5 years than as required). *Hand weed where possible. Spot treatment application with glyphosate free weed spray* to *noxious weeds such as docks, thistles and rosebay willowherb infestations during the growing season.* | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 7 |
| **Cultivate soil to remove compaction / foot traffic** | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Pruning of hedges – Formative.** *Evergreens trimmed to shape in spring and deciduous species in the winter.* | | | | | 1 | | | | | | | 1 | 2 |
| **Pruning of hedges – Maintenance.** | | | | | | | | | * | | | | N/A |
| **Mulch top-up to 50mm min.** (first 5 years). | | | 1 | | | | | | | | | | 1 |
| **Fertiliser application** *(Allow for foliar application where appropriate)* | | | 1 | | | | | | | | | | 1 |
| **Watering** (As deemed necessary when hot / dry. Cease during times of water restrictions and proposals are to be submitted for an alternative source of water). | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Visual Inspection to ensure health and condition of hedges** | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 |

*MIXED NATIVE PLANTING*

*(Refer to Section ⍰ in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Weed Control** (first 5 years than as required). *Hand weed where possible. Spot treatment application with glyphosate free weed spray* to *noxious weeds such as docks, thistles and rosebay willowherb infestations during the growing season. Top up mulch/replace mulch mats as per specification for ongoing weed suppression.* | * | | | 1 | 1 | 1 | 1 | 1 | 1 | | | * | 6 – Additional visit Dec/Jan to inspect condition |
| **Crown pruning** (As required). *To maintain form, health and vigour removing any branches below 2 metres.* | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Pruning / maintenance of buffers.** *Opportunity to pile deadwood for ecology purposes, refer to management plan* | | | | | | | | | 1 | | | | 1 |
| **Top up mulch to 50mm min.** (For first 5 years, then when required) | | | 1 | | | | | | | | | | 1 |
| **Replace failed planting with like for like.** *To ensure density and structural diversity is retained. As required and by the next planting season.* | | | | | | | | | * | | | | N/A |
| **Water regularly** (For first 3 years to establish – as deemed necessary when hot / dry. Cease during times of water restrictions and proposals are to be submitted for an alternative source of water). | | | | | | * | * | * | * | | | | N/A |
| **Examine stakes / ties / shelters / fencing** (For first 5 years, then when required). *Adjust/replace or remove is established and make good surfaces.* | * | * | * | | | | | | | * | * | * | N/A |
| **Thin mixed planting at yr5, and then from yr10 onwards to remove weaker specimens** | | * | * | | | | | | | | | | N/A |

*ORNAMENTAL PLANTING*

*(Refer to Section 4.3.5 in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Weed Control** (first 5 years than as required). *Hand weed where possible. Spot treatment application with glyphosate free weed spray* to *noxious weeds such as docks, thistles and rosebay willowherb infestations during the growing season.* | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 7 |
| **Cultivate soil to remove compaction / foot traffic** | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Pruning in accordance with species.** *Annual prune of current year's growth to promote new growth, enhance vigour, prevent encroachment onto adjacent footpaths and facilitate ease of access. Consider individual species requirements and utilise a free-form pruning style to retain the plant's natural form.* | | | | | | | | | | | 1 | | 1 |
| **Management of herbaceous planting and grasses.** *Deadheading operations between May & November and hand cutting of grasses between late Jan and early March* | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 10 |
| **Pruning / thinning / maintenance of planting beds.** *Maintenance requirements to control spread /growth of amenity shrubs planting and maintain a tidy appearance where required.* | | | | 1 | | | | | 1 | | | | 2 |
| **Mulch top-up to 50mm min.** (first 5 years). | | | 1 | | | | | | | | | | 1 |
| **Fertiliser application** *(Allow for foliar application where appropriate)* | | | 1 | | | | | | | | | | 1 |
| **Shrub border areas shall have an annual planting beat-up to replace dead species for first 3 years and a final check after 5 yrs** | | | | | | | | | | | 1 | | 1 |
| **Watering** (As deemed necessary when hot / dry. Cease during times of water restrictions and proposals are to be submitted for an alternative source of water). | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Visual Inspection to ensure health and condition of planting beds** | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 |

## *MOWN AMENITY GRASS AREAS & MOWN PATHS*

*(Refer to Section 4.3.6 in the report*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Maintain grass to a height of between 75mm and 100mm.** *Remove all arisings. Monthly operations to be adjusted as required to meet specification. Timing given is perceived based on fortnightly cuts during the growing season. Observe areas of bulb planting during operations.* | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 8 |
| **Undertake re-seeding and fertilizer treatment where required to maintain a well-manicured appearance.** | | | * | | | | | | | | | | N/A |

## *MEADOW SEEDING / GRASSLAND*

*(Refer to Section 4.3.7 in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **YEAR 1** | | | | | | | | | | | | | |
| **Maintain grass to a height of between 75mm and 100mm (every 3-4 weeks).** *Remove all arisings. Edging to be carried out. Remove weeds. Monthly operations to be adjusted as required to meet specification. Timing given is perceived based on fortnightly cuts during the growing season. Observe areas of bulb planting during operations.* | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 7 |
| **Final cut to be made in September / October to 75-100mm.** *Arisings / clipping to be left in-site for 3-4 days before removing all arisings. Edging to be carried out. Remove weeds.* | | | | | | | | | | 1 | | | 1 |
| **Undertake re-seeding where required to maintain a well-manicured appearance without any gaps.** | | | * | | | | | | | | | | N/A |
| **Watering** (As deemed necessary when hot / dry. Cease during times of water restrictions and proposals are to be submitted for an alternative source of water). | * | * | * | * | * | * | * | * | * | * | * | * | N/A |

| YEAR 2 ONWARDS | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Tidying cut to a height of between 75 and 100mm before the start of the growing season (Feb / March).** *Remove all arisings. Edging to be carried out. Remove weeds. Optional - client to be consulted each season on whether this is required. Observe areas of bulb planting during operations.* | | | * | | | | | | | | | | N/A |
| **Final cut to be made in July/August.** *Arisings / clipping to be left in-site for 3-4 days before removing all arisings. Edging to be carried out. Remove weeds.* | | | | | | | | | | 1 | | | 1 |
| **Undertake re-seeding where required to maintain a well-manicured appearance without any gaps.** | | | * | | | | | | | | | | N/A |
| **Watering** (As deemed necessary when hot / dry. Cease during times of water restrictions and proposals are to be submitted for an alternative source of water). | * | * | * | * | * | * | * | * | * | * | * | * | N/A |

*EXISTING PLANTING*

*(Refer to Section 4.4 in the report and BEMP by Middleton Bell for long-term management and monitoring)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Remedial arboricultural works as required in response to annual inspection.** *Qualified tree surgeon/arboriculturist to carry out.* | * | * | | | | | | | | | * | * | N/A |
| **All epicormic growth to the base of the tree shall be removed if necessary.** | * | * | * | * | * | * | * | * | * | * | * | * | N/A |
| **Weed Control** (as required). *Hand weed where possible. Spot treatment application with glyphosate free weed spray to noxious weeds such as docks, thistles and rosebay willowherb infestations during the growing season.* | | | * | * | * | * | * | * | * | * | | | N/A |

*MONITORING*

*(Refer to Section 4.5 in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Annual assessment and review of management plan objectives, prescriptions, schedule of maintenance works, budget and costings.** | | | | 1 | | | | | | | | | 1 |

*REPLACEMENT PLANTING*

*(Refer to Section 4.7 in the report)*

| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Planting** *(Replacements identified during previous growing season)* | | | | | | | 1 | | | | | | 1 |

## APPENDIX B: OUTLINE LANDSCAPE MASTERPLAN

**NOT FOR CONSTRUCTION**

## LANDSCAPE KEY

**SOFT LANDSCAPE**
(Planting: refer to planting schedule & specification for planting details)

- Existing trees and vegetation to be retained. Refer to Arboricultral Impact Assessment and Method Statement by Enzygo for further detail.
- Existing trees and vegetation to be removed to facilitate development. Refer to Arboricultral Impact Assessment and Method Statement by Enzygo for further detail.
- **Proposed Feature Trees - 8** — Heavy Standard Trees; Girth 12-14cm; Height 350-425cm
- **Proposed Ornamental Trees - 9** — Selected Standard Trees; Girth 10-12cm; Height 300-350cm
- **Proposed Native Trees - 30** — Standard & Feathered; Girth 8-10cm; Height 250-300cm
- **Proposed Feature Plants** — Ornamental feature shrubs and grasses within the domestic curtilage
- **Existing Hedge to be Retained** — Existing hedge to be retained, infilled and enhanced in accordance with ecological recommendations; Total length: 625 lm
- **Proposed Mixed Native Hedge** — Proposed hedge planting to be in with existing and to provide buffer to boundaries and between plots where required; Total length: 110 lm
- **Proposed Single Species Native Hedge** — Proposed hedge planting to provide definition between plots and the wider development setting; Total length: 25 lm
- **Existing Scrub to be Retained** — To be retained, infilled and enhanced in accordance with ecological recommendations. Position based on Ecological Impact Assessment by Enzygo; Total area: 1002m²
- **Proposed Mixed Native Scrub** — located to site boundaries and to infill, enhance and supplement existing areas of retained scrub; Total Area: 1166m²
- **Proposed Ornamental Planting Mix** — Located within the domestic curtilage; Total area: 280m²
- **Proposed Domestic Lawn/Seeding** — Total area: 4094m²
- **Retained Modified Grassland** — Retained grassland located outside of domestic curtilage. To be enhanced and managed in accordance with ecological recommendations to maximise biodiversity value; Total area: 2702m²
- **Proposed Neutral Grassland** — Located outside of domestic curtilage in the ownership boundary of Woodhead Hall. To be managed in accordance with ecological recommendations to maximise biodiversity value; Total area: 3163m²

**HARD LANDSCAPE**

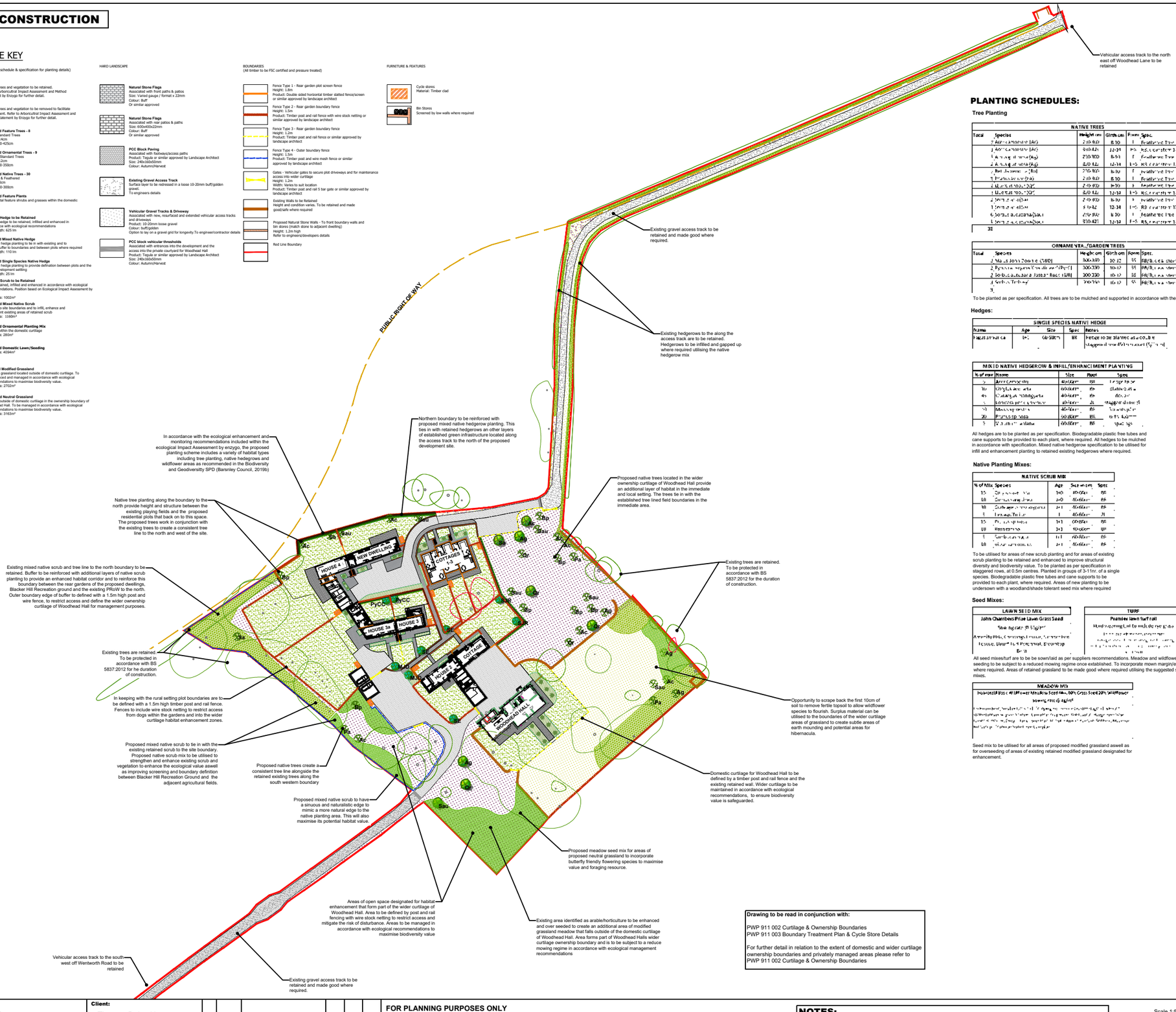
- **Natural Stone Flags** — Associated with front paths & patios; Size: Varied gauge / format x 22mm; Colour: Buff; Or similar approved
- **Natural Stone Flags** — Associated with rear patios & paths; Size: 600x400x22mm; Colour: Buff; Or similar approved
- **PCC Block Paving** — Associated with footaway/access paths; Product: Tegula or similar approved by Landscape Architect; Size: 240x160x60mm; Colour: Autumn/Harvest
- **Existing Gravel Access Track** — Surface layer to be redressed in a loose 10-20mm buff/golden gravel; To engineers details
- **Vehicular Gravel Tracks & Driveway** — Associated with new, resurfaced and extended vehicular access tracks and driveways; Product: 10-20mm loose gravel; Colour: buff/golden; Option to lay on a gravel grid for longevity,To engineer/contractor details
- **PCC block vehicular thresholds** — Associated with entrances into the development and the access into the private courtyard for Woodhead Hall; Product: Tegula or similar approved by Landscape Architect; Size: 240x160x60mm; Colour: Autumn/Harvest

**BOUNDARIES**
(All timber to be FSC certified and pressure treated)

- Fence Type 1 - Rear garden plot screen fence; Height: 1.8m; Product: Double sided horizontal timber slatted fence/screen or similar approved by landscape architect
- Fence Type 2 - Rear garden boundary fence; Height: 1.5m; Product: Timber post and rail fence with wire stock netting or similar approved by landscape architect
- Fence Type 3 - Rear garden boundary fence; Height: 1.2m; Product: Timber post and rail fence or similar approved by landscape architect
- Fence Type 4 - Outer boundary fence; Height: 1.5m; Product: Timber post and wire mesh fence or similar approved by landscape architect
- Gates - Vehicular gates to secure plot driveways and for maintenance access into wider curtilage; Height: 1.2m; Width: Varies to suit location; Product: Timber post and rail 5 bar gate or similar approved by landscape architect
- Existing Walls to be Retained; Height and condition varies. To be retained and made good/safe where required
- Proposed Natural Stone Walls - To front boundary walls and bin stores (match stone to adjacent dwelling); Height: 1.2m high; Refer to engineers/developers details
- Red Line Boundary

**FURNITURE & FEATURES**

- Cycle stores; Material: Timber clad
- Bin Stores; Screened by low walls where required




**Drawing to be read in conjunction with:**

PWP 911 002 Curtilage & Ownership Boundaries
PWP 911 003 Boundary Treatment Plan & Cycle Store Details

For further detail in relation to the extent of domestic and wider curtilage ownership boundaries and privately managed areas please refer to PWP 911 002 Curtilage & Ownership Boundaries

## PLANTING SCHEDULES:

### Tree Planting

**NATIVE TREES**

| Total | Species | Height cm | Girth cm | Form | Spec. |
|---|---|---|---|---|---|
| 7 | Acer campestre (Ac) | 250-300 | 8-10 | I | Feathered Tree |
| 3 | Alnus glutinosa (Ag) | 350-425 | 12-14 | HS | Rootballed Tree 3.5-4.25m |
| 5 | Betula pendula (Bp) | 250-300 | 8-10 | F | Feathered Tree |
| 2 | Corylus avellana (Ca) | 300-350 | 10-12 | HS | Rootballed Tree 3.5-4.25m |
| 2 | Fraxinus excelsior (Fe) | 250-300 | 8-10 | F | Feathered Tree |
| 3 | Prunus avium (Pa) | 250-300 | 8-10 | I | Feathered Tree |
| 2 | Quercus robur (Qr) | 250-300 | 10-12 | I | Feathered Tree |
| 1 | Ulmus glabra 'Lutescens' | 300-350 | 12-14 | HS | Rootballed Tree 3.5-4.25m |
| 2 | Sorbus aucuparia (Sau) | 250-300 | 8-10 | F | Feathered Tree |
| 1 | Sorbus aria 'Lutescens' | 350-425 | 12-14 | HS | Rootballed Tree 3.5-4.25m |
| 36 | | | | | |

**ORNAMENTAL/GARDEN TREES**

| Total | Species | Height cm | Girth cm | Form | Spec. |
|---|---|---|---|---|---|
| 2 | Malus sylvestris 'Evereste' (MSE) | 300-350 | 10-12 | SS | RB/B, clear stem 175-200cm |
| 2 | Prunus serrula 'Tibetan Birch' (PST) | 300-350 | 10-12 | SS | RB/B, clear stem 175-200cm |
| 2 | Sorbus aucuparia 'Joseph Rock' (SJR) | 300-350 | 10-12 | SS | RB/B, clear stem 175-200cm |
| 4 | Betula utilis 'Jacquemontii' | 300-350 | 10-12 | SS | RB/B, clear stem 175-200cm |
| 10 | | | | | |

To be planted as per specification. All trees are to be mulched and supported in accordance with their size.

### Hedges:

**SINGLE SPECIES NATIVE HEDGE**

| Name | Age | Size | Spec | Notes |
|---|---|---|---|---|
| Hawthorn (Ha) | 1+0 | 60-80cm | BR | Retain to be planted as a double staggered row 40cm centres |

**MIXED NATIVE HEDGEROW & INFILL/ENHANCMENT PLANTING**

| % of mix | Name | Size | Pkgd | Spec. |
|---|---|---|---|---|
| 30 | Acer campestre (Ac) | 60-80cm | BR | Transplant |
| 10 | Corylus avellana (Ca) | 60-80cm | BR | Double staggered |
| 40 | Crataegus monogyna (Ha) | 60-80cm | BR | double staggered |
| 5 | Ilex aquifolium (Ia) | 60-80cm | BR | staggered double |
| 10 | Malus sylvestris (Ms) | 60-80cm | BR | Transplant |
| 20 | Prunus spinosa (Ps) | 60-80cm | BR | Transplant |
| 5 | Viburnum opulus (Vo) | 60-80cm | BR | Transplant |

All hedges are to be planted as per specification. Biodegradable plastic tree tubes and cane supports to be provided to each plant, where required. All hedges to be mulched in accordance with specification. Mixed native hedgerow specification to be utilised for infill and enhancement planting to retained existing hedgerows where required.

### Native Planting Mixes:

**NATIVE SCRUB MIX**

| % of Mix | Species | Age | Size cm | Spec |
|---|---|---|---|---|
| 15 | Corylus avellana (Ca) | 1+0 | 40-60cm | BR |
| 10 | Crataegus monogyna (Ha) | 1+0 | 40-60cm | BR |
| 10 | Euonymus europaeus (Ee) | 1+1 | 40-60cm | BR |
| 5 | Frangula alnus (Fa) | 1 | 40-60cm | FI |
| 15 | Prunus spinosa (Ps) | 1+1 | 60-80cm | BR |
| 10 | Rosa canina (Rc) | 1+1 | 40-60cm | BR |
| 10 | Viburnum opulus (Vo) | 1+1 | 40-60cm | BR |

To be utilised for areas of new scrub planting and for areas of existing scrub planting to be retained and enhanced to improve structural diversity and biodiversity value. To be planted as per specification in staggered rows, at 0.5m centres. Planted in groups of 3-11nr. of a single species. Biodegradable plastic free tubes and cane supports to be provided to each plant, where required. Areas of new planting to be undersown with a woodland/shade tolerant seed mix where required

### Seed Mixes:

**LAWN SEED MIX**

John Chambers Prime Lawn Grass Seed

Sow by rate of 35g/m²

A hard-wearing mix, containing fescues, meadow grasses and rye grass. Ideal for hot, dry and tropical environments

**TURF**

Premier lawn turf roll

Hard-wearing turf to suit the needs of [illegible]

All seed mixes/turf are to be be sown/laid as per suppliers recommendations. Meadow and wildflower seeding to be subject to a reduced mowing regime once extablished. To incorporate mown margin/edge where required. Areas of retained grassland to be made good where required utilising the suggested seed mixes.

**MEADOW MIX**

Hedgerow/Bird Mix < 40% Flower Meadow Seed Mix < 60% Grass Seed 20% Wildflower

Sowing rate 4g/m²

Seed mix to be utilised for all areas of proposed modified grassland aswell as for overseeding of areas of existing retained modified grassland designated for enhancement.

## SOFTWORKS SPECIFICATION NOTES

The contractor is responsible to ensure that no products or practices are to be used that do not comply with relevant British Standards, Codes of Practice and Construction Regulations. Contractor to be fully satisfied with locations and off sets of services prior to excavations.

Site clearance generally: Where necessary remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil. Remove stones exceeding 75 mm. Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

Retain and protect trees and vegetation in accordance with BS 5837 where necessary. Grub up any large roots and dispose of without undue disturbance of soil and adjacent areas. In order to comply with UK legislation in regard to the Wildlife and Countryside Act 1981 (as amended), any tree or vegetation removal and/or management must take place outside of the bird nesting season (March to September inclusive). Where this cannot be achieved, nesting bird checks must be undertaken by a suitably qualified ecologist within 24 hours of the works.

Works within the root protection area (RPA):There shall be no areas of storage, trafficking of machinery, cultivation, ripping or mechanical rotivation, or importing of top soil, within the root protection area (RPA) of the existing trees to be retained. Where paths and hard surfacing is proposed within the retained tree RPA's, a No Dig methodology is to be adopted. Underground reinforcement, such as Cell Web (or similar approved) to be utilised in these locations. No trenches shall be dug within the RPA of the existing trees. New hedging plants within the RPA of the existing trees shall be notch planted. All of the above must be in accordance with BS 5837.

SOIL
Site preparation: Where required all existing topsoil and subsoil shall be stripped and stored separately on site. Heaps must not exceed 3m in height and should be used within 12 months in accordance with BS 4425 (Code of practice for general landscape operations).

Soil Sampling - Existing topsoil and inert sub soils, shall be analysed in accordance with BS 3882 to determine available nutrients, texture, organic matter content and pH. Where require, existing soils are to be improved in accordance with BS 3882:2015
Cultivation - Flail existing ruderal vegetation to ground level and remove arisings prior to cultivation. All areas to receive final layers of topsoil are to be de-compacted prior to spreading. Earth works vehicles to be small scale and tracked (loose-tipping) to minimise compaction, however chosen method for decompaction will be site specific dependant on size and soil conditions. Additional care must be taken as to not damage soil structure. All objects and stones over 75mm brought to the surface during decompaction are to be removed from the prepared surface layer. If existing subsoil horizon is found to consist of heavy clay, all proposed seeded areas to be tine ripped to 200mm depth at 300mm centres to increase drainage. Areas to be seeded to be chain harrowed to a fine tilth and lightly rolled to provide firm seed bed. Remove all stones over 30mm dia in any direction. Imported soil material: Import as necessary to make up any deficiency of topsoil and/or subsoil existing on site to complete the work and mitigate deficiencies. All imported material must conform with industry standards BS 8601 (Subsoil), BS 3882 Topsoil) and CLEA limits on heavy metals. Topsoil to be General purpose, 10mm screened and locally sourced (unless otherwise stated)

Soil build up: Existing topsoil and subsoil to be retained and reused on site within the landscape scheme where possible. Prior to spreading all topsoil to be screened to remove large stones and other deleterious materials, such as plant roots, leaves and clay. Topsoil to be loose-tipped and spread over de-compacted subsoil/receiving area. The total minimum rooting depth for planting, after settlement, should be: Grass 450mm; Planted areas 600mm; Trees 900mm. Topsoil depths for these areas should not normally exceed 300mm with the following minimum depths for each area: Grass 150mm; Planted areas 300mm; Trees 300mm. Meadow & wildflower seeding to be sown directly onto prepared subsoil.

Finished level of topsoil after settlement: Above adjoining paving or kerbs: 25 mm; Below dpc of adjoining buildings: Not less than 150 mm; Shrub areas: Higher than adjoining grass areas by 50 mm; Within root spread of existing trees: Unchanged; Adjoining soil areas: Marry in; Thickness of turf or mulch: Included.)

ADDITIVES
Compost to tree/shrub pits: To be as per BS PAS 100: well rotted sterilised spent mushroom compost max. pH 6.7 or Target Treestart compost. The contractor shall provide a Certificate of Analysis to show that the material being supplied complies with the above criteria. Incorporate spent mushroom compost or equivalent approved peat free compost into tree and planting pits at a rate of 3 parts topsoil to 1 part compost, thoroughly mixed together.

Fertiliser to ornamental shrub beds - Apply slow release fertiliser, Scotts 'Ennmag' 4.19.10 NPK or equivalent approved at a rate of 50 gms/sq. metre over topsoil surface and fork into top 225mm spit.

PLANTING
Generally: Minimise trafficking of graded slopes. All plants to be preferably planted between Nov. - March. Nursery stock trees and shrubs to be in accordance with BS 3936 and BS 8545, to be supplied and planted in accordance with British Standards and the Horticultural Association's Plant Handling Guide. Container grown shrubs to be thoroughly watered before planting; trees and bare root shrubs watered after planting.

Times of year for planting: Deciduous Trees, hedges and shrubs: Late October to late March. Evergreen hedges and shrubs: September/ October or April/ May. Container grown plants: At any time if ground and weather conditions are favourable. Watering and weed control to be provided as necessary.

Shrub/Hedge planting pits: Timing: Excavate 1-2 days (maximum) before planting. Pit sizes: Wide enough to accommodate roots/boughs when fully spread and 75 mm deeper than root system. Pit bottom improvement:Break up to a depth of 150 mm, incorporating 25g of slow-release fertiliser per planting pit. Where existing planting and roots are present plants are to be notch planted to minimise disruption/root damage. Backfilling material: Reuse excavated material. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil. Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.

Tree pit sizes: Standard trees excavate a tree pit 1.2m x 1.2m x 900mm. Break up sides and bottom of pits to a depth of 100mm to ensure free drainage.Tree pit treatment: Soil ameliorant worked into pit bottoms. Pit sides to be scarified and backfilling material to be in accordance with topsoil and subsoil specification. Drainage Layer: Provide 200mm layer washed, clean gravel to base of pits to aid drainage (tree pit to be actively drained if poor draining soil or clay discovered by contractor).

Tree Accessories: Typically trees in soft landscape to be staked unless stated otherwise by the Landscape Architect. Underground guying is recommended for semi mature trees or trees within hard landscape and in public areas. Trees to be staked using 1m long x 75mm dia. round timber stakes (size of stakes to be adjusted to suit size of tree). Cross member to be installed 75mm x 25mm (larger trees will need large cross members). Locate proprietary Hessian ties on cross member to secure tree and prevent rubbing. Short stakes (<1.0m high) with biodegradable Hessian ties are recommended to encourage wind tolerance and prevent rubbing. Tree pit accessories by Green Tech or similar: Underground guying and perforated plastic irrigation/ ventilation pipe to landscape architects approval.

Root Barriers: To be used wherever the installed rootball will be within 2m of a building foundation or within proximity to underground utilities (distance at which root barrier is required is as per utility providers standards and should be confirmed prior to installation). Root barrier by Green Tech or similar to be installed vertically in accordance with supplier recommendations.

Protective fencing/guards: Newly planted areas or individual plants are to include rabbit/deer proof fencing. Either perimeter mesh fencing or individual biodegradable plastic tree spiral guards/shelters/tubes are to be installed around all planting where required. Where areas are fenced, mesh to be 1m min above ground and buried 300mm below ground.

Mulching: Approved medium course chipped tree bark composted for at least 4 weeks. Particle size 25-75mm dia, max. 20% fines, pests and disease free and free of Methyl Bromide contamination. Clear any weeds, ensure soil is thoroughly moistened prior to applying mulch. All planting areas inc. trees, hedges and planting beds should receive an even 75mm depth of bark mulch, adjoining edge of mulch to be 15mm min. below adjacent hardstanding to avoid spillage. 50mm depth of mulch is only suitable for higher quality ornamental bark (<5% fines, 5-35mm size etc.). All bark should be FSC certified. Option to use biodegradable mulch mats to control moisture, soil temperature, erosion and weeds. All trees within grass are to have a 1.5m diameter mulch circle.

Seeding and making good existing grass areas: Steep embankments to be hydroseeded where required. After cultivating, grading and fertilizing prepare seed bed to fine, firm tilth with good crumb structure (Depth: 25 mm). Rake to a true, even surface, friable and lightly firmed but not over compacted. Remove surface stones/earth clods. Extend cultivation into existing adjacent amenity grassed areas sufficient to ensure full marrying in of levels where required. Evenly distribute seeds at an application rate of 35g/m² or as per supplier recommendations. Establish good seed contact with the root zone to promote healthy, consistent growth. Lightly harrow or rake to cover seed. Thoroughly water completed seeding until germination as necessary to keep the surface damp and soil most but not water logged.

Cutting In: Where cutting planting beds into existing grassed areas, the surrounding grass shall be protected and made good as necessary. These areas to be made good by preparing and re-seeding area. Seed mixes: John Chambers Lawn/Meadow seed or similar approved.

Turf Preparation - Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist. Do not lift turf in frosty weather or if ground waterlogged. Arrange phased delivery timescales to avoid need for excessive stacking. Stacking height 1m (max). Do not use dried out or deteriorated turf. After cultivating, grading and fertilizing prepare seed bed to fine, firm tilth with good crumb structure (Depth: 25 mm). Rake to a true, even surface, friable and lightly firmed but not over compacted. Remove surface stones/earth clods. Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

Turf Implementation - Turf to be laid in Spring and summer within 18 hours of delivery; and Autumn and winter within 24 hours of delivery. Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry. Planks to be laid on previously laid turf. Do not walk on prepared bed or newly laid turf. Turf laid along contours with staggered, close butted joints. Do not stretch turf. At the edges, whole turfs to overlap line, trimmed to a true line. Remove high spots and fill hollows with fine soil to adjust levels Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers. Dress turf with Sharp sand at a rate of 2kg/m2 and brushed in to completely fill joints. Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below. Use hardy low maintenance amenity turf suitable for use in shade (To BS 3969).

Seed Preparation and Implementation for Wildflower Areas: No addition of nutrient to soil required. Method to suit soil type, proposed usage, location and weather conditions during and after sowing. A friable firm seed bed required, weed free, alleviation of compaction to a depth of 100-200mm, sowed on a firm and fine tilth. Seed bed preparation to be conducted in dry conditions, close to the time of sowing.Remove surface stones/earth clods. Marry in with adjacent levels where required. Evenly distribute seeds at the manufacturers recommended application rate. Establish good seed contact with the root zone to promote healthy, consistent growth. Lightly harrow or rake to cover seed. Thoroughly water completed seeding.

MAINTENANCE
1 year Defects Liability Period applies. All dead or failing plants to be replaced the following growing season. Maintain a weedfree bare earth area 600mm dia minimum around individual trees and shrubs. Herbicide shall only be used where necessary and if use is required it should be a non-residual translocated herbicide and spot applied/applied with spray guard. Application and use to be in accordance with EA guidance. Prior to spraying ensure all spirals are light to ground level and leaves within spray range are fully enclosed. Arisings: Remove. Trim all edges. Weed control: Substantially free of broad leaved weeds. Method: Application of a suitable selective herbicide. Remove any stones 25 mm in any dimension brought to the surface. Watering: To ensure establishment.

NOTE: Works to be carried out in accordance with the most up to date and current British Standards referenced within this specification.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project:** Woodhead Hall Farm | **Client:** Thomas Daley Homes | | | | | | |
| **Title:** Outline Landscape Masterplan & Specification | **Drawn:** JMo | **Chk'd:** LW | **App'd** SH | | | | |
| **Drawing Number:** PWP 911 001 | **Revision:** 02 | **Drawing Scale:** 1:500 @A0 | | | | | |

| Rev | Date | Detail | Made | Chk'd | App'd |
|---|---|---|---|---|---|
| 02 | 24/02/25 | For Planning - Minor layout tweaks | JMo | LW | SH |
| 01 | 23/11/24 | For Planning - Condition Discharge | JMi | LW | SH |
| 00 | 15/11/24 | For Planning - Condition Discharge | JMi | LW | SH |

**FOR PLANNING PURPOSES ONLY**

**Notes:**
1. Not for construction all dimensions to be confirmed on site
2. Based on 'Proposed Block Plan Ground floor plans - 808 - PL110 - Rev F' By Walker Dsp Architects.
3. Refer to architects/engineers drawing for hard landscape, boundary treatments, site levels, drainage, retaining walls.
4. Build ups/footings to engineers specification.
5. Contractor to be fully satisfied with locations of services prior to excavations.
6. All existing trees to be protected to BS 5837.

**NOTES:**

**Trees & Services**
- Where paths and hard surfacing is proposed within close proximity to trees all construction is to be in accordance with BS 5837: 2012
- Root barriers / root protection measures are to be incorporated where required in accordance with guidelines where existing and proposed trees and vegetation are within 2m of proposed building or trees are in close proximity to services (details to be agreed).
- Tree and shrub planting proposed within drainage easements to be approved by local water authority. Planting to incorporate root protection measures around services or planting pits to ensure the sewer system is resistant to tree root ingress in accordance with the current Code for Design.
- Contractor shall comply with NJUG publication, volume 4 'Guidelines For The Planning, Installation And Maintenance Of Utility Services In Proximity To Trees' together with BS 5837:2012 Trees in Relation to Construction. Where conflict arises refer to the British Standard.

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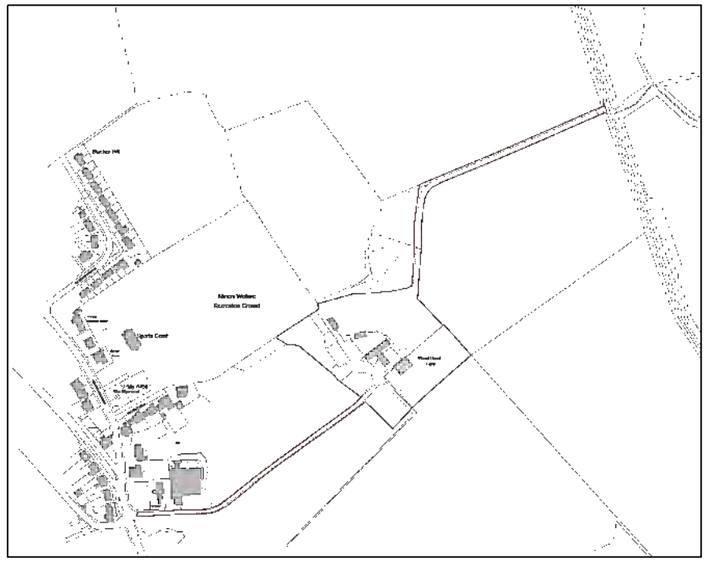
PWP DESIGN

## APPENDIX C: CURTILAGE & OWNERSHIP BOUNDARIES

**NOT FOR CONSTRUCTION**



LOCATION PLAN
NTS


**Key**

- Woodhead Hall Farm: Domestic Curtilage
- Woodhead Hall Farm: Wider Curtilage (Habitat Enhancement Area)
- House 2: Domestic Curtilage/Ownership Boundary
- The Cottage: Domestic Curtilage/Ownership Boundary
- House 3: Domestic Curtilage/Ownership Boundary
- House 3a: Domestic Curtilage/Ownership Boundary
- House 4: Domestic Curtilage/Ownership Boundary
- New Dwelling: Domestic Curtilage/Ownership Boundary
- Cottage 1: Domestic Curtilage/Ownership Boundary
- Cottage 2: Domestic Curtilage/Ownership Boundary
- Cottage 3: Domestic Curtilage/Ownership Boundary
- Privately Managed/ManCo

ALL AREAS OUTSIDE OF DOMESTIC AND WIDER CURTILAGE OWNERSHIP TO FALL UNDER PRIVATE MANAGEMENT OF A MANAGEMENT COMPANY. AREAS INCLUDE EXISTING ACCESS TRACKS, FOOT PATHS AND SHARED DRIVEWAYS/COURTS.

## NOTES:

**Boundaries & Ownership**

Woodhead Hall ownership boundary to include the domestic curtilage, which is limited to the immediate surroundings to the converted hall and the wider curtilage, which includes the wider landscape setting surrounding Woodhead Hall and additional open space to the western boundary. The wider curtilage is to be managed and maintained in accordance with the Biodiversity Enhancement Management Plan (BEMP) prepared by the project Ecologist, Middleton Bell. Reference PWP 911 100 Landscape Management Plan for management and maintenance for all other areas to be privately managed not included in the BEMP.

**Drawing to be read in conjunction with:**

PWP 911 001 Outline Landscape Masterplan & Specification
PWP 911 003 Boundary Treatment Plan & Cycle Store Details

For further detail in relation to the extent of domestic and wider curtilage ownership boundaries and privately managed areas please refer to PWP 911 002 Curtilage & Ownership Boundaries

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Project:** Woodhead Hall Farm | | **Client:** Thomas Daley Homes | | | | | | | |
| **Title:** Curtilage & Ownership Boundaries | | **Drawn:** BP | **Chk'd:** LW | **App'd** SH | | | | | |
| **Drawing Number:** PWP 911 002 | **Revision:** 00 | **Drawing Scale:** 1:500 @ A1 | | | 00 **Rev** | 14/11/24 **Date** | For Planning: Condition Discharge **Detail** | BP **Made** | LW **Chk'd** | SH **App'd** |

**FOR PLANNING PURPOSES ONLY**

**Notes:**

1. Not for construction all dimensions to be confirmed on site
2. Based on Layout Drawing 'Proposed Block Plan Ground floor plans - 808 - PL110 - Rev F' By Walker Dsp Architects.
3. Refer to architects/engineers drawing for hard landscape, boundary treatments, site levels, drainage, retaining walls.
4. Build ups/footings to engineers specification.
5. Contractor to be fully satisfied with locations of services prior to excavations.
6. All existing trees to be protected to BS 5837.

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## APPENDIX D: GRANT OF OUTLINE PLANNING PERMISSION

BARNSLEY
Metropolitan Borough Council

**Growth and Sustainability**
**Regeneration and Culture**
**Planning, Policy and Building Control**

# GRANT OF PLANNING PERMISSION

TOWN AND COUNTRY PLANNING ACT 1990

## APPLICATION NO. 2022/1234

**To** Walker Dsp Architects
42 Oxford Street
Holgate
York
YO24 4AW

**DESCRIPTION** Alteration, restoration and extension of existing farmhouse, farm cottage and conversion and extension of existing barns to form 4no dwellings, erection of 4no new dwellings and demolition of existing portal framed barn together with associated landscaping and parking (8no. new dwellings in total)

**LOCATION** Woodhead Farm Cottage, Woodhead Lane, Blacker Hill, Barnsley, S74 9SX

Permission is **granted** for the proposals which were the subject of the Application and Plans registered by the Council on 15/12/2022 and described above.

The approval is subject on compliance with the following conditions:

1 The development hereby permitted shall be begun before the expiration of 3 years from the date of this permission.
**Reason: In order to comply with the provision of Section 91 of the Town and Country Planning Act 1990.**

2 The development hereby approved shall be carried out in accordance with the plans and specifications as approved unless required by any other conditions in this permission. The approved plans are;

- 808-PL06-A 'Footprints'
- 808-PL14 'Block Plan Proposed Access 1'
- 808-PL15 'Block Plan Proposed Access 2'
- 808-PL110F 'Block Plan Proposed Ground Floors'
- 808-PL111D 'Block Plan Proposed First Floors'
- 808-PL112A 'Block Plan Proposed Roof Plans'
- 808-PL115C 'Site Elevations Proposed'
- 808-PL120B 'Woodhead Hall GF Plan as Proposed'
- 808-PL121B 'Woodhead Hall 1F 2F Plans as Proposed'
- 808-PL122B 'Woodhead Hall Basement Roof Plans as Proposed'
- 808-PL125C 'Woodhead Hall Elevations 1 as Proposed'
- 808-PL126C 'Woodhead Hall Elevations 2 and 3 as Proposed'
- 808-PL127C 'Woodhead Hall Elevations 4 as Proposed'

- 808-PL130B 'Farm Cottage GF 1F Plans as Proposed'
- 808-PL131A 'Farm Cottage Roof Plan as Proposed'
- 808-PL135B 'Farm Cottage Elevations as Proposed'
- 808-PL140B 'Barns 1-2 GF Plan as Proposed'
- 808-PL141B 'Barns 1-2 1F Plan as Proposed'
- 808-PL142C 'Barns 1-2 Roof Plan'
- 808-PL145C 'Barns 1-2 Elevation as Proposed'
- 808-PL146A 'Barns 1-2 Elevations as Proposed'
- 808-PL150B 'Barn 3 Plans as Proposed'
- 808-PL160B 'Barn 3a GF Plan as Proposed'
- 808-PL161B 'Barn 3a 1F Plan as Proposed'
- 808-PL162A 'Barn 3a Roof Plan as Proposed'
- 808-PL165D 'Barn 3-3a Elevations as Proposed'
- 808-PL166D 'Barn 3-3a Elevations as Proposed'
- 808-PL170B 'Barn 4 Plans as Proposed'
- 808-PL171A 'Barn 4 Roof Plan as Proposed'
- 808-PL175D 'Barn 4 Elevations as Proposed'
- 808-PL176D 'Barn 4 Elevations as Proposed'
- 808-PL180B 'New Dwelling Plans as Proposed'
- 808-PL181A 'New Dwelling Roof Plan as Proposed'
- 808-PL185D'New Dwelling Elevations as Proposed'
- 808-PL190A 'New Cottages GF Plan as Proposed'
- 808-PL191A 'New Cottages 1F Plan as Proposed'.
- 808-PL192 'New Cottages Roof Plan'
- 808-PL195B 'New Cottages Elevations as Proposed'
- 808-PL200 'New Garages Plans as Proposed'
- 808-PL205A 'New Garages Elevations as Proposed'
- 808-PL220 'House Sections'
- 808-PL240 'Barn 2 Sections'
- 808-PL250 Barn 3 Sections'
- 808-PL280 'New Dwelling Sections'

The approved Specifications/Documents/reports are;

- Mining Risk Assessment (Ref: 004/4661/REG)
- Arboricultural Survey, Impact Assessment and Method Statement (1757.003.ENZ.XX.00.RP.AR.45.101)
- Flood Risk Assessment & Drainage Strategy (21230-FRADS-001)
- Ecological Impact Assessment (MAN.1757.003.EC.R.002)

**Reason: In the interests of the visual amenities of the locality and in accordance with Local Plan Policy D1 High Quality Design and Place Making.**

3 External materials shall match the existing or historic materials on site in every respect unless specified on the approved plans. No construction work will commence until a representative sample of all new external materials has been submitted to, and approved in writing by, the Local Planning Authority, and the development shall proceed in strict accordance with these details as approved.

**Reason: To protect or improve the character and appearance of the Listed Building and surrounding area in accordance with Local Plan Policies HE1, HE3 and D1.**

4 Pointing to masonry shall be a hot lime mix as follows:

Raking out of OPC shall utilise handheld plugging chisels or Arbortech's with slim line heritage blades to a depth of 35mm. Raking out shall not utilise angle grinders due to the risk of overcuts to arises. Once prepared the joints shall be brushed back by hand and thoroughly wetted to the back of the open joint with a hand spray to avoid suction and cracking. The mortar gauging shall include 1 part unslaked powdered quicklime (or 15mm kibble) to 3 parts well graded reiver sand. The aggregate will require sieving to ensure compatibility with the joint width / height. The mortar shall be as dry as possible before pointing at the top of the wall and working downwards to allow cleaning below. The mortar should be packed as tightly as possible into the back of the joint using and pointing key or spatula and finished to a flush or slightly rebated joint. Thereafter pointing should be mist sprayed to control drying and shall be protected from sun, wind, and rain. Hessian sacking should be used to assist protection and work in temperatures below 5 degrees C should be avoided. Once the pointing has gone off and achieved a green set (resistant to a fingernail), it should be brushed and tamped back to close any fine cracks and consolidate the aggregate. Any final cleaning required can be done at this point.
**Reason: To protect or improve the character and appearance of the Listed Building and surrounding area in accordance with Local Plan Policies HE1, HE3 and D1.**

5 All windows to be used in the construction of the building shall be constructed in timber. Full details of their design, construction and finish (including details of heads and sills, means of opening and glazing pattern) shall be submitted to and approved in writing by the local planning authority before the commencement of the relevant site works. The details shall include an elevation at 1:20 scale of each door or window type and 1:5 scale cross-sections. Development shall be carried out in accordance with the approved details.
**Reason: To protect or improve the character and appearance of the Listed Building and surrounding area in accordance with Local Plan Policies HE1, HE3 and D1.**

6 Upon commencement of development details of measures to facilitate the provision of high speed full fibre broadband for the dwellings/development hereby permitted, including a timescale for implementation, shall be submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.
**Reason: In order to ensure compliance with Local Plan Policy I1.**

7 Construction or remediation work comprising the use of plant, machinery or equipment, or deliveries of materials shall only take place between the hours of 0800 to 1800 Monday to Friday and 0900 to 1400 on Saturdays and at no time on Sundays or Bank Holidays.
**Reason: In the interests of the amenities of local residents and in accordance with Local Plan Policies GD1 General Development Policy and POLL1 Pollution Control and Protection.**

8 All in curtilage planting, seeding or turfing comprised in the approved details of landscaping shall be carried out on each plot no later than the first planting and seeding season following the occupation of the individual dwellinghouse/s; and any trees or plants which die within a period of 5 years from first being planted, are removed, or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species.
**Reason: In the interests of the visual amenities of the locality, in accordance with Local Plan policies GD1 'General Development' and D1 'High Quality Design and Place Making'.**

9 All out of curtilage planting, seeding or turfing comprised in the approved details of landscaping shall be carried out in full in accordance with a timetable to be submitted to and approved in writing by the Local Planning Authority upon commencement of development. Thereafter the landscaping shall be carried out in accordance with the approved details and timescales.
**Reason: In the interests of the visual amenities of the locality, in accordance with Local Plan policies GD1 'General Development' and D1 'High Quality Design and Place Making'**

10 A landscape management plan, including long term design objectives, management responsibilities and maintenance schedules for all landscape areas, shall be submitted to and approved by the Local Planning Authority prior to the occupation of the development or any part thereof, whichever is the sooner, for its permitted use. The landscape management plan shall be carried out in accordance with the approved plan.
**Reason: In the interests of the visual amenities of the locality and in accordance with Local Plan Policy BIO1 Biodiversity.**

11 The parking/manoeuvring facilities, indicated on the submitted plan, shall be surfaced in a solid bound material (i.e. not loose chippings) and made available for the manoeuvring and parking of motor vehicles prior to the development being brought into use, and shall be retained for that sole purpose at all times.
**Reason: To ensure that satisfactory off-street parking/manoeuvring areas are provided, in the interests of highway safety and the free flow of traffic and in accordance with Local Plan Policy T4 New Development and Transport Safety.**

12 Pedestrian intervisibility splays having the dimensions of 2 m by 2 m shall be safeguarded at the drive entrance/exit such that there is no obstruction to vision at a height exceeding 1m above the nearside channel level of the adjacent highway.
**Reason: In the interest of road safety in accordance with Local Plan Policy T4 New Development and Transport Safety.**

13 All surface water run off shall be collected and disposed of within the site and shall not be allowed to discharge onto the adjacent highway.
**Reason: In the interests of highway safety in accordance with Local Plan Policies T4 New Development and Transport Safety and POLL1 Pollution Control and Protection.**

14 No development shall take place until:

(a) Full foul and surface water drainage details, including a scheme to reduce surface water run off by at least 30% and a programme of works for implementation, have been submitted to and approved in writing by the Local Planning Authority:

(b) Porosity tests are carried out in accordance with BRE 365, to demonstrate that the subsoil is suitable for soakaways;

(c) Calculations based on the results of these porosity tests to prove that adequate land area is available for the construction of the soakaways;

Thereafter no part of the development shall be occupied or brought into use until the approved scheme has been fully implemented. The scheme shall be retained throughout the life of the development.
**Reason: To ensure proper drainage of the area in accordance with Local Plan Policy POLL1 Pollution Control and Protection.**

15 The development shall be completed in line with the recommendations in the Ecological Impact Assessment (reference MAN.1757.003.EC.R.002) dated 15th August 2023, the Defra metric (reference Version 3.1 - Final - Revision C) dated 11th September 2023 and the conditions of the planning permission. All the recommendations shall be implemented in full according to the timescales laid out and thereafter permanently maintained for the stated purposes of biodiversity conservation.
**Reason: In the interest of Biodiversity and in accordance with Local Plan Policy BIO1.**

16 Where raised roofing tile and ridge tile access points for bats are provided within dwellings no breathable roofing membranes will be used within these locations.
**Reason: to ensure no bats are injured and/or killed.**

17 A copy of the European Protected Species Licence issued by Natural England shall be submitted to the Local Planning Authority prior to any works being undertaken.
**Reason: In the interest of Biodiversity and in accordance with Local Plan Policy BIO1.**

18 Monitoring surveys for bats, as per the Ecological Impact Assessment shall be submitted to the Local Planning Authority one year following completion of the development.
**Reason: in order to identify the success of the compensation features implemented.**

19 The development shall be carried out in accordance with the following additional biodiversity mitigation and enhancement measures to those described within section 4 and 5 of the Ecological Impact Assessment. The measures listed below shall be implemented in full, prior to first occupation of the site and the features shall thereafter be permanently retained.

- Integrated bat roosting boxes, integrated swift boxes and invertebrate bricks to be installed in suitable locations within each new dwelling on site; and
- Hedgehog highways to be installed in all boundary fencing, including fences between dwellings. The hedgehog highways will be signposted to prevent residents blocking the gaps.

**Reason: In the interest of Biodiversity and in accordance with Local Plan Policy BIO1.**

20 Prior to the commencement of development, a barn owl compensation strategy is to be submitted to and agreed in writing by the Local Planning Authority. The strategy will include the following details, updated barn owl survey results and a proposal for the provision of a barn owl loft above one of the dwellings on site, alongside two additional barn owl nesting boxes to be installed at suitable locations within the site. Both boxes to be erected at least 3m above ground level at least 30 days prior to the commencement of development.
**Reason: In the interest of Biodiversity and in accordance with Local Plan Policy BIO1.**

21 Prior to commencement of the development, an appropriately experienced and qualified Ecological Clerk of Works (ECoW) shall be appointed by the applicant/developer. The ECoW shall be in post during appropriate stages of the development, as agreed in writing with the Local Planning Authority. The ECoW's scope of work shall include monitoring compliance with the mitigation measures as detailed within the Ecological Impact Assessment, Defra metric, conditions of the European Protected Species Mitigation Licence, and the conditions of the planning permission.
**Reason: In the interest of Biodiversity and in accordance with Local Plan Policy BIO1.**

22 Notwithstanding the submitted details, no development shall take place (including demolition, ground works and vegetation clearance) until a Construction Environmental Management Plan - Biodiversity (CEMP-B) has been submitted to and approved in writing by the local planning authority. The CEMP-B shall include, but not necessarily be limited to, the following:

Risk assessment of potentially damaging construction activities;
- Identification of 'biodiversity protection zones';
- Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements);
- The location and timing of sensitive works to avoid harm to biodiversity features (e.g. daylight working hours only starting one hour after sunrise and ceasing one hour before sunset);
- Use of protective fences, exclusion barriers and warning signs, including advanced installation and maintenance during the construction period;
- The times during construction when specialists ecologists need to be present on site to oversee works;
- Responsible persons and lines of communication;
- The role and responsibilities on site of an Ecological Clerk of Works (ECoW) or similarly competent person(s);
**Reason: In the interest of Biodiversity and in accordance with Local Plan Policy BIO1.**

23 A Biodiversity Enhancement Management Plan (BEMP), completed by a suitably qualified ecologist will be submitted to the Local Planning Authority prior to the commencement of works on site. The BEMP will include the following:

- A recent landscape plan detailing the location of mitigation works and the size of each habitat/linear feature to be enhanced and/or created (if there are any changes to the proposed layout that would impact the outcomes of the Defra metric then an updated version of the metric should be provided to and approved by the Local Planning Authority);
- Management aims and prescriptions detailing the methods required to create and/or enhance each habitat/linear feature at the required quality for a period of 30 years;
- A timetable of delivery for each habitat/linear feature created and/or enhanced;
- A schedule of ecological monitoring for a minimum 30 year period, identifying when key indicators of habitat/linear feature maturity should be achieved;
- Details on the monitoring of habitats and linear features and the provision of a report, which shall be provided to the LPA on the 1st November of each year of monitoring (years one-three after creation, years five, ten and every ten years thereafter), which will assess the condition of all habitats and linear features created and/or enhanced and any necessary management or replacement/remediation measures required to deliver the Net Gain values set out in the BEMP;
- A schedule of actions to be undertaken in case signs of failing are identified; the schedules must include details of technique(s) to be used, equipment to be used, roles and relevant expertise of personnel and organisations involved and timing of actions including submission of monitoring report to the Council.

**Reason: In the interest of Biodiversity and in accordance with Local Plan Policy BIO1.**

24 Notwithstanding the submitted details, before above ground works commence, details of external/internal lighting shall be submitted to and approved in writing by the Local Planning Authority. The details shall be reviewed by the scheme ecologist and clearly demonstrate that lighting will not adversely impact wildlife using key corridors, foraging and commuting features and roosting sites. The details shall include, but are not limited to, the following:

o A drawing showing sensitive areas, dark corridors and buffer areas;
o Technical description, design or specification of external lighting to be installed including shields, cowls or blinds where appropriate;
o A description of the luminosity of lights and their light colour;
o A drawing(s) showing the location and where appropriate the elevation and height of the light fixings;
o Methods to control lighting control (e.g. timer operation, Passive Infrared Sensors (PIR)); and
o Lighting contour plans, both horizontal and vertical where appropriate, taking into account hard and soft landscaping.

**Reason: In the interest of Biodiversity and in accordance with Local Plan Policy BIO1.**

25 Part A (pre-commencement)

No development, including any demolition and groundworks, shall take place until the applicant, or their agent or successor in title, has submitted a Written Scheme of Investigation (WSI) that sets out a strategy for archaeological investigation and this has been approved in writing by the Local Planning Authority. The WSI shall include:

The programme and method of site investigation and recording.
The requirement to seek preservation in situ of identified features of importance.
The programme for post-investigation assessment.
The provision to be made for analysis and reporting.
The provision to be made for publication and dissemination of the results.
The provision to be made for deposition of the archive created.
Nomination of a competent person/persons or organisation to undertake the works.
The timetable for completion of all site investigation and post-investigation works.

Part B (pre-occupation/use)
Thereafter the development shall only take place in accordance with the approved WSI and the development shall not be brought into use until the Local Planning Authority has confirmed in writing that the requirements of the WSI have been fulfilled or alternative timescales agreed.

**Reason: To ensure that any archaeological remains present, whether buried or part of a standing building, are investigated and a proper understanding of their nature, date, extent and significance gained, before those remains are damaged or destroyed and that knowledge gained is then disseminated.**

26 Notwithstanding the provisions of the Town and Country Planning (General Permitted Development (England) Order 2015 (or any Order revoking and/or re-enacting that Order), the garages/car parking spaces hereby permitted shall be retained as such and shall not be used for any purpose other than the garaging of private motor vehicles associated with residential occupation of the property and ancillary domestic storage without the grant of further specific planning permission from the LPA.
**Reason: To retain the garages/car parking spaces for parking purposes.**

27 No works shall commence on site until a scheme for the parking of bicycles has been submitted to and approved in writing by the LPA. The scheme shall be fully implemented before the development is first occupied (or brought into use) and thereafter retained for this purpose.
**Reason: In interests of encouraging use of sustainable modes of transport.**

28 Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 2015 (or any Order revoking or re-enacting that Order with or without modification), no enlargement, improvement or other alteration of the dwellings which would otherwise be permitted by Part 1 of Schedule 2 to that Order shall be carried out without the prior written consent of the Local Planning Authority, and no garages or other outbuildings shall be erected.
**Reason: To safeguard the openness and visual amenities of the Green Belt in accordance with Local Plan Policy GB1 Protection of Green Belt.**

29 No building or use hereby permitted shall be occupied until details of arrangements for the future management and maintenance of proposed carriageways, footways, footpaths and landscaped areas not put forward for adoption as maintainable at public expense within the site have been submitted to and approved in writing by the LPA. On occupation of the first dwelling (or building) within the site, the streets shall be maintained in accordance with the approved management and maintenance details.
**Reason: To ensure that all private streets and landscaped areas are appropriately managed and maintained to ensure the safety of all users in accordance with Local Plan Policy T4**

30 No works shall commence on the site until the status and future maintenance of any footpaths / cycleways / bridleways on site are resolved. Constructional details and future maintenance plans shall be submitted and agreed in writing by the LPA. The development shall, thereafter, be constructed in accordance with the approved details.
**Reason: To ensure that all private streets and landscaped areas are appropriately managed and maintained to ensure the safety of all users in accordance with Local Plan Policy T4**

**Informative(s)**

Pursuant to article 35 (2) of the Town and Country Planning (Development Management Procedure) Order 2015 (as amended), the Local Planning Authority have, where possible, made a pre-application advice service available, and otherwise actively engaged with the applicant in dealing with the application in a positive and proactive manner.

1 The granting of planning permission does not in any way infer that consent of the landowner is given. Therefore, the consent of all relevant landowners is required before proceeding with any development, including that of the Council as landowner.

If it should transpire that the applicant does not own any of the land included in this consent, then it is the responsibility of the applicant to seek all necessary consents and approvals of the landowner.

2 The tracks serving Woodhead Hall Farm are not adopted public highway and future owners and occupiers should be made aware of access rights, liabilities and obligations for its upkeep.

3 The developer shall ensure that no vehicle leaving the development hereby permitted shall enter the public highway unless its wheels and chassis are clean. It should be noted that depositing mud and debris on the public highway is an offence under the provisions of the Highways Act 1980.

4 The works should be undertaken outside of the bird nesting season (March-August inclusive). Should this not be possible then a suitably qualified ecologist should undertake a nesting bird check no more than 48 hours prior to the start of works. Should active nests be found, works should cease until the nests are no longer active and the chicks have fledged and the ecologist has deemed the area to be free of nesting birds.

5 If a protected species (such as any bat, great crested newt, badger, water vole, barn owl or any nesting bird) is discovered using a feature on site that would be affected by the development or related works all activity which might affect the species at the locality should cease. You should then seek the advice of a suitably qualified and experienced ecologist and consider the need for a licence from Natural England prior to commencing works. This action is necessary to avoid possible prosecution and ensure compliance with the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 (as amended), the Protection of Badgers Act 1992 and the Wild Mammals Act 1996. This advice note should be passed on to any persons or contractors carrying out the development/works.

Please be aware that the Council monitors construction sites and open land within the vicinity of such sites in an attempt to prevent fly tipping (i.e. unauthorised deposit of waste on land), which is illegal under the Environmental Protection Act 1990. The penalties for fly-tipping can include:

- a fine of up to £50,000 and
- up to six months imprisonment on conviction.

Therefore, if necessary, please ensure that all demolition waste and waste associated with the construction of any development is disposed of via approved methods and that documents are retained to prove this.

Signed: Dated: 16 January 2024

**Garry Hildersley**
Head of Planning, Policy & Building Control
Growth & Sustainability Directorate

The grant of this consent does not constitute or imply permission, approval or consent by the Local Authority for any other purpose.

**NOTES:-**

## Appeals to the Secretary of State

If you are aggrieved by the decision of the Council to grant permission for the proposed development subject to conditions then you can appeal to the Secretary of State for the Environment, Transport and Regions under Section 78 of the Town and Country Planning Act. If you want to appeal, then you must do so within six months of the date of this notice, using a form which you can get from The Planning Inspectorate, Room 3/24 Hawk Wing, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6PN.

The Secretary of State can allow a longer period for giving notice of an appeal, but he will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal. The Secretary of State need not consider an appeal if it seems to him that the Local Planning Authority could not have granted planning permission for the proposed development or could not have granted it without the conditions it imposed, having regard to the statutory requirements, to the provisions of the development order and to any directions giving under the order. In practice, the Secretary of State does not refuse to consider appeals solely because the Local Planning Authority based its decision on a direction given by him.

## Purchase Notices

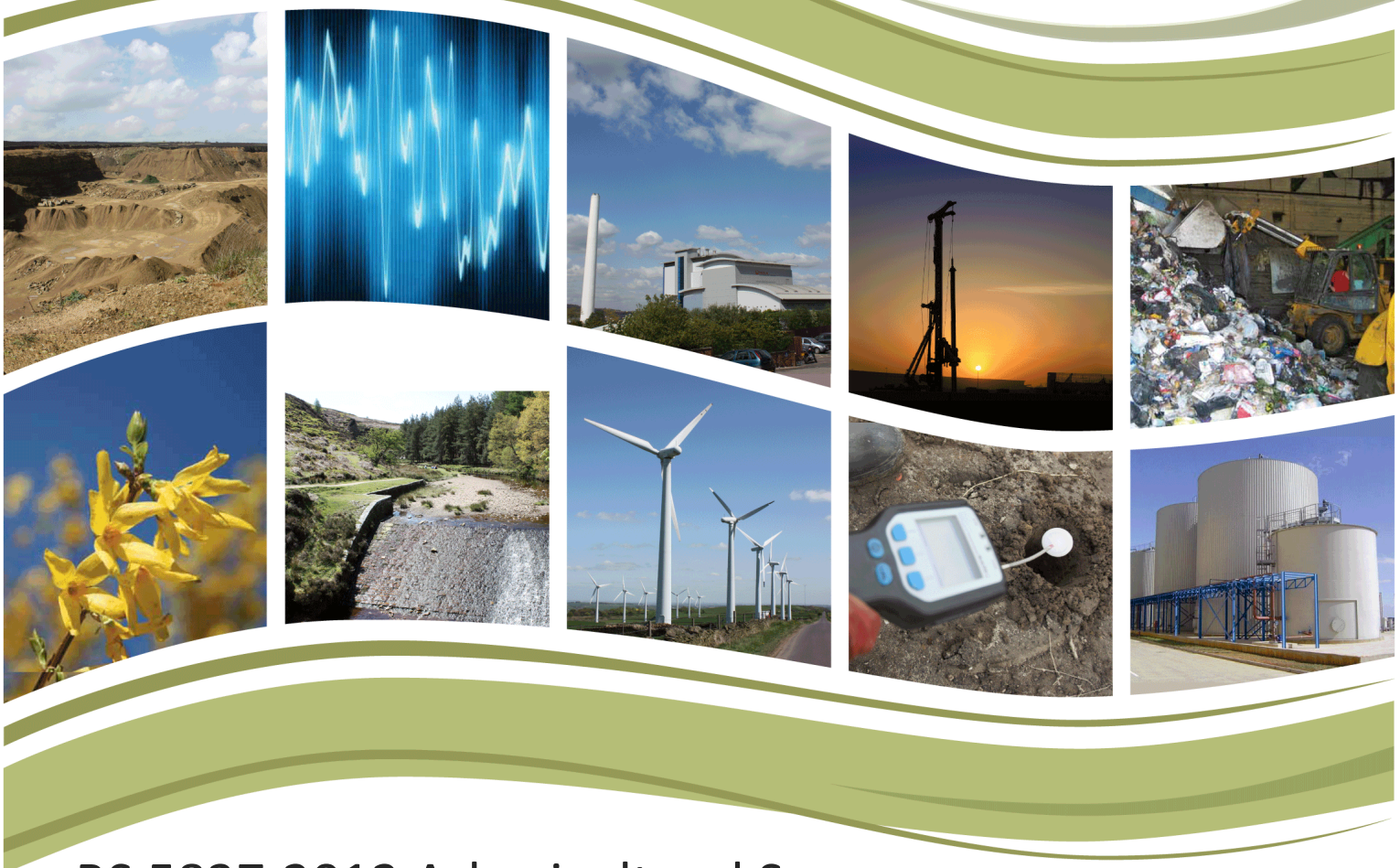
If either the Local Planning Authority or the Secretary of State for the Environment, Transport and Regions refuses permission to develop land or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor can he render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted. In these circumstances, the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of part VI of the Town and Country Planning Act 1990.

## Compensation

In certain circumstances compensation may be claimed from the Local Planning Authority if permission is refused or granted subject to conditions by the Secretary of State on appeal or on reference to the application to him. These circumstances are set out in Sections 114 and related provisions of the Town and Country Planning Act 1990.

## APPENDIX E: ARBORICULTURAL IMPACT ASSESSMENT

enzygo
environmental consultants



# BS 5837:2012 Arboricultural Survey, Impact Assessment and Method Statement

Woodhead Hall Farm, Hoyland

for:

**Rotary Developments Ltd.**

1757.003.ENZ.XX.00.RP.AR.45.101

'Experience and expertise working in union'

enzygo.com

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S36 2AA

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web: www.enzygo.com

# BS 5837:2012 Arboricultural Survey, Impact Assessment and Method Statement

| | |
|---|---|
| Project: | Woodhead Hall Farm, Hoyland |
| For: | Rotary Developments Ltd. |
| Status: | PL03 |
| Date: | March 2023 |
| Author: | Verena Meyer Dipl.Ing. CMLI MArborA – Principal Arboriculturist |
| Reviewer: | Graham Bailey BSC, DIP,CMLI – Associate Director Landscape |

# Contents

# 1.0 Non-Technical Summary

## 1.1 Arboricultural Survey

1.1.1 The site is a derelict farmyard to the East of the Blacker Hill area of Hoyland, near Barnsley. It comprises a disused farmhouse and ancillary collapsed outbuildings in the centre of the site, storage compounds in the West and grassland, scrub and scattered mature trees and tree groups along the site's perimeter.

1.1.2 A tree survey in accordance with BS 5837:2012 was carried out by Enzygo Ltd. in October 2022 25 trees, nine tree groups and two hedgerows were surveyed within the site and within 15m of the site boundary. They are predominantly large mature trees of moderate to high value due to the role they play in the screening of the site which lies in an open and exposed landscape.

## 1.2 Development Proposals

1.2.1 The Client proposes the restoration of Woodhead Hall and the associated farmhouse complex into residential unit and the construction of seven new residential units to its North. Internal and perimeter stone walling will be re-constructed and internal roads and parking spaces will be added to the site's infrastructure.

## 1.3 Arboricultural Impact Assessment

1.3.1 The development will not require the removal of any trees.

1.3.2 Unless adequate protection measures are provided operations linked to the development are expected to have an adverse effect on any retained trees on site.

## 1.4 Arboricultural Method Statement

1.4.1 Protective measures include Access Facilitation Pruning, the erection of a Protective Barrier, the installation of Temporary Ground Protection, No-Dig Construction methodologies for proposed new hard landscape and the sensitive design and installation of utilities.

# 2.0 Objectives

## 2.1 Introduction

2.1.1 Enzygo Limited [Enzygo] have been commissioned by Rotary Developments Ltd. to prepare an Arboricultural Report in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction* for the Woodhead Hall Farm site between Woodhead Lane and Wentworth Road in the Blacker Hill area north of Hoyland and West of Wombwell, in support of a planning application for the restoration of Woodhead Hall and the associated farmhouses into residential units and the erection of further cottages to the North, including access drives, parking and landscaping.

2.1.2 The report includes an assessment of the impact the development proposals may have on existing trees (Arboricultural Impact Assessment) including the expected loss of trees and potential impact on trees to be retained. Based on that it specifies methodologies which will minimise the potential effects on trees and makes recommendations on how any residual effects can be mitigated (Arboricultural Method Statement).

## 2.2 Structure of the Report

2.2.1 **Chapter 2.0** provides a brief description of the site and its location.

2.2.2 **Chapter 3.0** summarises the planning background, including national and local planning policies.

2.2.3 **Chapter 4.0** summarises the findings of the Arboricultural Survey, describing the overall species mix, age, condition and value of the trees recorded on site.

2.2.4 **Chapter 5.0** gives a brief description of the development and details the direct and indirect impact the proposals are expected to have on existing trees.

2.2.5 **Chapter 6.0** provides full details of any methodologies to be adopted in order to adequately protect any retained trees during construction and safeguard the health and safety of the trees in the future. It further makes recommendations for the mitigation of any adverse arboricultural impact.

## 2.3 Site Description

2.3.1 The site is located in Blacker Hill, approximately 1.5km north of the centre of Hoyland and 3km west of the centre of Wombwell, with the main access from Wentworth Road in the West and a secondary access off Woodhead Lane in the East. The site lies within a rural undulating

landscape which is characterised by agricultural fields, historic hedgerows and mature hedgerow trees.

2.3.2 The site falls within the Metropolitan District of Barnsley.

2.3.3 In addition to being characterised by the derelict hall and farm buildings, the site's western boundary is dominated by a large storage compound used by a local scaffolding company. This, as well as a large shipping container and various other storage units and piles in close proximity to mature trees, are expected to have a detrimental effect on tree health and growth in the medium-term.

## 2.4 Project Description

2.4.1 It is understood the planning application is for the restoration of the former Woodhead Hall and former farm buildings to create new residential units, as well as the erection of further cottages in the North. The main access into the site would be from the South-West, connecting the internal access drives to Wentworth Road in Blacker Hill in the West.

2.4.2 Further details regarding the proposed development can be found in the information submitted with the planning application.

# 3.0 Planning background

## 3.1 National Planning Policy Framework

3.1.1 The National Planning Policy Framework (NPPF) published by the government and updated in 2021 sets out the framework objectives for development in England. These are used by Local Planning Authorities (LPA) both during the preparation of their local planning policies as well as to guide them in making individual decisions for Planning Applications.

3.1.2 The NPPF sets out several objectives concerning the natural environment, including trees, woodland and hedgerows. In addition to broad objectives addressing biodiversity and the challenges posed by climate change (e.g. flood resilience, species selection) it encourages the enhancement of the natural and local environment by "*recognising […] the wider benefits from natural capital and ecosystem services including […] of trees and woodland*".

3.1.3 Paragraph 131 states that "*Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure (…) that existing trees are retained wherever possible*."

3.1.4 In paragraph 175 the NPPF requests that "*Planning policies and decisions should contribute to and enhance the natural and local environment by (…) recognising (…) benefits (…) of trees and woodland*".

## 3.2 Local Planning Policy

3.2.1 Supplementary Planning Guidance: Trees and Hedgerows produced by Barnsley Metropolitan Borough Council supports Planning Policy *BIO1 Biodiversity and Geodiversity* of their 2019 Local Plan and requests:

*"Where trees and hedgerows are situated in close proximity to a proposed development a full Tree Survey to British Standard BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations will be required. The Tree Survey should include as a minimum the species, height, crown spread, stem diameter, crown height and general condition of the trees and hedgerows. The trees and hedgerows must also be given a retention category in accordance with the guidance laid out in BS5837: 2012. The Tree Survey also needs to specify any works or pruning that is needed so that they can be satisfactorily and safely accommodated in the development.*

*The tree constraints plan submitted with the survey must show the position and crown spread of all trees and hedgerows on and adjoining the site and the Root Protection Area (RPA) of*

*each tree. The site plan submitted with the application must also clearly indicate which trees it is proposed to retain and which to remove. The site plan must also show the proposed layout of the site with the existing contour of the ground and any proposed alterations in ground level.*

*Where there are impacts on trees you may be requested to provide an Arboricultural Impact Assessment (AIA) in addition to the above information detailing all the potential impacts on the trees and how they can be dealt with in a manner which means that the tree can be safely retained. "*

# 4.0 Arboricultural Survey

## 4.1 Overview

4.1.1 The arboricultural survey was carried out by Verena Meyer, MArborA, in October 2022. At the time of the survey the trees were fully in leaf but beginning to turn.

4.1.2 Nine groups, two hedgerows and 25 individual trees were recorded during the walk-over survey. The majority are located along the site's perimeter, with a smaller number of individual trees scattered across the centre of the site.

4.1.3 A full schedule of all trees and tree groups recorded can be found in Appendix 1 - Arboricultural Survey Schedule.

4.1.4 A selection of photographs showing both the site and notable individual trees and tree groups is included in Appendix 3 – Site photographs.

## 4.2 Tree species, age and overall condition

4.2.1 The site is primarily characterised by clusters of large mature sycamore (*Acer pseudoplatanus*) which indicate the historic edge of Woodhead Hall Farm's curtilage. Beech (*Fagus sylvatica*) fill gaps in the North and a strip of early mature oak make up a section of the western site boundary. The majority of boundary treeswere found to be in good condition.

4.2.2 Within the site, orchard trees (apple- *Malus domestica* and pear- *Pyrus communis*) and non-native black locust/false acacia (*Robinia pseudoacacia*) were found to be overmature and in less favourable condition.

4.2.3 In the West, the aforementioned stoage compound, shipping container and other storage facilities are, whilst currently not visible, likely to have a detrimental effect on the health of trees T2- T6 and group G1 and their rooting environment.

## 4.3 Tree quality, value and significance on site and local landscape

4.3.1 Almost all mature trees which form the site's perimeter were assessed as being either of high or moderate landscape value (BS retention category A2 or B2). As a whole, they, alongside the farm buildings, they form a landmark within the surrounding undulating yet open agricultural landscape of this aprt of the borough. The trees form a pattern which allows glimpsed views into the site whilst still providing both screening of and shelter for any proposed site use.

4.3.2 Only a few overmature trees were assigned a lower retention category (either C or U), predominantly owed to the limited remaining useful life expectancy (RULE) of the falce acacia, the orchard species and the whitebeam (*Sorbus aria*) in the south.

## 4.4 Root Protection Areas (RPA)

4.4.1 The Root Protection Areas for each Category A to C tree and tree group has been calculated based on measured stem diameters. Both the radius and the area of each RPA are listed in Appendix 1 - Arboricultural Survey Schedule and shown on the plan included in Appendix 2 – Tree Survey and Constraints Plan.

## 4.5 Tree Preservation Orders (TPO) and Conservation Areas

4.5.1 The online tool provided on the Barnsely Metropolitan Borough Council website has confirmed that none of the trees included in this survey are protected by Tree Preservation Order. The site is not located within a Conservation Area.

# 5.0 Arboricultural Impact Assessment (AIA)

## 5.1 Development proposals

5.1.1 This AIA is based on the development proposals as shown on Walker DSP Architect's Proposed Block Plan ref. 808-PL110 Revision E received 20th October 2022.

## 5.2 Tree removal

5.2.1 None of the trees on site will require removal to facilitate the development.

5.2.2 The small number of category U trees (T1, T10, T22, T25) will be retained due to their ecological value.

5.2.3 The arboricultural impact of the development is negligible to positive due the overall canopy cover and landscape value of the site being unaffected, in particular if new tree planting is proposed.

## 5.3 Residual impact of development on retained trees

5.3.1 Demolition and construction operations near retained trees are likely to cause accidental damage of tree trunks and low hanging branches.

5.3.2 Vehicle and plant movement during demolition and construction may further cause ground compaction which could lead to irreversible damage of tree roots and the rooting environment within the RPA of retained trees.

5.3.3 The construction of hard landscape within the RPA is likely to have an adverse effect on the rooting environment of retained trees T18 and the northernmost tree in G9.

5.3.4 Any built structures, including new buildings, retaining walls, boundary treatments and street furniture, which require foundations within the RPA of retained trees may have an adverse impact on the health and growth of these trees.

5.3.5 Excavations for underground services may have an impact where they are proposed within the RPA of retained trees. Proposed above ground services may further conflict with parts of tree canopies.

## 5.4 Recommendations

5.4.1 All methodologies specified in the Arboricultural Method Statement (AMS) in Chapter 6.0 should be implemented to ensure any retained trees are adequately protected during site set-up, demolition and construction.

5.4.2 Prior to any development, it is recommended to alleviate any potential issues in the RPAs of T2- T6 and G1, where material storage is likely to have caused ground compaction.

5.4.3 All site managers and site operatives should be aware of the potential impact of the works on retained trees and follow the protection methodologies specified in the AMS in Chapter 5.0.

5.4.4 The site offers opportunities for tree planting which would be sympathetic to the setting of the site. Fruit trees in the south-eastern section of the site could both recreate the historic orchard and increase the biodiversity of the site. Supplementary tree and hedgerow planting in particular along the northern boundary would also benefit the site and its surrounding rural landscape.

# 6.0 Arboricultural Method Statement (AMS)

This AMS should be read in conjunction with Appendix 4 – Tree Protection Plan.

## 6.1 Tree Works

6.1.5 Prior to the site being set-up, a qualified arborist will and carry out any tree works included in the Preliminary Management Recommendations of the Tree Survey Schedule in Appendix 1 - Arboricultural Survey Schedule.

6.1.5 Any tree works should be carried out in accordance with *BS 3998:2010- Tree works recommendations*. To find a suitably qualified tree surgeon, please refer to the Arboricultural Association's list of Registered Contractors.

6.1.6 Any tree works proposed in the respective survey season should be preceded by a nesting bird and roosting bat check carried out by a suitably qualified ecologist.

## 6.2 Ground decompaction and soil amelioration (T2- T6)

6.2.1 Where it is likely that the storage of material and the long-term presence of storage units have caused the compaction of the ground within the RPA of T2- T6, the ground should carefully be de-compacted. A variety of tools are available, including Terravent and Airspade.

6.2.2 The decompaction process should be combined with the improvement of soil within the trees' RPA, in particular the injection of root mycorrhiza which will help to re-establish a sybiotical relationship between tree roots and the soil.

## 6.3 Protective Barrier

6.3.1 Where construction operations are likely to cause damage to above ground parts of retained trees or compaction of the Root Protection Areas (RPA), a protective barrier should be erected prior to commencement of any works on site to create a sacrosanct Construction Exclusion Zone (CEZ). The alignment of the fence should follow the canopy line of the trees or the edges of the RPA, whichever is greater.

6.3.2 Where possible, the CEZ should be extended to include any areas proposed for soft landscaping to minimise compaction in these areas and ensure new planting can establish successfully.

6.3.3 The alignment of the barrier, including indicative setting-out information, is shown on the drawing included in Appendix 4 – Tree Protection Plan.

6.3.4 The protective barrier should be installed in accordance with *BS 5837:2012 Figure 2 Default specification for protective barrier* which consists of a horizontal and vertical scaffold framework that should be braced to resist impact from construction plant and vehicles. Please refer to Appendix 5 – Protective barrier to BS5837:2012 for further information and a detailed specification.

6.3.5 All weather notices should be firmly attached to the barrier to inform any site operatives of the purpose of the fencing, e.g. “Construction Exclusion Zone- No access”.

6.3.6 Where the development is proposed in more than one phase or where temporary access of the CEZ is required for the installation of hard landscape or any other permitted work which is required prior to the main construction works being completed, the barrier may be realigned only on completion of the main demolition/construction works.

6.3.7 The protective barrier must not be removed or realigned unless in accordance with this report or until all construction work has been completed and all construction vehicles and plant have departed from site.

### 6.4 Temporary Ground Protection

6.4.1 Where construction access is justified within the Root Protection Area (RPA) of retained trees, the ground should be protected from disturbance, distortion and compaction by installing Temporary Ground Protection.

6.4.2 The Temporary Ground Protection should be capable of supporting any traffic entering the area and may comprise the following:

- For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame or on top of a compression resistant layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane;

6.4.3 Existing hard landscaping may be suitable as Temporary Ground Protection and should be retained during demolition and construction.

6.4.4 Temporary Ground Protection should only be removed on completion of all construction work and following the departure of all construction vehicles and plant from site. Following removal the ground should be reinstated without disturbance of the underlying soil.

### 6.5 Demolition of existing buildings and removal of hard landscape

6.5.1 Following the the installation of protective barriers and of any temporary ground protection, existing buildings may be demolished by pulling the structures away from existing trees.

6.5.2 Demolition debris should not be stored within the RPA of existing trees.

6.5.3 Areas of hard landscaping should be taken up carefully and without disturbing the ground within the RPA of existing trees. Where new hard landscaping is proposed in the same location, the existing subbase should be retained. Hard landscaping should be retained where otherwise the installation of Temporary Ground Protection would be required.

## 6.6 Level Changes

6.6.1 The reduction of ground levels and the skimming of ground within the RPA of retained trees is not permitted.

6.6.2 Where it is required to raise levels within the RPA of retained trees, this should be achieved by use of an inert granular material which remains gas- and water-permeable throughout its design life.

## 6.7 No-dig construction methodologies for new hard surfaces

6.7.1 New hard surfaces may not exceed 20% of the RPA of retained trees.

6.7.2 New hard surfaces proposed within the RPA of retained trees should be installed without any excavations, but should be built up on top of existing ground levels.

6.7.3 A geotextile membrane will be laid out on top of the existing ground, which may be cleared of all vegetation and loose organic matter. Then a three-dimensional Cellular Confinement System (CCS) specified and approved by the relevant Project Engineer will be installed and filled with inert granular material which allows free drainage and gas exchange (min. 4mm, no fines or sand).

6.7.4 With the CCS acting as a sub-base, all remaining layers required by the Project Engineer can be installed on top, finishing with a permeable wearing course which will ensure gas and water exchange between the air and the root zone.

6.7.5 An example detail is included in Appendix 6 – Example no-dig construction detail.

6.7.6 Kerbing which requires excavations within the RPA of existing trees should be avoided. Peg and board edging may be acceptable for light structures. Where traditional kerbs are unavoidable, excavations for foundations should be carried out carefully and by hand, making sure no roots larger than 25mm diameter are severed. Foundations for traditional kerbs should be installed leaving gaps, allowing the kerb stones to bridge over significant roots.

## 6.8 Reconstruction of stone walls and installation of Boundary Treatments

6.8.7 Existing stone walls should be reconstructed on top of existing foundations, avoiding the need for excavations within the Root Protection Areas. Where new walls are proposed within the RPA of retained trees, these should be built on top of "bridging lintels" to support he wall slightly above roots above 25mm thickness which are to be retained.

6.8.1 Where the installation of fence posts is proposed within the RPA of retained trees, excavations should be kept to a minimum and be carried out carefully by hand. If possible, fence posts should be supported by metal post support spikes. Alternatively, a semi-dry postcrete mix may be acceptable for both fence post foundations and foundations of proposed street furniture. Fences should be aligned to ensure a minimum distance of 500mm between the fence and the stems of existing trees to allow for the future growth of the trees.

## 6.9 Installation of Utility Apparatus

6.9.1 Underground services which require excavations should be located outside the Root Protection Areas (RPA) of retained trees, or outside the Tree Protection Zone as shown in Figure 1 of the *National Joint Utility Group (NJUG) Volume 4- Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees* (NJUG Volume 4), whichever is greater. Refer to Appendix 7 – NJUG Tree Protection Zone.

6.9.2 Where the location of underground services within the RPA is justified, trenchless solutions should be applied in accordance with *BS 5837:2012 Clause 7.7.2* and *NJUG Volume 4*.

6.9.3 Above ground services, including CCTV cameras and lighting, should be sited and installed to avoid the need for detrimental tree pruning in the short and long-term. Installation of above-ground services should further be carried out in accordance with *BS 5837:2012 Clause 7.7.3* and *NJUG Volume 4*.

# 7.0 Appendix 1 – Arboricultural Survey Schedule

## 7.1 Information recorded and symbols used

Ref - Sequential tree reference as per Tree Survey Plan

Species - Common name (*Scientific name*)

Ht (m) - Estimated tree height in metres

Stem dia (cm) - Stem diameter measured in accordance with BS5837:2012 Annex C

Canopy Spread - Estimated branch spread (in metres) at four cardinal points

Clear crown - Height of the lowest branch(es) including cardinal point(s) where applicable

Life stage -
- YNG - Young
- SM - Semi-mature
- EM - Early mature
- M - Mature
- OM - Over-mature (including veteran trees)

RULE - Remaining useful life expectancy estimated in years

Cond. - Overall condition -
- G - Good
- F - Fair
- P - Poor

Notes - Including observations and notes on:

Defects and other structural and physiological abnormalities, nesting birds, bat roost potential (where possible), notes on surrounding land incl. soil compaction, Tree Preservation Orders and Conservation Area (where information is available), notes on limited access/inspection, off site location and preliminary management recommendations (in *italics*)

BS Cat. - Retention category and sub-category in accordance with BS5837:2012

| | |
|---|---|
| A - High Quality | 1 - Mainly arboricultural value |
| B - Moderate Quality | 2 - Mainly landscape value |
| C - Low Quality | 3 - Mainly cultural value |
| U - Unsuitable for retention | |

RPA (m) - Radius of Root Protection Area calculated in metres

(Radius of RPA= 12x stem diameter)

- This will usually be capped at 15m for trees with a stem diameter larger than 1.25m.

RPA ($m^2$) - Area of Root Protection Area (relevant if RPA is not circular due to pre-existing site conditions, incl. water courses, retaining structures and building foundations). Rounded up to nearest $m^2$.

- This will usually be capped at 707$m^2$ for trees with a stem diameter larger than 1.25m.

~ - estimated, used to indicate measurements which cannot be taken due to access restrictions (in particular stem diameters)

| Ref | Species | Ht (m) | Stem dia (cm) | Canopy spread (m) | | | | Clear crown | Life stage | RULE | Cond. | Notes (*Including preliminary management recommendations*) | BS Cat. | RPA (m) | RPA ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | E | S | W | | | | | | | | |
| T1 | Unknown | 8 | 60 | 2 | 2 | 2 | 2 | - | OM | <10 | Poor | Standing deadwood adjacent to site entrance, severely retrenched crown- reduce to 5m if target changes (e.g. for development) | U | 7.20 | 162.86 |
| T2 | Sycamore (Acer pseudoplatanus) | 30 | 65 | 4 | 3 | 9 | 7.5 | 3 | M | 40+ | Good | Forming attractive and prominent group with T3, T4 and T5 | A2 | 7.80 | 191.13 |
| T3 | Sycamore (Acer pseudoplatanus) | 30 | 50 | 4 | 5 | 8 | 6 | 3 | M | 40+ | Good | Forming attractive and prominent group with T2, T4 and T5, larger shipping container placed over RPA to South, close to tree trunk and supported by metal beam- move container out of RPA in medium-term/ adjust position in the short-term | A2 | 6.00 | 113.10 |
| T4 | Sycamore (Acer pseudoplatanus) | 30 | 55 | 6.5 | 6.5 | 9 | 2.5 | 3 | M | 40+ | Good | Forming attractive and prominent group with T2, T3 and T5, shipping container placed too close to tree trunk and restricting secondary growth in short-term- move container out of RPA in medium-term/ adjust position in the short-term | A2 | 6.60 | 136.85 |
| T5 | Sycamore (Acer pseudoplatanus) | 30 | 45 | 6 | 6 | 2.5 | 7 | 3 | M | 40+ | Good | Forming attractive and prominent group with T2, T3 and T4, containers and building material stored over root plate- remove stored materials | A2 | 5.40 | 91.61 |

| Ref | Species | Ht (m) | Stem dia (cm) | Canopy spread (m) | | | | Clear crown | Life stage | RULE | Cond. | Notes (*Including preliminary management recommendations*) | BS Cat. | RPA (m) | RPA (m²) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | E | S | W | | | | | | | | |
| T6 | Sycamore (Acer pseudoplatanus) | 30 | 60 | 8 | 8 | 8 | 8 | 3 | M | 40+ | Good | Large tree by site entrance, prominent along site boundary, scaffolding poles temporarily attached to trunk (i.e. tied, not fixed) at 2.5m height, dense epicormic growth at base, material stored over northern and western RPA | A2 | 7.20 | 162.86 |
| T7 | Sycamore (Acer pseudoplatanus) | 15 | 40 | 4 | 2 | 4 | 6 | 0 | EM | 40+ | Good | - | B2 | 4.80 | 72.38 |
| T8 | Beech (Fagus sylvatica) | 25 | 50 | 6 | 7 | 6 | 5 | 0 | M | 40+ | Good | Attractive tree in north-east corner of the site, forming group with T7 and T9 | A2 | 6.00 | 113.10 |
| T9 | Beech (Fagus sylvatica) | 18 | 55 | 2 | 4 | 5 | 7 | 0 | M | 40+ | Fair | Severe lean to South but overall medium-term stability appears unaffected (i.e. no sign of root plate lifting) | C1 | 6.60 | 136.85 |
| T10 | Unknown | 10 | 30 | 5 | 3 | 3 | 3 | 2 | OM | <10 | Poor | Dead tree | U | 3.60 | 40.72 |
| T11 | Ash (Fraxinus excelsior) | 5 | 3x 10 | 1.5 | 1.5 | 1.5 | 1.5 | 0.5 | SM | 40+ | Fair | Multi-stemmed | C1 | 2.04 | 13.07 |
| T12 | Sycamore (Acer pseudoplatanus) | 9 | 15 | 2 | 2 | 2 | 2 | 0.5 | SM | 40+ | Fair | - | C1 | 0.00 | 0.00 |
| T13 | Silver birch (Betula pendula) | 20 | 30 | 4 | 3 | 1 | 2 | 1 | EM | 10+ | Fair | Large cavity at base, reduce to safe height if target changes (e.g. for development) | C1 | 3.60 | 40.72 |
| T14 | Sycamore (Acer pseudoplatanus) | 30+ | 3x 40, 1x 30 | 3 | 5 | 5 | 5 | 0 | M | 40+ | Good | Large multi-stemmed tree forming prominent group with T15, tight stem unions at base with included bark, growing from collapsed stone wall | A2 | 9.00 | 254.47 |

| Ref | Species | Ht (m) | Stem dia (cm) | Canopy spread (m) | | | | Clear crown | Life stage | RULE | Cond. | Notes (*Including preliminary management recommendations*) | BS Cat. | RPA (m) | RPA ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | E | S | W | | | | | | | | |
| T15 | Sycamore (Acer pseudoplatanus) | 30+ | 3x 40 | 7 | 5 | 3 | 5 | 0 | M | 40+ | Good | Large multi-stemmed tree forming prominent group with T14, tight stem unions at base with included bark, growing from collapsed stone wall | A2 | 8.28 | 215.38 |
| T16 | Sycamore (Acer pseudoplatanus) | 25 | 70 | 6 | 6 | 6 | 3 | 1 | M | 20+ | Fair | Large tree with fork at 2m, at base of collapsed wall, third stem removed | B2 | 8.40 | 221.67 |
| T17 | Sycamore (Acer pseudoplatanus) | 25 | 70 | 6 | 4 | 4 | 8 | 2 | M | 20+ | Fair | Large tree at base of stone wall and collapsed stone outbuilding | B2 | 8.40 | 221.67 |
| T18 | Sycamore (Acer pseudoplatanus) | 20 | 60 | 7 | 4 | 5 | 7 | 5 | M | 40+ | Good | Prominent tree in farm courtyard, dense ivy on stem, cable protruding from lower stem, reduced vitality shown by leaf cover being sparser than expected in October | B2/ B3 | 7.20 | 162.86 |
| T19 | Pear (Pyrus communis) | 6 | 25 | 2 | 3 | 2 | 3 | 1 | OM | <10 | Fair | historic and overmature tree in orchard | C1 | 3.00 | 28.27 |
| T20 | Sycamore (Acer pseudoplatanus) | 10 | 18 | 2.5 | 2.5 | 2.5 | 2.5 | 1 | SM | 40+ | Fair | - | C1 | 2.16 | 14.66 |
| T21 | Sycamore (Acer pseudoplatanus) | 25 | 40 | 5 | 4 | 3.5 | 3 | 1.5 | M | 40+ | Good | - | B2 | 4.80 | 72.38 |
| T22 | Pear (Pyrus communis) | 7 | 40 | 4 | 0 | 1 | 2.5 | 1.8 | OM | <10 | Poor | Dying, suppressed by surrounding trees | U | 4.80 | 72.38 |
| T23 | Sycamore (Acer pseudoplatanus) | 25 | 75 | 8 | 6 | 4 | 9 | 2.5 | M | 40+ | Good | Large prominent tree on southern edge of site, forming large canopy with T24, collapsed stone structures at base | A2 | 9.00 | 254.47 |
| T24 | Sycamore (Acer pseudoplatanus) | 25 | 50 | 3 | 5 | 6 | 9 | 2.5 | M | 40+ | Good | Large prominent tree on southern edge of site, forming large canopy with T23, collapsed stone structures at base | A2 | 6.00 | 113.10 |

| Ref | Species | Ht (m) | Stem dia (cm) | Canopy spread (m) | | | | Clear crown | Life stage | RULE | Cond. | Notes (*Including preliminary management recommendations*) | BS Cat. | RPA (m) | RPA (m²) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | E | S | W | | | | | | | | |
| T25 | Whitebeam (Sorbus aria) | 6 | 40 | 3 | 4 | 1 | 1.5 | 0 | M | <10 | Fair | Severe lean to East, large cavity dominating short main stem | U | 4.80 | 72.38 |
| G1 | Pedunculate oak (Quercus robur) | 20 | 25 | See plan | | | | 0 | EM | 40+ | Good | Dense, early mature boundary group comprising oak only, fly tipping at base of trees and storage compound to East | B2 | 3.00 | 28.27 |
| G2 | Sycamore (Acer pseudoplatanus) | 25 | 60 | See plan | | | | 6 | M | 40+ | Good | Four large sycamore with canopies raised to 6m so somewhat limited screening effect, strong epicormic growth, pressure on root zone from adjacent intensively farmed field- where possible, establish 5m undisturbed buffer to protect western root zone | B2 | 7.20 | 162.86 |
| G3 | Sycamore (Acer pseudoplatanus) | 20-25 | 50 | See plan | | | | 3 | EM | 40+ | Good | Three early-mature trees on edge of site with long-term potential to close visual gaps in green boundary, pressure on root zone from adjacent intensively farmed field- where possible, establish 5m undisturbed buffer to protect southern root zone | B2 | 6.00 | 113.10 |
| G4 | Sycamore (Acer pseudoplatanus) | 25-30 | 70 | See plan | | | | 2 | M | 40+ | Good | Three large trees forming attractive group along north-western boundary, should be retained fully as a group | A2 | 8.40 | 221.67 |
| G5 | Mixed group | 5 | 35 | See plan | | | | 0 | EM | 40+ | Fair | Goat willow, ash, sycamore, all multi-stemmed indicating it may be an old coppiced hedgerow/boundary group | B2 | 4.20 | 55.42 |

| Ref | Species | Ht (m) | Stem dia (cm) | Canopy spread (m) | | | | Clear crown | Life stage | RULE | Cond. | Notes (*Including preliminary management recommendations*) | BS Cat. | RPA (m) | RPA ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | N | E | S | W | | | | | | | | |
| G6 | Pear and apple | 10 | 30 | See plan | | | | 1.5 | OM | <10 | Fair | Two fruit trees growing closely together | U | 3.60 | 40.72 |
| G7 | Mixed group | 20 | 40 | See plan | | | | 0 | M | 20+ | Good | 2x sycamore and 2x false acacia/black locust | B2 | 0.00 | 0.00 |
| G8 | Black locust (Robinia pseudoacacia) | 20 | 40 | See plan | | | | 1 | OM | <10 | Fair | Reached end of useful life with fractured/brittle branches | U | 0.00 | 0.00 |
| G9 | Sycamore (Acer pseudoplatanus) | 30+ | Varies | See plan | | | | 2 | M | 40+ | Good | Large prominent boundary group with varying stem diameters | A2 | See plan | See plan |
| H1 | Mixed hedgerow | 1.5-5 | 70 | See plan | | | | 0 | EM | 40+ | Fair | Boundary hedge comprising sycamore and hawthorn, management lapsed | C1 | 8.40 | 221.67 |
| H2 | Hawthorn (Crataegus mongyna) | 5 | 10 | See plan | | | | 0 | M | 40+ | Good | Mature boundary hedgerow | B2 | 1.20 | 4.52 |

# 8.0 Appendix 2 – Tree Survey and Constraints Plan


**NOTES**

- Do not scale from this drawing
- All dimensions are in meters unless stated otherwise
- This drawing is to be read in conjunction with all relevant drawings and documents associated with this project.
- All surveyed information including levels and layout is provided by others
- All existing and proposed dimensions, levels and locations to be checked and verified by the main contractor on site prior to the commencement of the works and any anomalies reported to the engineer.

**KEY - Tree Survey and Tree Constraints Plan**

**Tree Categories BS 5837 (2012)**

- Tree Category A
- Tree Category B
- Tree Category C
- Tree Category U

Root Protection Area (RPA)

| Rev | Date | Description | | | |
|---|---|---|---|---|---|
| PL01 | 19/10/22 | For Planning | VM | GB | GB |

**Project**
Woodhead Hall Farm

**Client**
Rotary Developments Ltd.

**Drawing Title**
Tree Constraints Plan

| Status | Date | Scale |
|---|---|---|
| For Planning | 19/10/2022 | 1:500 @ A3 |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| VM | -- | GB | GB |

**DWG No.** 1757.003.ENZ.XX.00.DR.AR.45.101

**Revision** PL01

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# 9.0 Appendix 3 – Site photographs

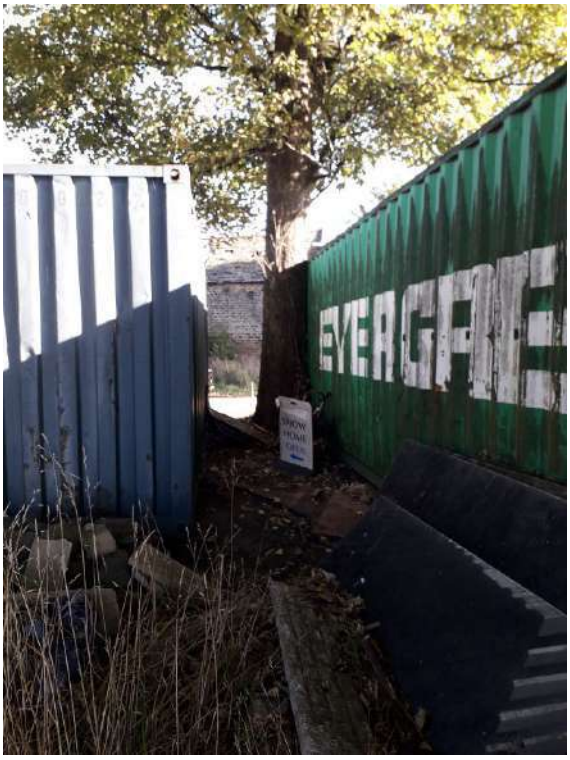

**Plate 1: Shipping container and T4**

**Plate 2: Material stored over RPA of T6**

**Plate 3: Central farmyard and T16 and T17**

**Plate 4: Trees along eastern boundary**

**Plate 5: G9 along western boundary**

**Plate 6: Western site boundary**

# 10.0 Appendix 4 – Tree Protection Plan


## NOTES

- Do not scale for construction purposes
- All dimensions are in meters unless stated otherwise
- This drawing is to be read in conjunction with all relevant drawings and documents associated with this project.
- All surveyed information including levels and layout is provided by others
- All existing and proposed dimensions, levels and locations to be checked and verified by the main contractor on site prior to the commencement of the works and any anomalies reported to the engineer.

**KEY - Tree Protection Plan**

**Tree Categories BS 5837 (2012)**

- Tree Category A
- Tree Category B
- Tree Category C
- Tree Category U
- Tree to be removed (n/a)
- Root Protection Area (RPA)
- TPF — Protective barrier BS 5837 (2012) Figure 2
- No-dig construction BS 5837 (2012) clause 7.4
- Temporary ground protection BS 5837 (2012) clause 6.2.3
- Indicative replacement tree planting (refer to landscape drawings for details)

| Rev | Date | Description | DRA | CHK | APP |
|---|---|---|---|---|---|
| PL03 | 08/03/23 | Cat U trees retained and protected | VM | GB | GB |
| PL02 | 01/11/22 | For Planning | VM | GB | GB |
| PL01 | 21/10/22 | For Planning | VM | GB | GB |

**Project**
Woodhead Hall Farm

**Client**
Rotary Developments Ltd.

**Drawing Title**
Tree Protection Plan

| Status | Date | Scale |
|---|---|---|
| For Planning | 20/10/2022 | 1:500 @ A3 |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| VM | -- | GB | GB |

**DWG No.** 1757.003.ENZ.XX.00.DR.AR.45.102

**Revision** PL03

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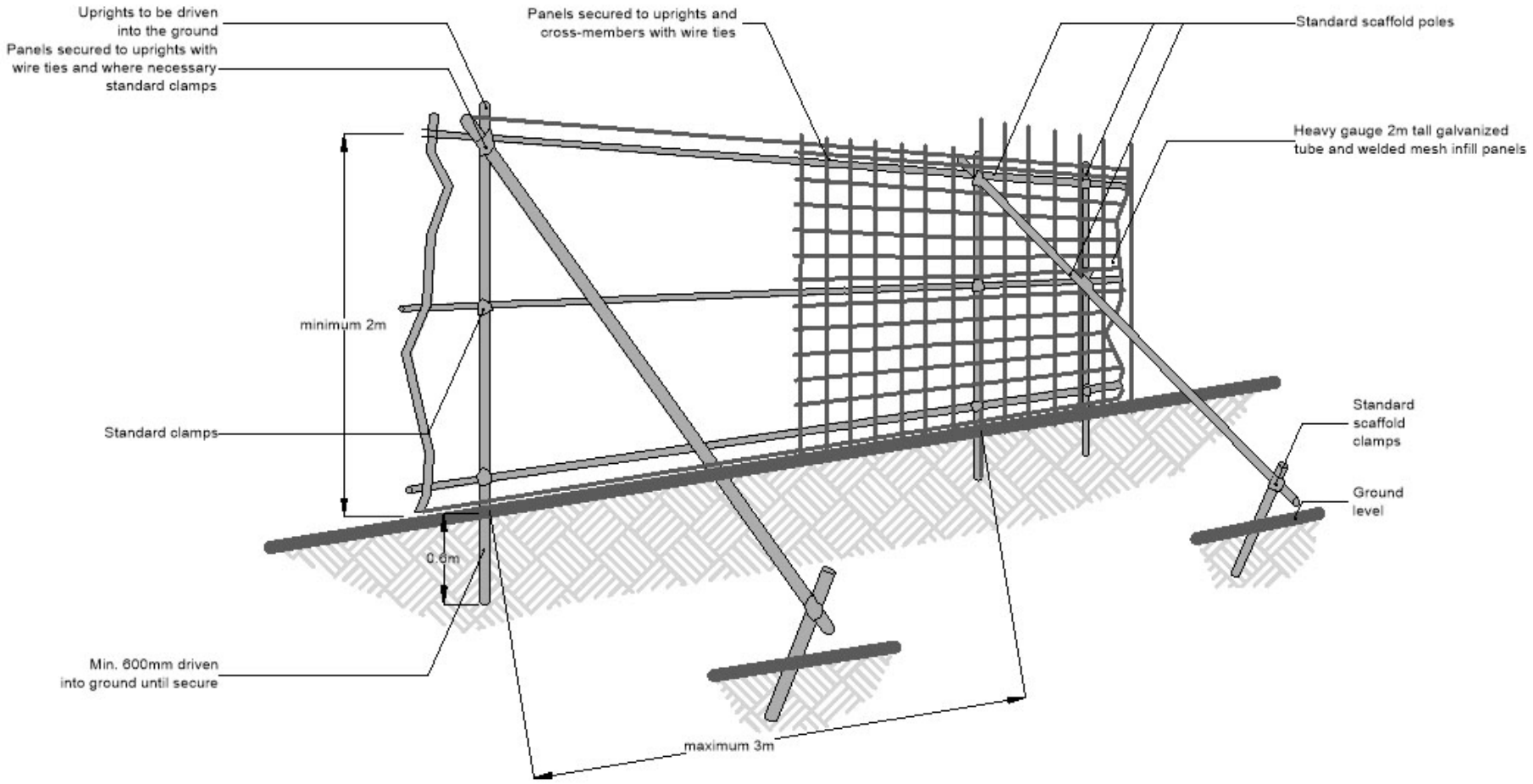
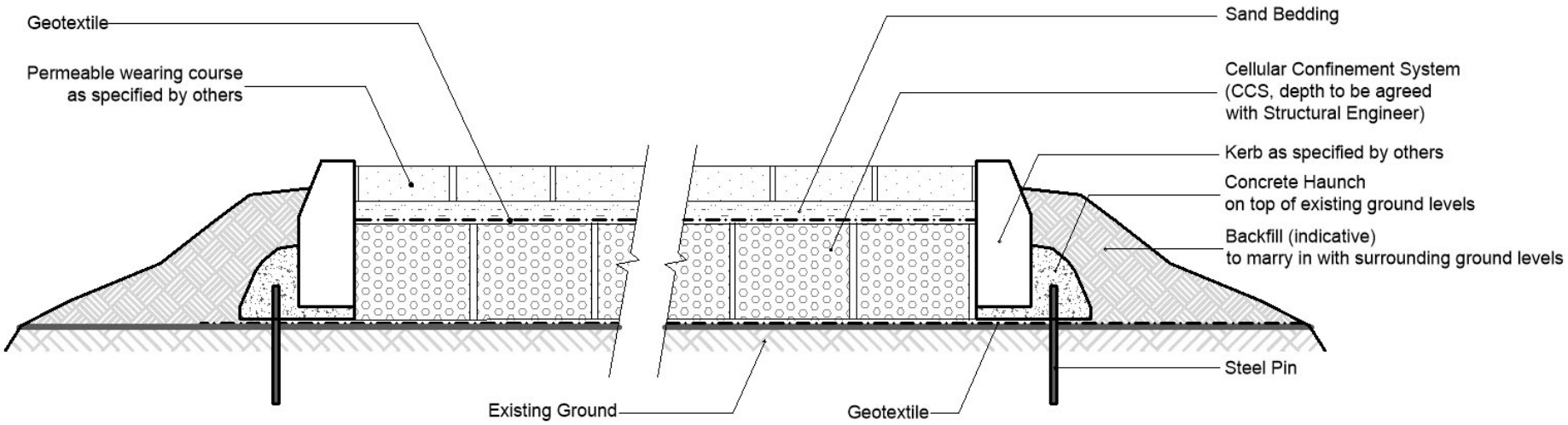
# 11.0 Appendix 5 – Protective barrier to BS5837:2012

## 11.1 Default specification for protective barrier



# 12.0 Appendix 6 – Example no-dig construction detail



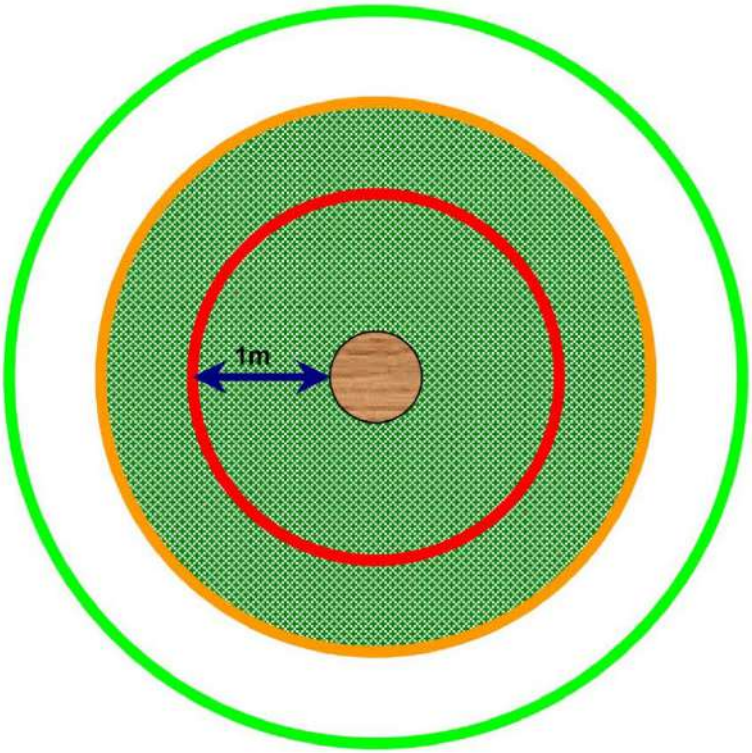

**PLEASE NOTE: For illustrative purposes only to show that hard surfaces are to be installed on top of existing ground levels and therefore not require any excavations. Full detail to be agreed with relevant engineer to ensure suitable strength for traffic expected to use the surface.**

# 13.0 Appendix 7 – NJUG Tree Protection Zone

The National Joint Utilities Group

**NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees**

**FIGURE 1 – Tree Protection Zone**




**Key**

Trunk of tree

Canopy or branch spread

**PROHIBITED ZONE – 1m from trunk.** Excavations of any kind must not be undertaken within this zone unless full consultation with the local authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.

**PRECAUTIONARY ZONE – 4 x tree circumference.** Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with the local authority Tree Officer if in any doubt.

**PERMITTED ZONE – outside of the precautionary zone**. Excavation works may be undertaken within this zone, however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

# 14.0 Appendix 8 – Methodology

## 14.1 Introduction

14.1.1 This report and the methodology adopted to carry out the Arboricultural Survey as well as the Arboricultural Impact Assessment and Method Statement is based on recommendations outlined in *British Standard (BS) 5837:2012 Trees in relation to design, demolition and construction- Recommendations*. This was published by BSI Standards Limited and came into effect on 30th April 2012. It supersedes BS 5837:2005 which is withdrawn.

## 14.2 Arboricultural Survey

14.2.1 A tree survey or arboricultural survey is a ground-based visual assessment of existing trees and tree groups on a site. It records the location of trees, the species, the estimated height and canopy spread, the stem diameter, and the tree's life stage, remaining useful life expectancy (RULE) and overall condition. Any distinctive features and abnormalities such as structural defects and physiological condition which may or may not have an adverse effect on the health or stability of the tree are also recorded, together with any signs of nesting birds and bat roost potential. Where ground conditions may influence the tree's growth, health and stability, such as water logging, ground compaction and severe level changes, this would also be recorded.

14.2.2 The site walkover includes an assessment of the overall value and quality of the trees on site by assigning a retention category to each tree and tree group. This assists stakeholders in deciding which trees should be removed or retained in the event of development occurring. There are four categories: A (high quality), B (moderate quality), C (low quality) and U (unsuitable for retention). For trees in categories A to C, these should qualify under one or more subcategories: 1 (mainly arboricultural qualities), 2 (mainly landscape qualities) and 3 (mainly cultural values).

14.2.3 The findings of the tree survey are recorded in an Arboricultural Survey Schedule supported by a Tree Survey and Tree Constraints Plan, both appended to the report.

14.2.4 The survey includes all trees which have a stem diameter of at least 75mm at 1.5m height or measured in accordance with BS 5837:2012 Annex C.

14.2.5 The tree survey usually records individual trees (labelled "T" on the Tree Survey and Tree Constraints Plan and in the Tree Survey Schedule), but may also group trees of similar age, species and condition into Groups (labelled "G"). Trees may also be grouped where they form

a homogeneous unit (e.g. tree belts and woodland groups) which is unlikely to be directly affected by the development (labelled "G" for small groups or "W" for Woodland Groups, as appropriate). Hedgerows are also recorded where present (labelled "H").

14.2.6 To determine the location of trees, groups and hedgerows on site, Enzygo Ltd. use a Trimble TDC100, a handheld GPS tracking device with an accuracy of up to 1-2m. It enables the surveyor to plot trees onto a base plan, usually a digital copy of a topographic survey or an OS map tile, and to simultaneously record all tree survey information required for a full tree survey schedule to BS 5837:2012.

14.2.7 Following the completion of the site survey this is then uploaded into a Computer Aided Design (CAD) programme in order to produce the Tree Survey and Tree Constraints Plan, with the tree survey information converted into a corresponding Tree Survey Schedule.

14.2.8 The survey includes any trees outside the site boundary which may be affected by any development proposals by overhanging canopies or by Root Protection Areas which are likely to extend into the site. These trees are normally found within 15m from the site boundary.

14.2.9 In addition to a site walk-over survey, a desk-study is carried out which includes the calculation of Root Protection Areas (RPA) in accordance with BS 5837:2012 clause 4.6 as the minimum area of land around the stem of a tree which should be protected during construction.

14.2.10 In line with standing advice by the Forestry Commission and Natural England, the Root Protection Area will be a "*buffer zone around an ancient or veteran tree*" which "*should be at least 15 times larger than the diameter of the tree* [and] *5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter*".

14.3 The desk study includes liaison with the relevant local authority to establish whether any of the trees on site are protected by Tree Preservation Order (TPO) or whether Conservation Areas affect the legal status of any trees. Some local authorities provide online mapping tools on their website which identify any legal tree protection.

### 14.4 Arboricultural Impact Assessment (AIA)

14.4.1 Once the Tree Survey and Tree Constraints Plan has been prepared and a site layout is available, these are superimposed to establish the potential impact of the development, including the construction phase, on the existing tree stock.

14.4.2 The requirement for tree removal is ascertained where tree stems are located within or very close to proposed building footprints and hard landscape and/or within areas with significant proposed level changes and other works requiring soil movement (incl. excavations).

14.4.3 In a second stage an assessment is carried out of the impact both the construction operations and the development proposals may have of retained trees, including hard landscape in RPA, vertical structures and tree canopies

14.4.4 Using information provided by the client on construction operations, including site access, construction vehicle and plant movement and location of the site compound and material storage areas, the potential impact on both below and above ground parts of retained trees is assessed.

14.4.5 In addition to assessing the impact of the development on existing trees, Enzygo also include an assessment of the impact of existing trees on the future use of the site, including shading, spatial constraints and the use of gardens, open spaces, paths and roads. Potential conflicts between trees and the safety of the site have also been analysed.

## 14.5 Arboricultural Method Statement (AMS)

14.5.1 The Arboricultural Method Statement (AMS) gives an overview on all methodologies to be adopted to minimise the effects the development, including construction operations, are expected to have on retained trees.

14.5.2 The AMS further includes a full specification for all methodologies which are necessary to protect retained trees.

14.5.3 Methodologies include protective barriers installed to create a Construction Exclusion Zone (CEZ) around retained trees, temporary ground protection where Root Protection Areas (RPA) cannot be fully fenced off, access facilitation pruning where there are conflicts between parts of the canopy and the development, specialist construction methods for buildings within the RPA and any methodologies to be adopted for utilities within the RPA.

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**Arboriculture**
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# SCHEDULE OF REVISIONS


PWP Design,
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Pool Rd,
Pool in Wharfedale,
Leeds
LS21 1FR

0113 457 2508

| Revision (Date) Purpose | Author | Checked | Approved |
|---|---|---|---|
| REV 01 24/02/2025 | **LW** | **SH** | **SH** |
| REV 00 28/11/2024 | **LW** | **SH** | **SH** |