
**CHARLIE'S PLACE, LAND OFF SODOM LANE,
GRITTENHAM, WILTSHIRE, SN15 4JY**

**LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN
FOR
GYPSY SITE**

**Prepared by:
WHLandscape**

**On behalf of:
Mr John Lee**

Project Reference: 24.1874

Revision:

OCTOBER 2025

APPOINTMENT

WH Landscape Consultancy Ltd (WHLandscape) has been appointed by Mr John Lee to produce a Landscape and Ecological Management Plan (LEMP) for the proposed gypsy site consisting of four pitches and associated hardstanding, landscaping and a commercial barn at Charlie's Place, land off Sodom Lane, Grittenham, Wiltshire, SN15 4JY.

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DWG-1874-01: LANDSCAPE MITIGATION AND ECOLOGICAL ENHANCEMENT

1. INTRODUCTION

1.1 This document, along with the associated illustrative material, provide the landscape and ecological management detail to enable the discharge of Condition 5 of Appeal Reference APP/Y3940/W/25/3360013. The Condition is reproduced in full below:

CONDITION 5

Prior to any above ground building works, and before any caravans are placed on the site, details of both hard and soft landscape works shall be submitted to and approved in writing by the local planning authority. These details shall include:

- *Location and current canopy spread of all existing trees and hedgerows on the land, full details of any to be retained, and measures for their protection in the course of development¹;*
- *A detailed planting specification showing all plant species, planting sizes and planting densities;*
- *All hard and soft and soft surfacing materials;*
- *The location and specification of the fence to delineate the 20 metre no build zone around the badger setts;*
- *Details and location of bat roosts and bird boxes;*
- *Description of existing and proposed ecological features to be managed;*
- *An implementation programme.*

The landscaping works shall be carried out in accordance with the approved details and in accordance with the agreed implementation programme. Any trees or plants which, within a period of five years from the completion of the development, die, are removed, or become seriously damaged or diseased shall be replaced in the next planting season with others of a similar size and species.

1.2 This document has been compiled by WHLandscape in conjunction with Wessex Ecology. The document should be read alongside existing ecological documents (Preliminary Ecological Appraisal, Land at Manor Farm, Sodom Lane, Grittenham, SN15 4JY. Wessex Ecology October 2022.) and information including the landscape plans prepared by WHLandscape (included within the illustrative material).

¹ Full details can be found in the Arboricultural Method Statement produced by WHLandscape and submitted as part of this Condition Discharge

1.3 The aim is to not only integrate the proposed development into the landscape but also provide landscape and ecological enhancements through a comprehensive scheme of new planting and management of existing vegetation, as well as the creation of new habitat areas.

1.4 Planting will be undertaken during the first planting season after the completion of the proposed development and the implementation of hard landscaping proposals. Furthermore, it is important to note that the specification tables show the sizes of vegetation at planting. Their eventual size will depend on growing conditions and appropriate management.

2. ECOLOGY

2.1 ECOLOGICAL BASELINE (2022)

2.1.1 The site, which was approximately 2 hectares in area, consisted of a one pasture field which was being grazed by alpacas and sheep at the time of the appraisal (in 2022). The site was bounded by deciduous hedgerows on its western and eastern sides and a wire fence on its southern boundary. The northern boundary had a small watercourse (the Dauntsey Brook which is a tributary of the Bristol Avon) along it and just within the site.

2.1.2 The hedgerows did not appear to be particularly species rich. The western boundary hedge consisted mainly of hawthorn along with some blackthorn and one semi mature ash tree. The hedge on the eastern boundary also consisted mainly of hawthorn along with alder, blackthorn and elm.

2.2.3 The brook was dry at the time of the appraisal and the bed consisted of soil and dead leaves indicating that there had been no flow for some considerable time. There were shrubs and trees growing along its banks, mainly on the north bank, predominantly field maple & blackthorn along with some dead elm. There was one mature willow tree growing on the north bank close to the northwest corner of the site.

2.2.4 There were no ponds on the site.

2.2.5 The site was surrounded by pastureland on all sides (and a road just beyond the western boundary).

2.2 PROTECTED & NOTABLE SPECIES

2.2.1 Two potential badger setts (inactive) were identified on the site. No badger signs were found during the appraisal. The first possible sett consisted of two entrances, and the other with one entrance. None of the entrances had spoil heaps to speak of, indicating that the tunnels were not extensive. The entrances/ burrows had leaves in them, with no clean soil, indicating a lack of use by badgers. These burrows were assessed as probable outlying satellite setts, which had not been occupied for some time. It is possible that badgers forage on the site. The area of both setts should be fenced off from the rest of the site with a 20m buffer.

2.2.2 There were no buildings on the site. One tree was identified with bat potential; this was a mature willow tree on the north bank of the watercourse close to the northwest corner of the site. The tree had obvious hollows in both the trunk and branches. Bats will forage across the site.

2.2.3 Hedgerows and trees within the hedgerows offered potential bird-nesting habitat.

2.2.4 The vast majority of the site consisted of regularly grazed grassland, which is generally unsuitable for reptiles. Boundary hedgerows represented potential reptile habitat, although the hedges were not particularly wide or dense. There was an area in the north-east corner of the field where there were a number of old electricity poles with long grass growing between them: this area had some potential to support reptiles, and viviparous lizard in particular. There was a pile of old logs and another pile of steel lintels in the southwest corner of the site. These overgrown with vegetation and could potentially act as habitat piles for reptiles.

2.3 OBJECTIVES

2.3.1 The overall aim of creation and management of semi-natural habitats is to establish and/or enhance a range of nationally and locally important habitats that will potentially allow a wider diversity of wildlife to inhabit and use the application site.

2.3.2 The main objective of habitat creation and management during the first 5 years is to ensure the successful establishment of the different habitat types defined below.

2.3.3 Longer-term management objectives deal mainly with maintaining a species- and structurally diverse, robust and maturing habitat mosaic for the benefit of a wide range of wildlife.

2.3.4 The specific ecology objectives of the landscape proposals are:

- *Objective E1:* Establishment and subsequent management of new woody planting (including hedgerow and trees) within the site to promote enhanced structural integrity and habitat connectivity, thereby providing places of shelter as well as movement corridors and foraging resources for wildlife.
- *Objective E2:* Management of areas of species-rich grassland to promote floristic diversity and opportunities for wildlife.
- *Objective E3:* Creation and subsequent management of pond and ditches with associated marginal vegetation to promote habitat and floristic diversity and opportunities for wildlife.

- *Objective E4:* Provision and, where required maintenance, of new species-specific features (e.g. bat and bird boxes and wildlife hibernacula) to provide places of shelter/nesting/roosting for wildlife especially insects, bats, small mammals, birds and common amphibians.

2.3.2 The above objectives will be achieved by the establishment and growth / maturity of individual trees, shrubs, planted and seeded areas, through appropriate management operations as detailed in the chapters below.

2.4 LANDSCAPE AND ECOLOGICAL FEATURES

2.4.1 Provided below is a summary of the landscape and ecological features currently on site that are to be retained, protected and managed, as well as those that are to be created as part of the development.

2.4.2 Retained habitats to be protected and managed are:

- Trees
- Hedgerows
- Watercourse

2.4.3 New habitats/features to be created, protected and managed are:

- Individual trees (native)
- Mixed native hedgerows
- Native (broadleaf) single species hedgerows
- Native riparian shrubs
- Watercourse
- Native bulb swathes
- Bat boxes
- Bird boxes
- Wildlife habitat piles

2.5 HABITAT CONDITION TARGETS

TREES

2.5.1 The site management of individual trees will aim to achieve 'moderate condition' in the shorter term (e.g. 1-20 years) by achieving 4 criteria, and a 'good condition' in the longer term (20+ years) by achieving at least 5 of the 6 criteria as set out below.

1. The tree is a native species.
2. The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).
3. The tree is mature (or more than 50% within the block are mature). **Longer-term management aim.**
4. There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.
5. Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark. **Longer-term management aim.**
6. More than 20% of the tree canopy area is oversailing vegetation beneath.

NATIVE HEDGEROW ON BOUNDARIES

2.5.2 To achieve a 'good' condition status management of the hedgerow will aim to achieve no more than 2 failures in total and no more than 1 failure in any functional group (A-D) of the following components.

- A1. *Height*. Has a greater than 1.5m average height along length.
- A2. *Width*. Has a greater than 1.5m average width along length.
- B1. *Gap – hedge base*. Gap between ground and base of canopy <0.5m for 90% of length.
- B2. *Gap – hedge canopy continuity*. Gaps make up <10% of total length and no canopy gaps >5m long.
- C1. *Undisturbed ground and perennial vegetation*. >1m width of undisturbed ground with perennial herbaceous vegetation for >90% length (from outer edge of hedge on at least one side)
- C2. *Nutrient-enriched perennial vegetation*. Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.
- D1. *Invasive and neophyte species*. >90% of the hedgerow and undisturbed ground is free of invasive, non-native plant species (including those listed on Schedule 9 of the WCA) and recently introduced species.
- D2. *Current damage*. >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.

2.6 RESPONSIBILITIES AND GENERAL MAINTENANCE

2.6.1 The applicant will be responsible for implementation of the management and maintenance measures detailed in this document.

2.6.2 A formal record/log of management activities undertaken will be kept, along with details of vegetation establishment (and any informal records of associated wildlife use where appropriate), which should be used to inform and provide suitable justification for any alterations to the management activities undertaken. An annual summary of the measures undertaken, and any snags or deviations should be prepared. Should measures not have been undertaken in line with the requirements, or other issues identified, the annual summary should include actions to remedy these, including dates, timelines and responsibility. A copy of the annual summary should be kept with the log/record and made available upon request for inspection.

2.6.3 All landscape maintenance operations, where they do not conflict with ecology operations, will be conducted in accordance with BS 4428:1989 'Code of practice for general landscape operations'. Ongoing landscape maintenance operations are to be in accordance with sound ecological principles, and where relevant to be in accordance with BS 7370-4:1993 'Grounds Maintenance Recommendations for maintenance of soft landscape'.

2.6.4 All relevant Acts of Parliament and the manufacturer's instructions must be followed, and containers and other contaminated equipment must be cleared from the site after each day's work.

2.6.5 During maintenance visits, the applicant should:

- Check all plants for damage, security, firmness, fixing and support, and replant in an upright position and re-firm if required;
- Keep all planting areas free from weed growth and hoe over and level all cultivated areas and remove weeds to tip, reinstating mulch as necessary;
- Remove encroaching scrub growth from grassland areas;
- Re-fix displaced, ease where necessary, or replace where damaged, tree ties and tree and shrub shelters; and
- Remove any waste or surplus discarded materials from the above within planted areas including riparian areas.

2.6.6 At the end of each growing season, an inspection of all new planting areas shall be carried out to identify plants that are dead/dying or are failing to thrive. Any dead plants shall be removed and replaced with plant material of the same size and species as specified in Section 5 Landscape and Ecological Enhancement.

2.6.7 Replacement tree and shrub planting shall be carried out by the applicant in the current/first planting season following the discovery of the defect.

2.6.8 Any waste created as part of the general or habitat specific landscape management operations will either be disposed of appropriately off-site, composted on-site or used to create discrete brash piles or used to restock existing habitat piles.

3. MANAGEMENT OF EXISTING VEGETATION AND HABITATS

3.1 TREES

3.1.1 In October 2025, WHLandscape undertook a survey of the trees and hedgerows both within and on the boundary of the site. Altogether 15 trees and 3 hedgerows were assessed. No trees will need to be removed in order to accommodate the proposals, however, a short section of hedgerow will need to be removed for the new access point. This loss will be offset through the planting of mixed native hedgerow along the entranceway and through the gapping up of the former field access point to the north.

TREES UNDER THE CONTROL OF APPLICANT/LANDOWNER

Existing Trees – Maintenance Operations

- a. All trees will be inspected before development begins on the site, and remedial work, (e.g. thinning, crown raising, etc), will be undertaken where necessary in the interest of site safety and general management.
- b. Removal of any trees marked for felling will take place before any demolition or development takes place on site.
- c. Post-construction any trees within or bordering publicly accessible areas must be checked at least once every two years, and after severe inclement weather, for signs of deterioration or distress, and the appropriate actions taken where a potential safety hazard is identified.
 - Heavy branches should be removed in sections and undercut to avoid the tearing of the bark, and thereafter lowered by slings. No branch stumps should be left and no cuts should be capable of holding water.
 - Any dense ivy infestation should be removed if evident on site or during the maintenance period.
 - All diseased wood, pruning's and rubbish should be removed from the site, and the site left clean and tidy.
- d. All works shall be carefully carried out to avoid damage to the tree being treated, or neighbouring trees. No trees to be retained shall be used for anchorage or winching.
- e. Under the terms of the Wildlife and Countryside Act 1981 (as amended), the Countryside Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010, it is an offence to disturb any protected species, including their habitat or resting place. It may, therefore, be necessary to obtain expert ecological advice prior to the commencement of any works. This is particularly relevant to nesting birds, bats and their roosts. Contractors must be

reminded of their responsibilities and should contact the relevant authorities if any signs of bats are found.

- f. The nesting season for most birds runs from 1st March to 31st August. However, this can vary depending on the species and location. During these months, careful inspection must be made before any work commences and works must be postponed if active nests are found.
- g. All tree works will be undertaken by a suitably qualified arborist in accordance with the BS 3998:2010 British Standard Tree Work - Recommendations. Proof of experience and insurance provision will be required. All work shall be undertaken at the appropriate time and with the consent of the applicant.

OFF-SITE TREES NOT UNDER THE CONTROL OF THE APPLICANT/LANDOWNER

2.1.2 Branches of off-site trees overhanging the site, can be subject to cutting back to the ownership boundary without prior consent, unless within the designated Conservation Area or covered by a Tree Preservation Order. However, no trespass must occur, including climbing the tree or accessing the adjacent land without consent. Furthermore, as these trees lie outside of the site, their retention is at the discretion of the relevant landowners. As previously notes, under the terms of the Wildlife and Countryside Act 1981 (as amended), the Countryside Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010, it is an offence to disturb any protected species, including their habitat or resting place.

3.2 HEDGEROWS

3.2.1 Hedgerow cover is typically found in conjunction with the treed boundaries. In several locations, lack of management has resulted in hedgerow plants growing into shrubs of tree sized proportions.

Existing Hedges – Maintenance Operations

- a. All hedges will be inspected before development begins on the site, and remedial work, (e.g. pruning, etc), will be undertaken where necessary for general management.
- b. Post-construction any hedges within or bordering publicly accessible areas will be checked annually, and after severe inclement weather, for signs of deterioration or distress, and the appropriate actions taken.
- c. Where hedgerow plants have grown to 'tree sized proportions', they will be reduced to 1.75m, allowing for managed hedge regrowth, and for the identification of areas to be repaired.

- d. Where hedgerow repair is necessary, planting will be undertaken as described in Section 5.4 of this document, using the detailed Mixed Native Hedge Species Mix. Any gaps smaller than 1.00 m are to be gapped up with hawthorn (*Crataegus monogyna*).
- e. Pruning will be required to ensure the growth of strong, dense hedging, with the hedgerow being grown and maintained at a minimum of 2.50m in height.
- f. Hedgerow management taking place between mid-December and early March. This will avoid the dormice active period and bird-nesting season and allow berries to be used for foraging wildlife.
- g. In order to encourage wildlife mixed native hedgerows must only receive a light pruning and will be cut in an "A" shape or a "topped A" shape to create tall bushy hedges with maximum wildlife potential.

OFF-SITE HEDGES NOT UNDER THE CONTROL OF THE APPLICANT/LANDOWNER

2.1.2 Branches of off-site hedges overhanging the site, can be subject to cutting back to the ownership boundary without prior consent. However, no trespass must occur, including climbing onto hedges or accessing the adjacent land without consent. Furthermore, as these hedges lie outside of the site, their retention is at the discretion of the relevant landowners. As previously notes, under the terms of the Wildlife and Countryside Act 1981 (as amended), the Countryside Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010, it is an offence to disturb any protected species, including their habitat or resting place.

4. PROTECTION OF EXISTING VEGETATION

4.1 The retained trees and hedgerows are vulnerable to damage during demolition and construction and shall be protected during the construction period. Trees and hedges will be protected in accordance with the requirements of BS5837 (2012) taking account of the Root Protection Areas (RPAs) calculated by WHLandscape.

- Protection Barriers will be used to provide a Construction Exclusion Zone (CEZ) to prevent construction activity within the RPAs of the retained trees and hedging both on-site and off-site directly boarding construction areas.
- The protection barriers are to be constructed from weldmesh panels of at least 2.00m height and securely fixed with wire or scaffold clamps fixed to a rigid framework. This framework must be constructed from horizontal and vertical scaffold tubes during the construction period, in accordance with the requirements of BS5837:2012.
- Where protection fencing falls outside of the RPAs of the retained trees and other vegetation, a robust high visibility plastic mesh barrier is recommended in place of the above-mentioned fencing. This will create a visual deterrent and signify the extent of the CEZ.
- All services should be directed outside the retained tree's RPAs.
- No unplanned construction activity whatsoever must be allowed within the RPAs of trees to be retained. This includes the storage of materials, unplanned re-routing of underground services or incursions by vehicles or site operative unless specified and accompanied by specialist protection measure.
- Mixing of concrete or cement, or the storage of fuels must not take place within 10m of the retained trees, nor in any location where a slope in the ground could lead to the contamination of the RPA of any tree to be retained.
- Fires must not be lit in a position where flames could extend within 10m of the foliage, branch framework or trunk of any tree to be retained.
- Landscape works undertaken within the RPAs must be done so as not to damage shallow roots and are to be agreed by the arboricultural consultant. Heavy mechanical cultivation of the soil must not be undertaken within the RPAs of trees to be retained.
- Changes in soil levels should not be undertaken within the RPAs of retained trees, unless otherwise agreed in writing with the Local Planning Authority (LPA). This is in order to ensure that the rooting systems, including the delicate non-woody roots, are not inadvertently severed, or the rooting zones are not compromised by compaction.

4.2 The undertaking of the above measures will ensure that the biodiversity of the site is protected in accordance with the Wildlife and Countryside Act 1981.

5. LANDSCAPE AND ECOLOGICAL ENHANCEMENT

5.1 LANDSCAPE AND HABITAT ENHANCEMENT

5.1.1 Management practices are proposed that will safeguard and enhance key habitats (e.g. hedgerows and mature trees) for the benefit of wildlife. The design and long-term management of the land seeks to provide enhanced green infrastructure connections between the existing site boundary planting with the vegetation of the wider landscape, as well as encouraging species diversity around the site.

5.1.2 The proposed planting will largely consist of introducing distinct structural elements around the site boundary as well as creating structure within the development itself through the use of strategic tree and hedge planting.

5.2 PRELIMINARIES

IRRIGATION

5.2.1 This document is not able to give precise recommendations with regard to species-specific watering requirements; however, the following should be considered in respect of watering for all new planting:

- Use a watering can with a rose attachment on the end to water or a sprinkler or other such method that will administer water slowly and at a low pressure, mimicking rainfall.
- Water should be applied to the base of the plant, evenly distributed over the entirety of the root-ball to encourage even root development.
- Ensure that water is draining well away after 10 minutes of application of water.
- A newly planted tree/shrub should be watered in when planted, and at the point of bud burst in the spring and should be continued throughout the spring and summer until the leaves have fallen in autumn (for deciduous trees).
- Watering is advised for the first 3 summers after planting, further to this the trees and shrubs should be able to access water from the surrounding soil. (**Note:** *Be mindful that newly planted trees do need watering, even if it has been raining as often rainwater will not reach the rootball*).
- Evergreens may need to be watered a little during the winter months if it is particularly dry, this does not need to be done routinely and can be a response to a period of dry weather.
- Use organic mulch at the base of the plants to help retain water, prevent weed growth and also give you an indication of where you need to water.

5.2.2 The table (below) provides a guide to the necessary irrigation period.

Irrigation Schedule: Years 1 to 3		
Size of nursery stock	Irrigation Frequency	Irrigation Rates**
<50mm girth (Shrubs & hedge plants)	Daily for 2 weeks; every other day for 2 months; weekly until established.	Water will be applied to trees at a rate of 8-12 litres of water per 25mm of trunk diameter; Water will be applied to shrubs at a rate of 4-8 litres of water per 25mm of trunk diameter.
50-100mm girth (Standard trees)	Daily for 1 month; every other day for 3 months*; weekly until established.	
>100mm girth (Selected Standard + trees)	Daily for 6 weeks; every other day for 5 months*; weekly until established.	
* When planting in winter, the irrigation frequency can be reduced to 2-3 times each week (after the initial period of daily watering) instead of every other day. ** During the period between May to September weekly watering rates will be no less than 20 litres per tree and 10 litres per individual shrub/linear metre of hedgerow unless ample rainfall renders this unnecessary. During extended dry periods (i.e. 10 days with no rain), plants will be watered every other day.		

5.3 RIPARIAN WOODLAND PLANTING AND MANAGEMENT

Ground Preparation and Planting

- All trees and shrubs will be planted during the first planting season following completion of development (i.e. between November and March) when the ground is neither frozen nor waterlogged.
- All trees are to be pit-planted in square pits, in an area cleared of all vegetation within 1.00m² around each tree. The base and side of tree pits are to be ‘broken’ to assist root penetration and improve drainage.
- Trees are to be planted at 4.00/6.00m (avg. 5.00m) centres, in square pits, avoiding a ‘grid structure’.
- Trees are to be planted a minimum of 3.00m from any existing and proposed drainage channels and service runs that cross the site. (The precise routes of drainage, and any service points, are to be determined before planting commences to prevent conflicts.)
- Trees are to be planted a minimum of 1.50m from any fencing or boundary walls to prevent future conflicts.
- Shrubs will be planted amongst the trees (at minimum distance of 1.00m) at 1.50/2.00m centres (grouping 4-7 specimens of the same species) and avoiding a ‘grid structure’.
- Shrubs will be notch planted.
- All trees and shrubs will be watered to capacity once planted.

Trees Within Soft Landscape Areas – Tree Pits

- Tree pits are to be excavated to a depth of 200mm wider and 200mm deeper than the root spread and backfilled with:

- 150mm of good quality subsoil to meet the specification as set out in BS 8601:2013 'Specification for subsoil and requirements for use'.
- b. A general-purpose slow release fertiliser (at the rate of 75gm/m²) and Tree Planting and Mulching Compost (at the rate of 20litres/m²) are to be incorporated into the top 150mm of topsoil during its final cultivation.

Staking

- a. '*Light Standard*' trees will be single staked using height (Ht) 1200mm and diameter (Dia) 1000mm tree stakes. Trees are to be secured with tree buckle and rubber block, attached to the steaks with flat headed wood nails.
- b. All tree '*Whips*' will be individually staked using (Ht) 75cm (Dia) 25cm square tree stakes.
- c. All shrubs will be staked using (Ht) 60cm bamboo canes.
- d. All plants will be guarded with spiral guards to prevent damage by vermin.

Planting Specifications

Wet Woodland Species Mix – Total Area: 2131.00m²								
Scientific name	Common name	Specification	Girth (cm)	Approx. height (m)	Clear stem height (m)	%	C/U*	No.
Trees								
<i>Alnus glutinosa</i>	Alder	Whip	-	90-120cm	-	15%	U/T	20
<i>Betula pubescens</i>	Downy birch	Light Standard	6-8	2.50/3.00	1.50/1.75	25%	U/T	33
<i>Carpinus betulus</i>	Hornbeam	Light Standard	6-8	2.50/3.00	1.50/1.75	15%	C/T	20
<i>Prunus avium</i>	Wild cherry	Whip	-	90-120cm	-	8%	U/T	11
<i>Salix × fragilis</i>	Crack Willow	Whip	-	90-120cm	-	15%	U/T	20
<i>Salix pentandra</i>	Bay willow	Whip	-	90-120cm	-	15%	U/T	20
<i>Sorbus aucuparia</i>	Rowan	Transplant	-	60-80cm	-	7%	U/T	10
Total (canopy)								134
Shrubs								
<i>Cornus sanguinea</i>	Common dogwood	Transplant	-	60-80cm	-	20%	U	148
<i>Corylus avellana</i>	Hazel	Transplant	-	60-80cm	-	25%	U	185
<i>Crataegus monogyna</i>	Hawthorn	Whip	-	90-120cm	-	25%	U	185
<i>Euonymus europaeus</i>	Spindle	Transplant	-	60-80cm	-	15%	U	110
<i>Salix viminalis</i>	Osier willow	Transplant	-	60-80cm	-	15%	U	110
Total (shrubs)								738
Total plants								872
* Canopy/Understory (T – Tree)								

Maintenance Operations

- a. The planting will be checked at regular intervals five years and any damaged stakes, canes and ties replaced. Plants will be firmed up following planting and, if necessary, until established. Any plants which die, become diseased or damaged will be replaced.
 - Years 0 – 2: Woodland plants will be checked quarterly and after inclement weather.
 - Years 3 – 5: Trees will be checked annually and shrubs will be checked every six months; all plants will be checked after inclement weather.

- Years 5+: Trees will be checked be checked at least once every two years and shrubs will be checked annually; all plants will be checked after severe inclement weather.
- b. Any losses will be replaced during the following planting season to achieve a stocking rate of 95% by the end of the 5-year period.
- c. The stakes and guards will be removed when the trees are established, after 3 to 5 years.
- d. For the first three years, plants within the woodland area will be watered at the frequency and the rates stated in irrigation section of this document.
- e. For subsequent years, during extended dry periods (i.e. 10 days with no rain), plants will be watered to ground capacity on a weekly basis until dry conditions are alleviated.
- f. Weeding around trees will be carried out monthly by hand or by the spot application of glyphosate, taking care not to spray the tree stems, until the plants are well established.

Tree Pruning

- a. Limited formative pruning will be necessary to ensure healthy and balanced crowns develop, avoiding 2 weeks either side of bud burst and leaf fall, at which time the stakes, guards and tree ties will be checked to ensure that the trees are not being damaged by them.
- b. Mature and established trees will be inspected at least once every two years and after severe inclement weather, and any necessary remedial work performed.
- c. Trees in close proximity to the existing overhead power lines to the south of the site will be managed to ensure there are no conflicts between the canopies and the wires.

Shrub Pruning

- a. Pruning will be required to ensure the growth of strong shrub planting and will be carried out once the plants are well established, normally after 2 years but dependent on growth rates.
- b. Established shrubs will be inspected annually and after severe inclement weather, and any necessary remedial work performed.
- c. Pruning will take place in February to maximise retention of any berries for bird foraging.

5.4 INDIVIDUAL TREE PLANTING AND MANAGEMENT

Ground Preparation and Planting

General

- a. All trees are to be pit-planted in minimum 1.00m² square pits, which have been cleared of all vegetation. The base and side (unless root barriers are being used) of tree pits are to be 'broken' to assist root penetration and improve drainage.

- b. Trees will be planted during the first planting season following completion of development (i.e. between November and March) when the ground is neither frozen nor waterlogged. If the ground is dry, the plants will be watered to ground capacity on planting.
- c. Trees are to be planted a minimum of 3.00m from any existing and proposed drainage channels and service runs that cross the site. (The precise routes of drainage, and any service points, are to be determined before planting commences to prevent conflicts.)
- d. Trees are to be planted a minimum of 1.00m from any fencing or boundary walls to prevent future conflicts.
- e. Root barriers (GreenBlue Urban or similar approved) should be used where necessary to protect services, structures and surfaces if trees cannot be suitably repositioned in their immediate locality (see 5.2.1 to 5.2.5 for full details).
- f. All trees will be watered to capacity once planted.

Trees Within Soft Landscape Areas – Tree Pits

- a. Tree pits are to be excavated to a depth of 750mm (900mm in previously developed areas) and backfilled with:
 - 300mm of good quality subsoil (450mm if planting within a previously developed area cleared to 900mm) to meet the specification as set out in BS 8601:2013 'Specification for subsoil and requirements for use'.
 - 450mm depth of topsoil to meet the specification as set out in BS 3882:2015 'Specification for topsoil'.
- b. A general-purpose slow-release fertiliser (at the rate of 75gm/m²) and Tree Planting and Mulching Compost (at the rate of 20litres/m²) are to be incorporated into the top 150mm of topsoil during its final cultivation.

Staking

- a. '*Light Standard*' and '*Standard*' trees will be single staked using (Ht) 1200mm (Dia) 1000mm tree stakes. Trees are to be secured with tree buckle and rubber block, attached to the steaks with flat headed wood nails.
- b. All trees will be mesh guarded to prevent damage by vermin.

Planting Specifications

Open Space/Boundary Tree Species							
Plan Ref.	Scientific name	Common name	Specification	Girth (cm)	Approx. height (m)	Clear stem height (m)	No.
Ac	<i>Acer campestre</i>	Field Maple	Light Standard	6-8	2.50/3.00	1.5/1.75	6
Ag	<i>Alnus glutinosa</i>	Alder	Standard	8-10	2.50/3.00	1.75/2.00	4
Cb	<i>Carpinus betulus</i>	Hornbeam	Light Standard	6-8	2.50/3.00	1.5/1.75	4
Cm	<i>Crataegus monogyna</i>	Hawthorn	Light Standard	6-8	2.50/3.00	1.5/1.75	3
Ms	<i>Malus sylvestris</i>	Crab apple	Light Standard	6-8	2.50/3.00	1.5/1.75	1
Pa	<i>Prunus avium</i>	Wild cherry	Light Standard	6-8	2.50/3.00	1.5/1.75	2
Pp	<i>Prunus padus</i>	Bird cherry	Standard	8-10	2.50/3.00	1.75/2.00	4
Qr	<i>Quercus robur</i>	English oak	Standard	8-10	2.50/3.00	1.75/2.00	2
Total:							25

Maintenance Operations

- a. The planting will be checked at regular intervals and any damaged stakes, canes and ties replaced. Plants will be firmed up following planting and, if necessary, until established. Any plants which die, become diseased or damaged will be replaced.
 - Years 0 – 2: Trees will be checked quarterly and after inclement weather.
 - Years 3 – 5: Trees will be checked annually and after inclement weather.
 - Years 5+: Trees will be checked at least once every two years and after severe inclement weather.
- b. For the first three years, trees will be watered. For subsequent years, during extended dry periods (i.e. 10 days with no rain), trees will be watered to ground capacity on a weekly basis until dry conditions are alleviated.
- c. Weeding around trees will be carried out monthly by hand until the plants are well established. Mulch will be applied annually, using 50mm of matured wood bark, or wet straw, for the first three years after planting to suppress weed growth and contain the moisture.
- d. Limited formative pruning will be necessary to ensure that healthy and balanced crowns develop, avoiding 2 weeks either side of bud burst and leaf fall, at which time the stakes, guards and tree ties will be checked to ensure that the trees are not being damaged by them.
- e. Stakes and guards will be removed when the trees are established, after approximately 3 to 5 years depending on species.

- f. Any losses will be replaced during the following planting season to achieve a stocking rate of 100% by the end of the 5-year period.
- g. Mature and established trees will be inspected at least once every two years and after severe inclement weather, and any necessary remedial work performed.

5.5 HEDGE PLANTING AND MANAGEMENT

Ground Preparation and Planting

- a. Bare-rooted hedging material will be planted during the first planting season following completion of development (i.e. between November and March) when the ground is neither frozen nor waterlogged. If the ground is dry, the plants will be watered to ground capacity on planting.
- b. All invasive and pernicious weeds will be removed from the site before works commence. Clearance will be restricted to non-residual herbicide in accordance with manufacturers specifications and hand weeding. All planting beds will be free from weeds and waste materials.
- c. All Mixed Native hedging material will be planted as bare-rooted transplants and are to be notch-planted in a double staggered row at 45cm centres using 5 plants per linear metre, taking care to ensure species are mixed and not heavily grouped.
- d. Planting areas will be mulched using 50mm of matured wood bark, or wet straw
- e. Plants will be individually staked using (Ht) 600mm bamboo canes and guarded with spiral guards to prevent damage by vermin.
- f. All hedgerow plants will be watered in once planted.

Planting Specifications

Mixed Native Hedge Species Mix – Total Length: 313m					
Scientific name	Common name	Specification	Approx. height (cm)	%	No.
<i>Acer campestre</i>	Field maple	1 + 1 transplants	60-80	5	70
<i>Corylus avellana</i>	Hazel	1 + 1 transplants	60-80	25	348
<i>Crataegus monogyna</i>	Hawthorn	1 + 1 transplants	60-80	40	556
<i>Euonymus europaeus</i>	Spindle	1 + 1 transplants	60-80	5	70
<i>Ilex aquifolium</i>	Holly	Pot-grown (3ltr)	40-60	2.5	35
<i>Prunus spinosa</i>	Blackthorn	1 + 1 transplants	60-80	15	209
<i>Viburnum lantana</i>	Wayfaring tree	1 + 1 transplants	60-80	5	70
<i>Viburnum opulus</i>	Guelder rose	1 + 1 transplants	60-80	2.5	35
Total:					1393

Maintenance Operations

- a. The planting will be checked at regular intervals and any damaged stakes, canes and ties replaced. Plants will be firmed up following planting and, if necessary, until established. Any plants which die, become diseased or damaged will be replaced.
 - Years 0 – 2: Hedging plants will be checked quarterly and after inclement weather.
 - Years 3 – 5: Hedging plants will be checked biannually and after inclement weather.
 - Years 5+: Hedging plants will be checked annually and after severe inclement weather.
- b. For the first three years, hedge plants will be watered. For subsequent years, during extended dry periods (i.e. 10 days with no rain), plants will be watered to ground capacity on a weekly basis until dry conditions are alleviated.
- c. Weeding around hedges will be carried out monthly by hand until the plants are well established. Mulch will be applied annually, using 50mm of matured wood bark, or wet straw, for the first three years after planting to suppress weed growth and contain the moisture.
- d. Pruning will be required to ensure the growth of strong, dense hedging and will be carried out once the plants are well established, normally in the second year, but dependant on growth rates.
- e. Hedgerow management will take place between mid-December and early March. This will avoid the dormice active period and bird-nesting season and allow berries to be used for foraging wildlife.
- f. Mixed native hedging will be maintained at a minimum of 2.50m in height once established.
- g. Guards and stakes will be removed once the plants are well established.

- h. Any losses will be replaced during the following planting season to achieve a stocking rate of at least 95% by the end of the 5-year period.
- i. Established hedges will be inspected annually and after severe inclement weather, and any necessary remedial work performed.

5.6 LAWN GRASS PLANTING AND MANAGEMENT

Ground Preparation

To prepare the seed bed weeds must first be removed using repeated cultivation or herbicide application. The ground will be ploughed or dug to bury any unwanted ground cover, then cultivated with a rotovator, finally the soil will be harrowed or raked to produce a medium tilth. After the initial cultivation and levelling the ground will be left to settle for several days/weeks; this gives another opportunity to control any residual weeds which emerge during this time, such as docks, thistles, mare's tail or brambles.

To achieve an even surface, the ground will be lightly re-cultivated, and any large stones or bricks removed from the surface. Once prepared the ground will be raked and rolled, moving soil if needed to smooth out minor humps and depressions, to produce a firm surface. The final raking and rolling will produce a seed bed with a medium-fine tilth ready for seeding. Cultivation work will be carried out when the soil moisture level is reasonably low, allowing the soil to crumble.

Sowing Specifications

Lawn Seed Mix – Total Area: 576.00m²			
Seed Mix	Sowing Rate (g/m²)	%	Quantity (g)
Emorsgate EG22 (or equivalent)	25	100	≈14400

Sowing

- a. Seed will be sown in spring when there is sufficient warmth and moisture in the soil. Moisture will be supplied artificially by watering if the soil is dry, however it must be thorough enough to penetrate at least 100mm.
- b. Seed will be surface sown onto a freshly prepared seed bed and can be applied by machine or broadcast by hand (do not drill). To get an even distribution, divide the seed into two or more parts and sow in overlapping sections.
- c. After sowing lightly rake or harrow the surface to settle the seed in. Take care not to bury the seed at depth. Firm with a roller, or by treading, to give good soil/seed contact.

Maintenance Operations

- a. Protect the newly sown seed from birds and prevent public access onto the soil. Weed the area by hand, removing any weeds before they flower.
- b. Newly sown grass seed must always remain moist unless conditions are naturally damp. Seed will be watered with sprinklers twice per day (morning and late afternoon) for 5 to 10 minutes each time so as not to oversaturate the soil. Watering will continue for 3-4 weeks, depending on weather conditions. Once germination occurs and green grass shoots are visible, reduce watering unless conditions are very dry.
- c. Once grass seed has germinated, the frequency of watering will be slowly reduced to a single long soak of approximately 40 minutes in late afternoon on alternate days, depending on weather conditions.
- d. Once seedling grasses are established and 5-8cm in height, (typically in good growing conditions after about three to four weeks), lightly roll or tread to firm and level the soil around the grass roots ready for the first cut. Do not roll if the ground is saturated with water.
- e. When the grass has picked up again (typically after a few days) the first cut can be undertaken with the mower set on a high setting (50mm +). The aim is to trim the sown grass back by about one-third of its height and cut back any weeds. The watering regime continued until the next cut.
- f. After the second cut the lawn can be mown regularly as needed, progressively reducing the mowing height over its first spring/summer to the desired height. The grass will be watered weekly at a rate of 40 minutes per day in late afternoon, depending on weather conditions. When there are extended dry periods (i.e. 10 days with no rain), the lawn will be watered to saturation twice a week until dry conditions are alleviated.
- g. A new sown lawn will take a full year or more to reach full strength and ground cover and knit together as a turf. It can be walked on during establishment but heavy use that might cause wear and tear will be avoided.

5.7 TUSSOCKY GRASSLAND PLANTING AND MANAGEMENT

5.7.1 The driveway will be constructed using Type 1 rolled stone with a central grass strip.

Ground Preparation

To prepare the seed bed weeds must first be removed using repeated cultivation or a herbicide. The ground should be ploughed or dug to bury any unwanted ground cover, then cultivated with a rotovator, finally the soil should be harrowed or raked to produce a medium tilth. It may be necessary

to return to site even after seeing in order to remove any invasive species such as docks, thistles, mare's tail or brambles; These should either be manually removed or individually chemically treated.

Once prepared the ground should be raked and rolled, moving soil if needed to smooth out minor humps and depressions, to produce a firm surface. The final raking and rolling should produce a seed bed with a medium-fine tilth ready for seeding. Cultivation work will be carried out when the soil moisture level is reasonably low, allowing the soil to crumble.

Sowing Specifications

Tussocky Grass Seed Mix – Total Area: 254.70m²			
Seed Mix	Sowing Rate (g/m²)	%	Quantity (g)
Emorsgate EM10 (or equivalent)	4	100	≈1019

Sowing

- Seed is best sown in autumn or spring at a rate of 4g/m², however it could be sown at other times of the year if there is sufficient warmth and moisture.
- Seed should be surface sown onto a freshly prepared seed bed and can be applied by machine or broadcast by hand (do not drill). To get an even distribution, divide the seed into two or more parts and sow in overlapping sections.
- After sowing do not incorporate the seed but roll to firm it in and get good soil/seed contact.

Maintenance Operations

First Year

- Growth and establishment of grasses may be slow initially, and there will often be a flush of annual weeds from the soil in the first growing season. While weeds can look unsightly, they nonetheless provide shelter to sown seedlings, as well as providing habitat for invertebrates and they will die during the winter period.
- Resist cutting the annual weeds until mid to late summer (early August is recommended), especially if the mixture contains Yellow Rattle, then remove and compost. This will reveal the young seedlings, which can then be kept short by mowing through to the end of March of the following year.

Continued Management

- Once established tussocky grassland requires minimal maintenance.
- Unwanted perennial weeds may need control by selective cutting before seeding.

- c. To control scrub and bramble development, tussocky grassland will need cutting every 2-3 years between February and October.
- d. Strimming shall occur every 2-3 years on a rotational basis, where approximately 40% of the tussocky grassland is strimmed at any one time. This will allow for some areas of tussocky grassland to be undisturbed, enhancing its structure and providing shelter habitat for a range of species.

6. FAUNA SPECIFIC FEATURE CREATION AND MANAGEMENT

6.1 BATS

CREATION

6.1.1 To enhance the site for roosting bats, ten integrated bat roosting boxes (also known as bat bricks or bat tubes) will be installed within the fabric of external walls on the new buildings (2 day rooms and 1 barn). The ten bat boxes will be installed as close to the roof apex on southerly facing elevations.

MANAGEMENT

6.1.2 The bat boxes are fully integrated into the fabric of the buildings and are self-cleaning. The bat boxes require no specific maintenance.

6.2 BIRDS

CREATION

6.2.1 To provide mitigation and an enhancement for nesting birds a number of integrated swift nesting boxes, which fit into the fabric of an external cavity wall, will be incorporated into the scheme. The swift boxes will generally be installed as pairs. The boxes will be orientated as close to the roof apex on northerly or easterly facing elevations, which provide sufficient height and shelter from direct sunlight and predators.

6.2.2 Swallow boxes will also be installed on the proposed barn. A small number of 'small bird' boxes will also be installed on the barn. Appropriate boxes will also be attached to mature trees on the site.

MANAGEMENT

6.2.3 The swift boxes are fully integrated into the fabric of the buildings and require no specific maintenance. The swallow and small bird boxes will be attached externally to the buildings and mature trees at appropriate locations.

6.3 WILDLIFE HABITAT PILES

CREATION

6.3.1 To enhance the habitat niches available within the site for a range of wildlife, wood habitat piles (wildlife hibernacula) will be created within appropriate locations in the corners of the fields and along boundaries.

6.3.2 The habitat piles will be constructed from arisings from site management of woody vegetation by stacking 1.00-2.00m lengths of cut tree, shrub or brashwood. Openings into the wood piles will be maintained at ground level, providing access for wildlife to seek refugia within the interior of the piles.

6.3.3 These decaying wood piles provide ideal habitat for saproxylic invertebrates (feed on deadwood), fungi and mosses, while also providing shelter for a variety of wildlife including small mammals, reptiles and amphibians.

MANAGEMENT

6.3.4 The habitat piles are reasonably long lasting, and their gradual decay is important to ensure they continue to provide benefits to a range of wildlife. As such, they do not require regular ongoing maintenance. Nonetheless, the habitat piles should be inspected every 3-5 years and topped up with woody arisings from ongoing site management as required.

6.4 TUSSOCKY GRASSLAND

CREATION

6.4.1 The area of the field beyond the badger fence near the north-east corner of the site will be left unmanaged and allowed to develop into tussocky grassland which will be beneficial to badgers, voles, reptiles, amphibians etc.

MANAGEMENT

6.4.2 Occasional removal of encroaching scrub will be required to prevent the area scrubbing over.

Wet Woodland Species Mix – Total Area: 2131.00m ²								
Scientific name	Common name	Specification	Girth (cm)	Approx. height (m)	Clear stem height (m)	%	C/U*	No.
Trees								
<i>Alnus glutinosa</i>	Alder	Whip	-	90-120cm	-	15%	U/T	20
<i>Betula pubescens</i>	Downy birch	Light Standard	6-8	2.50/3.00	1.50/1.75	25%	U/T	33
<i>Carpinus betulus</i>	Hornbeam	Light Standard	6-8	2.50/3.00	1.50/1.75	15%	C/T	20
<i>Prunus avium</i>	Wild cherry	Whip	-	90-120cm	-	8%	U/T	11
<i>Salix × fragilis</i>	Crack Willow	Whip	-	90-120cm	-	15%	U/T	20
<i>Salix pentandra</i>	Bay willow	Whip	-	90-120cm	-	15%	U/T	20
<i>Sorbus aucuparia</i>	Rowan	Transplant	-	60-80cm	-	7%	U/T	10
Total (canopy)								134
Shrubs								
<i>Cornus sanguinea</i>	Common dogwood	Transplant	-	60-80cm	-	20%	U	148
<i>Corylus avellana</i>	Hazel	Transplant	-	60-80cm	-	25%	U	185
<i>Crataegus monogyna</i>	Hawthorn	Whip	-	90-120cm	-	25%	U	185
<i>Euonymus europaeus</i>	Spindle	Transplant	-	60-80cm	-	15%	U	110
<i>Salix viminalis</i>	Osier willow	Transplant	-	60-80cm	-	15%	U	110
Total (shrubs)								738
Total plants								872
* Canopy/Understory (T – Tree)								

Open Space/Boundary Tree Species							
Plan Ref.	Scientific name	Common name	Specification	Girth (cm)	Approx. height (m)	Clear stem height (m)	No.
Ac	<i>Acer campestre</i>	Field Maple	Light Standard	6-8	2.50/3.00	1.5/1.75	6
Ag	<i>Alnus glutinosa</i>	Alder	Standard	8-10	2.50/3.00	1.75/2.00	4
Cb	<i>Carpinus betulus</i>	Hornbeam	Light Standard	6-8	2.50/3.00	1.5/1.75	4
Cm	<i>Crataegus monogyna</i>	Hawthorn	Light Standard	6-8	2.50/3.00	1.5/1.75	3
Ms	<i>Malus sylvestris</i>	Crab apple	Light Standard	6-8	2.50/3.00	1.5/1.75	1
Pa	<i>Prunus avium</i>	Wild cherry	Light Standard	6-8	2.50/3.00	1.5/1.75	2
Pp	<i>Prunus padus</i>	Bird cherry	Standard	8-10	2.50/3.00	1.75/2.00	4
Qr	<i>Quercus robur</i>	English oak	Standard	8-10	2.50/3.00	1.75/2.00	2
Total:							26

Mixed Native Hedge Species Mix – Total Length: 313m					
Scientific name	Common name	Specification	Approx. height (cm)	%	No.
<i>Acer campestre</i>	Field maple	1 + 1 transplants	60-80	5	70
<i>Corylus avellana</i>	Hazel	1 + 1 transplants	60-80	25	348
<i>Crataegus monogyna</i>	Hawthorn	1 + 1 transplants	60-80	40	556
<i>Euonymus europaeus</i>	Spindle	1 + 1 transplants	60-80	5	70
<i>Ilex aquifolium</i>	Holly	Pot-grown (3ltr)	40-60	2.5	35
<i>Prunus spinosa</i>	Blackthorn	1 + 1 transplants	60-80	15	209
<i>Viburnum lantana</i>	Wayfaring tree	1 + 1 transplants	60-80	5	70
<i>Viburnum opulus</i>	Guelder rose	1 + 1 transplants	60-80	2.5	35
Total:					1393

