

MIXED USE DEVELOPMENT
LONGFORD PARK, BANBURY

Application No. 15/01168/REM

Planning Condition 8:
Landscape Management Plan



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1. INTRODUCTION

- 1.1. Aspect Landscape Planning Ltd and Aspect Ecology Ltd have been appointed by Barratt Homes, Bovis Homes and Taylor Wimpey (the 'Consortium') to produce a Landscape Management Plan (LMP) to provide management and maintenance guidelines for the managing body and in turn to discharge Condition 8 of Reserved Matters consent 15/01168/REM for the mixed-use development at Longford Park, Banbury.
- 1.2. The long term intention is that Cherwell District Council (CDC) will adopt all public open space and habitat creation areas within the development. As such, this document has been produced in consultation with CDC to ensure a cooperative approach between the Consortium and the Council.
- 1.3. This visionary document aims to set out the landscape framework for the development. As a strategic document, it seeks to define the habitats to be retained and created and the subsequent management principles to ensure a long term sustainable landscape asset designed to maximise biodiversity benefits.
- 1.4. The Landscape Management Plan takes the following format:
 - Background Information;
 - Opportunities, Aims & Objectives;
 - The Masterplan Proposals;
 - Management Principles;
 - Monitoring and Review.

2. BACKGROUND INFORMATION

Context

- 2.1. The development site is located within Bodicote, immediately to the south of Banbury and is bound by Oxford Road to the west, Bankside to the north, and fields to the east extending to the Oxford Canal. The site area comprises c.78 hectares of intensive agricultural land, with outline planning permission for mixed use development and the provision of a Community Park to maintain separation between Bodicote and Banbury.
- 2.2. The original village centre lies along Church Street in the west of Bodicote, and modern development has occurred along the routes through the historic core including East Street / Weeping Cross and Broad Gap, and extending south as typical late twentieth century housing with a number of cul-de-sacs. To the east of Oxford Road, ribbon development is present in the form of bungalows and semi-detached properties set back behind private roads and grass verges up to Canal Lane, beyond which lies the main extent of the development site.
- 2.3. The urban edge of Banbury lies to the north at Bankside, with an extensive network of roads, modern housing and incidental open space. The topography of the area is part of the Cherwell Valley, with dramatic views to the east across the valley which the M40 runs through north-south.

Site description

- 2.4. The development site is made up of large scale arable fields with hedgerow boundaries and individual trees. The Oxford Canal is visible within the valley, with a series of draw bridges and the tow path on the eastern side linking Banbury with the wider network of public rights of way.

- 2.5. The ES provides full details on the ecological and landscape baseline situation of the site as a whole. For convenience, a summary of the main existing ecology and landscape elements is provided below. Refer also to the Ecological Features Plan at Appendix 3, which illustrates the locations and distribution of habitats across the site.

Flora

- 2.6. The site is dominated by intensive arable farmland with small areas of unmanaged grassland, typically bordered by hedgerows of varying structure and management. As a consequence there is overall a relatively low existing floristic diversity. Several ditches / streams are associated with boundary hedgerows, and a single ephemeral pond is situated adjacent to the canal.
- 2.7. The main grassland type within the site was improved neutral grassland, which was horse grazed at the time of the original survey and dominated by Perennial Rye-grass *Lolium perenne*.
- 2.8. Hedgerows form the majority of field boundaries within the site. The management of hedgerows is variable with those associated with arable field compartments heavily managed. Woody species diversity is generally high and includes local species such as Midland Hawthorn *Crataegus levigata* and those of generally more calcicolous habitat such as Buckthorn *Rhamnus catharticus*, Wayfaring-tree *Viburnum lantana*, Spindle *Euonymus europaea* and Dogwood *Cornus sanguinea*. Mature standard trees are relatively infrequent with Oak *Quercus robur* and Ash *Fraxinus excelsior* present occasionally.
- 2.9. Mature trees are scattered throughout the site and are generally found in association with hedgerows as standards or along the northern section of the Oxford Canal adjacent to the site boundary. Hedgerow standards are predominantly mature Ash or Oak. Mature trees associated with the canal are confined to Crack willow *Salix fragilis* with occasional Osier *Salix viminalis* or Goat willow *Salix caprea* scrub also present.

- 2.10. The Oxford Canal supports only a limited diversity of species due to the structure of the canal (being predominantly deep, vertically sided and containing only limited marginal vegetation) and is heavily used by boat traffic. Nonetheless the Oxford Canal is included within the Oxfordshire Wetlands Habitat Action Plan and Cherwell Aquatic Habitats Action Plan.

Fauna

- 2.11. In terms of fauna, the site supports a range of species and species groups, including Badger, Otter, bats, reptiles, invertebrates and birds.
- 2.12. A number of Badger setts occur within the site, predominantly within hedgerow bases. In addition, Badger are likely to use the hedges as foraging habitat and as commuting corridors. The vast majority of the site is unlikely to provide an important foraging resource due to the dominance of arable habitat although some seasonal use of this habitat by Badgers may occur.
- 2.13. The nearby River Cherwell is known to be used by Otter, however, the Oxford Canal at the northern boundary of the site is not known to be used by Otter, albeit given the proximity of the River Cherwell it is possible that Otter may pass through the canal on occasion.
- 2.14. Bat surveys confirmed the presence of Common Pipistrelle *Pipistrellus pipistrellus* foraging along the canal.
- 2.15. Anecdotal evidence suggests the possible presence of Grass Snake in grassland to the north of the site.
- 2.16. Invertebrate surveys of the Oxford Canal observed a total of five nymph species and three species of Odonata.
- 2.17. A total of 17 species of bird were identified within the site which represents early breeding species and residents. Areas of greatest relative bird diversity include the improved grassland fields and associated hedgerows and tall less heavily managed hedgerows.

Landscape Considerations

- 2.18. The existing local landscape is already influenced by the context of Banbury's urban fringe with features of Cherwell Heights, Oxford Road, and beyond within the valley: the M40 motorway and Grimsbury Industrial Estate.
- 2.19. The site is not covered by any formal landscape designation. The important views across the valley were identified in the ES as a principal site feature that requires consideration in the development of the proposals. The landscape character and visual integrity of the Cherwell Valley is worthy of protection and enhancement. In particular, the eastern rising flanks of the valley are attractive in their own right, and provide panoramic views across the open valley where public access exists.
- 2.20. The development masterplan ensures that built development areas are located away from the more sensitive valley slopes. The new development will respect the slopes of the Cherwell Valley with the provision of the Community Park and will create an appropriate transition between a new urban environment and an enhanced river valley landscape character area.
- 2.21. The proposed new landscape framework will include the retention and reinforcement of these existing features together with substantial areas of new hedgerow, tree and woodland planting, which will provide a significant enhancement of the local landscape character. Conserving the existing vegetation, respecting the valley slopes and Oxford Canal will provide a positive contribution to the local landscape and the Cherwell Valley.

3. OPPORTUNITIES, AIMS & OBJECTIVES

- 3.1. The primary management aim for the proposed planting is the establishment and future sustained growth of individual trees, shrubs and seeded / turfed areas. This document outlines the management and maintenance for years 1-5, 6-10 and 11-20 years by the Estate Managing Agents.
- 3.2. The main aim for the existing vegetation is its integration and long term management. Any existing trees within or directly adjacent to the site shown as retained on the landscape plans shall be protected in accordance with BS 5837: 2012, from commencement to completion of all works on site.
- 3.3. The proposed landscape scheme shall be implemented to the approved plans, using the relevant standards as noted on the Drawings. All plants are to be supplied in accordance with the HTA 'National Plant Specification' and from a HTA certified nursery. All plants and trees are to be planted in accordance with BS3936. Delivery and handling of all plant material to be in accordance with BS4428/JCLI/CPSE Code of Practice for 'Handling and Establishing Landscape Plants' parts I,II and III.
- 3.4. It is intended that the landscape scheme will be implemented by a Landscape Contractor appointed by The Consortium clients Barratt Homes, Bovis Homes and Taylor Wimpey, and upon completion will hand over the ongoing maintenance responsibilities of each landscaped area to the Estate Managing Agents.
- 3.5. The ES set out (paragraph 6.94) the key new habitat types to be created as part of the development, as follows:
 - New native hedgerow, broadleaved woodland and tree planting;
 - Areas of semi-natural grassland of varying management regimes within the Community Park;
 - Wetland areas adjacent to the canal, including areas of open water and marsh to provide areas of lower disturbance than the canal;

- Vegetated swales and periodically wet detention basins providing habitats for wildlife.

3.6. The key objectives of the habitat creation and landscape strategy are:

- Exploit the natural views to and from the site;
- Create a network of pedestrian and cycle linkages;
- Enhance existing habitats and landscape structure;
- Habitat creation to increase biodiversity value;
- Generate new and attractive areas of public amenity and open space;
- Embrace the canal-side relationship.

4. THE MASTERPLAN PROPOSALS

Development Vision

- 4.1. The vision for Longford Park is stated and the principles detailed within Longford Park, Banbury Masterplan and Design Code, July 2012. This document provides the foundations from which the proposed scheme has been developed.
- 4.2. The vision within the Design Code is that Longford Park will be a place with a distinct character, which has well laid out streets and buildings, and is responsive to the local landscape and architectural setting. Longford Park will provide a wide range of important local amenities such as shops, offices, a school, and civic uses clustered in the core of the development, as well as the Community Park and play spaces in the wider masterplan area.
- 4.3. There are two main neighbourhood groups; the Plateau is located to the north-eastern side of the Oxford Road and Haynesbridge is located to the south western side of the Oxford Union Canal. Each of these areas contains specific landscape features such as mature trees, hedgerows and lanes, all of which have been designed into the urban areas in a way that respects and enhances their setting.
- 4.4. The proposals have evolved from the principles and illustrative masterplan outlined within the Design Code. The design and components of the community park have been developed in response to the Section 106 Bankside/ College Fields - Brief for Valley Side Community Park, together with the requirements outlined within the Environmental Statement, in particular the habitat creation measures (see paragraph 3.3 above).
- 4.5. A Character Area plan has been produced at Appendix 1 to illustrate the various character zones proposed across the site. In addition, Table 1 below provides a breakdown of the character zones outlining the distinguishing features, the quality and character of each zone as well as the associated purpose within the masterplan.

Table 1: Landscape Character Zones

Character Zone	Features	Character	Purpose
Community Park			
Gateway	<ul style="list-style-type: none"> ▪ Sculptural gateway feature ▪ Framed views out across Cherwell Valley 	<ul style="list-style-type: none"> ▪ Parkland quality 	<ul style="list-style-type: none"> ▪ Emergency/ maintenance access
Woodland glade	<ul style="list-style-type: none"> ▪ Wildflower meadow glade with mown paths within woodland setting ▪ Large open expanse of space with steep topography ▪ Panoramic views across Cherwell Valley 	<ul style="list-style-type: none"> ▪ Exposed, expansive, large scale ▪ Wild and windy ▪ Steep descent 	<ul style="list-style-type: none"> ▪ Potential for grazing ▪ Habitat creation
Woodland	<ul style="list-style-type: none"> ▪ Meandering informal footpath through trees ▪ Swathes of Bluebells 	<ul style="list-style-type: none"> ▪ Enclosed, sheltered ▪ Steep descent 	<ul style="list-style-type: none"> ▪ Habitat creation
Lower wetlands	<ul style="list-style-type: none"> ▪ Ecological focus ▪ Visual interest 	<ul style="list-style-type: none"> ▪ Permanent water ▪ Limited access ▪ Relationship with canal 	<ul style="list-style-type: none"> ▪ SUDs ▪ Habitat creation
Events space	<ul style="list-style-type: none"> ▪ LEAP ▪ Picnic benches ▪ Amphitheatre 	<ul style="list-style-type: none"> ▪ Formal avenues of trees ▪ Relationship with adjacent residential area 	<ul style="list-style-type: none"> ▪ Parking ▪ Outdoor events space ▪ Toilets and services
Embankment	<ul style="list-style-type: none"> ▪ Central zig-zag path ▪ Land art; swathes of wildflower, bulbs and ornamental shrubs ▪ Visual/ seasonal interest 	<ul style="list-style-type: none"> ▪ Expansive 	<ul style="list-style-type: none"> ▪ Habitat creation ▪ Focal interest for onlooking residents ▪ Backdrop to events space
Sports pitches	<ul style="list-style-type: none"> ▪ Football pitches ▪ Play; MUGA & NEAP ▪ Bulbs and formal hedgerows 	<ul style="list-style-type: none"> ▪ Formal avenues of trees ▪ Functional amenity grass 	<ul style="list-style-type: none"> ▪ Recreational/ sports facilities ▪ Access to residential development ▪ Parking ▪ Toilets & facilities
Parkland	<ul style="list-style-type: none"> ▪ Copses and groups of individual trees ▪ Swathes of wildflower to the borders and beneath trees 	<ul style="list-style-type: none"> ▪ Parkland quality ▪ Sheltered but spacious and open 	<ul style="list-style-type: none"> ▪ Recreational space ▪ Habitat creation
Linear Park inc. community orchard	<ul style="list-style-type: none"> ▪ Variety of fruit trees under planted with wildflower meadow ▪ Mown paths ▪ Visual/ seasonal interest ▪ Play; LEAP 	<ul style="list-style-type: none"> ▪ Sheltered, enclosed ▪ More intimate, small scale ▪ Strong relationship with on looking residents 	<ul style="list-style-type: none"> ▪ Connectivity/ link to wider residential development ▪ Habitat creation
Upper wetlands	<ul style="list-style-type: none"> ▪ Ephemeral ponds ▪ Board walk ▪ Lookout tower ▪ Informal play 	<ul style="list-style-type: none"> ▪ High point 	<ul style="list-style-type: none"> ▪ SUDs ▪ Habitat creation

Character Zone	Features	Character	Purpose
Development Areas			
The Plateau	<ul style="list-style-type: none"> ▪ Key hedgerows along field boundaries ▪ Linear park along Oxford Road frontage ▪ Retain hedgerow to Canal Lane 	<ul style="list-style-type: none"> ▪ Village character ▪ Parkland edges 	<ul style="list-style-type: none"> ▪ High quality development ▪ Access to Country Park
Haynesbridge	<ul style="list-style-type: none"> ▪ Close to Canal ▪ Rural setting with parks to all sides 	<ul style="list-style-type: none"> ▪ Canalside character ▪ Urban/rural transition 	<ul style="list-style-type: none"> ▪ High quality development ▪ Access to Country Park ▪ Sustainable location

The Community Park

4.6. The Community Park forms the heart of Longford Park. It provides a variety of environments including formal play, the canal basin setting and informal open space that offers natural slopes with long views across the Cherwell Valley. The Community Park will be the focus of the habitat creation as part of the overall masterplan. It will be a place that offers a different experience all year round. The majority of the area is made up of grasslands, hedgerows and woodland planting. There will also be wetland areas that provide additional ecological enhancement to the park.

4.7. The Community Park Design Principles within the Design Code document are as follows:

- Fully protect the sensitive 'valley slopes' as illustrated on the Concept Masterplan;
- Demonstrate enhanced biodiversity and habitat creation by using the species listed in the landscape masterplan;
- Provide a restoration of the landscape with new hedgerows and woodland areas;
- Seek to replicate the traditional landscape character of the Cherwell Valley;
- Provide large areas of informal open space;

- Provide a robust structural planting framework assimilating the development into the broader landscape;
- Improve and increase accessibility with a new footway-cycleway route connecting the Haynesbridge and Plateau areas as informal routes across the Park;
- Provide areas of active play and formal sport provision in line with the Section 106 agreement;
- Protect existing hedgerows and semi-mature hedgerow trees.

Development Areas

- 4.8. The detailed design for each development phase including perimeter planting and play areas and open space will be determined with the Local Authority through the Reserved Matters process. The development areas of Longford Park are divided into two character areas due to the key differences in location, environment and topography. The two separate character areas are called the Plateau and Haynesbridge.

The Plateau

- 4.9. The Plateau will take the form of a village with a local centre, residential streets and a housing perimeter that will look out onto parkland. The main street will be defined by key buildings and higher occurrence of red brick dwellings will define the route. At the local centre building heights will be higher to create a sense of enclosure to the civic space. Towards the development edges building heights and densities will be reduced creating a village edge character. Hedgerows will create an important character within the Plateau area and careful consideration has been given to retain key hedgerows.

Haynesbridge

- 4.10. The Haynesbridge area is located between Bankside Park and the Community Park and is close walking distance to the town centre. Its form and setting will reinforce the character of a relatively separate community as it is almost completely surrounded by parks and

countryside. The canal side character will not be that typically associated with wharfs and tow paths. It will be a type of character that illustrates the transition from rural to urban. It will be valued for its quiet canal side living environment. The residential planting bordering the boundaries of this residential parcel will bleed out into the surrounding community park and canal-side reinforcing the urban to rural transition as outlined in the design code.

Habitat Creation Rationale and Proposals

- 4.11. As described previously, the approach to habitat creation at the development site has been centred on retaining and integrating the existing hedgerow and tree network, and providing a suite of additional habitats to provide enhancements.
- 4.12. The habitat types proposed have been selected based on the commitments set out in the ES, along with providing locally appropriate habitats compatible with those naturally occurring in the area and based on those likely to be sustained. The habitat types selected have also been informed by the aims identified at the national level in accordance with Priority Habitats listed on the S41 list under the NERC Act 2006 and at the regional level in line with the Cherwell and Oxfordshire LBAP Habitat Targets. These habitats will provide a substantial increase in diversity and quantum of habitat types, which will also provide an increase in foraging, commuting, breeding, nesting and shelter habitat for a wide range of fauna.
- 4.13. The creation of a wide range of habitats will contribute towards local provision of accessible open space with varied experiences and habitats to explore, benefiting both the local community and the local wildlife. This rich tapestry of habitats which both embrace and enhance the setting of the proposals, will present a high degree of biodiversity and community importance.
- 4.14. The key habitat creation measures proposed are described below.

Woodland

- 4.15. The existing site and immediate surroundings contain very little woodland habitat, with Cherwell as a whole being lightly wooded (c.3.5%). Lowland deciduous woodland is a national and local priority habitat type. Accordingly, the proposals include extensive native woodland creation at the site, including large blocks of woodland and smaller woodland copses. This will bolster the existing small area of woodland adjacent the eastern boundary and provide stepping stone habitat across the Community Park.
- 4.16. A variety of different woodland types are proposed, based on the National Vegetation Classification (NVC) types known to occur in Oxfordshire. This will provide a number of different woodland communities, which in turn will support a diversity of flora and fauna. The NVC communities have been used to select typical canopy and understorey species, and it is also proposed to plug-plant the field layer with representative herbs, grasses and ferns. In addition, a proportion of the woodland edges will be sown with a mix of shade-tolerant herbs, whilst the remainder will be left to natural colonisation.

Hedgerow and Tree Planting

- 4.17. To facilitate access to and within the development, several areas of hedgerow are to be lost. To compensate for this habitat loss, new hedgerow planting will be incorporated into the development, which, along with enhancement of retained hedgerows, will provide wildlife corridors throughout the site.
- 4.18. Such new habitat will ensure connectivity between the site and wider landscape is maintained, such that wildlife may safely move through the site while providing a net gain in biodiversity overall. Hedgerows will comprise locally native species. A number of existing hedgerows will also be extended / bolstered with new native planting to increase species diversity and extend existing wildlife corridors.

Orchard

- 4.19. Traditional orchards in England have declined by more than 60% over the last 50 years and are a national conservation priority. The proposals will assist in addressing this decline by including the creation of two orchards within the Community Park.

Native Shrub Planting

- 4.20. New landscape planting will be incorporated throughout the Community Park, including areas of locally native shrub planting. Such planting will provide new opportunities for wildlife, including invertebrates, birds and small mammals. The variety of fruit and nut bearing species in particular will provide a seasonal food resource for these species groups.

Wildflower Grassland

- 4.21. The existing site contains agriculturally improved grassland, which supports a relatively low diversity of plants and provides limited opportunities for wildlife. The proposed development will deliver a significant enhancement through the creation of a number of areas of wildflower meadow grassland. Lowland meadow is a national and local conservation priority habitat type.
- 4.22. Several different grassland communities are proposed, with dry and damp grasslands to suit the likely prevailing ground conditions, for example areas within and adjacent surface water attenuation features will be sown with a wet grassland seed mix. The soils are understood to be generally of neutral pH and hence the grassland communities targeted are neutral in nature.
- 4.23. The existing land is currently likely to be high in nutrients and will no doubt have a residual seed bank of pernicious weeds. Accordingly, in order to prepare the land for reversion to grassland it will first be necessary to reduce the weed burden through the application of herbicides. The proposed management of the grassland will reduce the

soil nutrient levels over time. If practicable, spare subsoil from the construction works could be used to further reduce the soil nutrient levels.

- 4.24. The proposals will also allow for a degree of natural grassland establishment, for example the main run of the proposed ditch along hedgerow H5 will be left to natural colonisation and existing hedgerows will also have a habitat buffer that will be allowed to develop naturally rather than being seeded.

Wetland Habitat (Balancing Ponds and Ditch)

- 4.25. The surface water drainage strategy for the development involves the creation of four balancing ponds (two that are likely to hold water for part of the year and two that will be largely ephemeral). The ponds will provide new wetland habitat at the site and will complement the adjacent canal-side habitat, providing a backdrop of less disturbed habitat compared to the existing canal.
- 4.26. In addition, a ditch is to be created parallel with hedgerow H5, which will partly feed the balancing ponds. Rocks will be strategically placed within the channel of the ditch to introduce morphological variation and provide varied flow conditions. The ditch channel and banks will be left to natural colonisation.
- 4.27. The ephemeral ponds will be dominated by wet grassland but will also include Reedbeds, which will introduce yet another habitat type to the site; thereby providing additional ecological interest.
- 4.28. The new wetland habitat will provide opportunities for a range of amphibian and invertebrate species, along with foraging habitat and water supply for mammals and birds.

Fauna-specific Enhancements

- 4.29. A number of scrapes will be created along the line of the new ditch. The scrapes will comprise shallow, gently sloping depressions that will hold

water periodically. The wet muddy edges of the scrapes will be particularly beneficially to feeding birds, such as waders, and will also provide habitat for a range of invertebrates, including beetles, bugs and molluscs.

- 4.30. The spoil arising from the scrape creation will be used to create adjacent bee banks. The banks can also be used to incorporate any excess aggregates or spoil arising from the development works. The banks will include south-facing, relatively steep slopes that will provide habitat for thermophilic ground nesting invertebrates, such as solitary bees, solitary wasps, beetles and spiders.
- 4.31. A number of bat and bird boxes are also to be incorporated within the proposed development so as to provide new roosting and nesting opportunities for these faunal groups. The boxes will be installed on suitable existing trees and/or incorporated within a proportion of the new build as integrated features. The precise numbers and locations will be determined as part of the detailed design of each relevant phase.
- 4.32. The retained Badger setts will be protected through the provision of additional dense planting to provide a buffer around the setts. This will deter human access to the setts and therefore reduce the chance of human disturbance.

Habitat Creation Summary

- 4.33. Table 2 below provides a summary of the proposed habitat creation within the Community Park. This will guide detail that will be required as part of future Reserved Matters Approvals. Detailed species lists and ratios will be provided as part of the consenting process at the appropriate stage. However, the key species targeted within the newly created and retained habitats are highlighted within Table 2. The table should be read in conjunction with the Habitat Management Masterplan – see Appendix 2.

Table 2: Habitat Types Created and Retained and Associated Flora and Fauna

Habitat Type (Possible NVC Category)	Cherwell and Oxfordshire BAP and Priority Habitat Types	Key Target Species	
		Flora	Fauna
Woodland: Alder (W7), Field Maple (W8), Oak – Birch (W10) Beech (W12), Oak (W16)	Lowland Beech Woodland, Lowland Mixed Deciduous Woodland, Wet Woodland	<p>W7- Alder, Silver Birch, Grey Willow, Hazel, Hawthorn, Meadowsweet, Lady-fern</p> <p>W8- Field Maple, Hornbeam, Hazel, Blackthorn, Dogwood, Privet, Spindle, Tufted Hair-grass, Wood-sedge, Bluebell</p> <p>W10- Oak, Silver Birch, Small-leaved Lime, Hornbeam, Hazel, Hawthorn, Holly, Guelder-rose, Bluebell, Honeysuckle, Wood Melick, Male-fern</p> <p>W12- Beech, Hazel, Hawthorn, Holly, Field Maple, Primrose, Dog's mercury, Ramsons, Wood Melick</p> <p>W16- Oak, Silver Birch, Rowan, Alder, Buckthorn, Elder, Hairy Wood-rush, Broad Buckler-fern, Wood Sage</p>	Badger, Lesser Spotted Woodpecker, Marsh Tit, Soprano Pipistrelle, Hedgehog
Broad leaf copse: W8 (Field Maple)	Lowland Mixed Deciduous Woodland	Field Maple, Hornbeam, Hazel, Blackthorn, Dogwood, Privet, Spindle, Tufted Hair-grass, Wood-sedge, Bluebell	Hawfinch, Linnet, Small mammals
Hedgerow trees	-	Oak, Field Maple, Beech	Bullfinch, Bats
Existing trees	-	Oak, Willow	Birds, Bats, Invertebrate
Standard Trees	-	Oak, Field Maple, Beech	Birds, Bats, Invertebrates
Orchard	Traditional Orchard	Cherry, Apple, Pear, Walnut, Hazel, Plum	Birds, Hedgehog, Badger
Existing hedgerows	Hedgerows	Hazel, Rowan, Elder, Dog-rose, Holly, Beech	Yellowhammer, Bats, Small Mammals, Badger,

Habitat Type (Possible NVC Category)	Cherwell and Oxfordshire BAP and Priority Habitat Types	Key Target Species	
		Flora	Fauna
			Reptiles, Invertebrates
Proposed hedgerow	Hedgerows	Hazel, Rowan, Elder, Dog-rose, Holly, Wild Privet, English Elm ¹	Birds, Myotis Bat sp., Small Mammals, Badger, Slow-worm, White Letter-hairstreak
Shrubs	-	Hazel, Rowan, Elder, Dog-rose, Wild Privet	Birds and Invertebrates
Neutral wildflower grassland (MG5)	Lowland Meadow	Crested Dog's-tail, Red Fescue, Common Knapweed, Oxeye Daisy, Bird's-foot Trefoil	Common Lizard, Badger, Birds, Bats, Harvest Mouse
Wet grassland (MG4, MG8)	Lowland Meadow	Great Burnet, Meadow Sweet, Marsh Bedstraw, Soft Rush, Sedge sp., Marsh- marigold	Grass snake, Common Toad, Invertebrates, Birds
Amenity grassland: (Emorsgate seed mix - EL1, EN1, EM1, EG22)	-	Bird's-foot Trefoil, Selfheal, Crested Dog's Tail, Common Bent, Salad Burnet	Invertebrates, Birds
Attenuation pond	Ponds	Sedges, Rushes, Yellow Iris, Brooklime, Peppermint, Purple- loosestrife	Amphibians, Odonata, Birds, Daubenton Bat
Ephemeral ponds (MG4, MG8)	Ponds	Sedges, Rushes, Marsh Bedstraw,	Reptiles, Amphibians, Invertebrates, Birds

¹ Only the strain resistant to Dutch Elm disease.

5. MANAGEMENT PRINCIPLES

Operational Management

- 5.1. As identified previously, the masterplan provides a range of habitats to enhance the landscape setting and increase biodiversity for future generations. In order for the biodiversity and landscape benefits to be realised, an appropriate management strategy will be implemented. Fully detailed maintenance and management regimes for each habitat type are included in the Landscape Management Schedules at Appendix 4, which has been informed by Cherwell DC's standard landscape Technical Specifications. The relevant habitat-specific management operations are described below.

Woodland

- 5.2. Initial management of the new woodland areas will be focused on checking the establishment of the plants and replacing any failures. As the woodland develops, a longer-term management regime will be established based on the traditional system of coppice with standards. This will involve a coppicing regime in 5 year cycles, as described below, with the main objective being to develop a multi-layered woodland structure, comprising canopy trees, understorey and a rich ground flora.
- 5.3. The woodland management shall be undertaken sensitively, guided by ecological principles which include minimising the use of herbicides / pesticides, etc., avoiding the use of heavy machinery which may cause soil compaction and ensuring that relevant works are undertaken outside of the nesting bird season (i.e. outside March to August inclusive). The woodland management will follow the CDC technical specifications for 'Woodland / Tree Maintenance' and 'Arboricultural Operations'.
- 5.4. The canopy trees will be inspected for the health of the main trunk and limbs and their overall structural integrity. This would occur during the coppicing of the understorey as described below.

- 5.5. A coppicing regime of the understorey will be undertaken in minimum 5 year cycles on rotation. Different woodland compartments will be coppiced at each 5 year interval, so as to allow reasonable recovery time for each compartment whilst also providing sufficient disturbance / variation in light levels for the ground flora to fully develop. The coppicing should be undertaken between January to February or mid-September till the end of November.
- 5.6. At least once a year, a proportion of any overly-dominant scrub growth (e.g. Bramble) will be thinned and any re-occurring invasive species will be removed. Any litter within the woodland will also be removed.
- 5.7. Over time, the woodland management will seek to continually build up the deadwood resource within the woodlands by retention and stacking of arisings.

Hedgerows

- 5.8. In the first spring following planting, the new hedgerows will be pruned to a height of 45 – 60cm above ground level to encourage dense, bushy growth. The new hedgerows will then be pruned incrementally higher and wider on an annual basis until they reach the desired size and shape, which will ideally be at least 2m tall by 1.5m wide with an 'A'-shape or chamfered profile to provide a wide base beneficial as cover for wildlife.
- 5.9. Once established, most likely after years 4-5, the hedgerows will be cut every other year so as to achieve the desired dense hedgerow structure and also to maximise berry production of fruit-bearing shrub species. The hedgerow bases will essentially be managed as wildflower grassland (see below)
- 5.10. The retained hedgerows will be managed from the outset as per 5.9 above, i.e. every other year.

Trees

- 5.11. New tree planting will initially be managed as detailed in the Landscape Management Schedules so as to control weeds and promote the development of good specimens. Longer term management will continue to focus on the development of good specimens with no specific management operations required in terms of ecological interest.
- 5.12. Retained trees will be subject to ongoing management, with tree works carried out as and when required in accordance with arboricultural best practice to maintain health and vigour.

Orchard

- 5.13. Management of individual orchard trees will initially be as described above for the new tree planting. Over time, as the trees mature, the management regime will seek to retain trees for as long as possible so as ultimately to provide standing deadwood. Any deadwood that is not safe to retain standing shall be removed and stacked up nearby.
- 5.14. Management of the underlying grassland will be as for the wildflower grassland across the site (see below). The use of pesticides will be avoided.

Wildflower Grassland

- 5.15. New areas of wildflower grassland are to be created, comprising drier areas within open space and at the base of hedgerows, and wetter areas associated with the surface water attenuation features, which will be periodically inundated. Management for both types of grassland will essentially be the same and will follow the CDC technical specifications for maintenance of wild flora areas, with the wildflower grassland managed as a Combination Meadow ('E Cut').
- 5.16. Management will be designed to encourage floristic diversity by regular cutting to control ranker grasses and weeds, whilst also controlling

scrub encroachment and reducing nutrient levels. The cutting will also be timed to allow wildflowers to set seed. A proportion of the grassland areas will also be left uncut for longer periods (2-3 years at a time) to encourage tussock formation and therefore structural heterogeneity amongst the sward.

Amenity Grassland

- 5.17. New areas of amenity grassland are to be managed as appropriate following the CDC technical specifications for maintenance of General Amenity / Verge Areas ('B Cut').

Wetland

- 5.18. The ponds holding water periodically will undergo a relatively relaxed management regime based on non-intervention so as to allow semi-natural plant communities to develop and to minimise disturbance to wildlife (based on the CDC technical specifications for maintenance of aquatic areas). Periodic control of any overly dominant or invasive plant species will be carried out as appropriate.
- 5.19. The more ephemeral attenuation features will be managed as per the wildflower grassland above with the exception of reedbed areas, which will not be managed.

Bat and Bird Boxes

- 5.20. The proposed bat bricks and boxes are rot proof and extremely long lasting. They are effectively self-cleaning and therefore no particular maintenance or management is required.
- 5.21. Annual visual inspections from the ground will be undertaken of the bat and bird boxes within areas of open space to ensure they remain in good condition and as such do not pose a health and safety risk, whilst continuing to offer suitable opportunities for bats and birds.

- 5.22. Where boxes have become dislodged or unsafe, these will be re-secured, ideally during the late autumn months (ideally October) when they are less likely to be in use. Any damaged boxes will be replaced.

Legislation

- 5.23. *Birds.* All wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended) in respect of killing and injury, and their nests, whilst being built or in use, cannot be taken, damaged or destroyed.
- 5.24. All pruning works are to be undertaken outside of the bird-nesting season (i.e. not between 1st March and 31st August inclusive), where practicable. Should this not be practicable, a nesting bird check survey should first be carried out by a suitably qualified ecologist. Any active nests identified should be cordoned off and protected until the end of the nesting season or until the nests are no longer active.
- 5.25. Should any bird boxes require replacement this should take place outside the bird-nesting season (i.e. not between 1st March and 31st August inclusive).
- 5.26. *Bats.* All British bats are classed as European Protected Species under the Conservation of Habitats and Species Regulations 2010 (as amended) and are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). As such, both bats and their roosts (breeding sites and resting places) receive full protection under the legislation.
- 5.27. Accordingly, bat boxes will not be cleared out, repaired or replaced unless by personnel carrying the appropriate licence from Natural England or under the direct supervision of such personnel, as appropriate.

Summary

5.28. The detailed management schedules for each habitat are found at Appendix 4. Table 3 below summarises the key management principles and objectives for each habitat type.

Table 3: Habitat Management Principles and Objectives

Item	Habitat	Management Principle/Objective
1	Woodland	Rotational coppicing of understorey and occasional felling of mature trees (felled / dead wood to be left <i>in situ</i>) followed by re-planting where appropriate, to create a multi-layered structure incorporating mature trees forming a closed canopy, young trees / shrubs and open rides supporting a botanically rich ground flora.
2	Broadleaf Woodland Copse	See 'Woodland' above.
3	Hedgerow trees	Minimal management where necessary to maintain healthy trees. Retain dead wood <i>in situ</i> wherever practicable.
4	Existing trees	See 'Hedgerow trees' above.
5	Proposed trees	See 'Hedgerow trees' above.
6	Community Orchard	The orchard will bolster an existing hedgerow, and will be managed to provide a balance between fruit production for the community and ecological benefit. Dead wood will be left <i>in situ</i> wherever practicable.
7	Existing hedgerows	Hedgerows should be regularly trimmed every 2 to 3 years in late winter and allowed to incrementally increase in height. Any gaps will be re-planted. This should provide dense, well-structured and healthy hedgerows.
8	Proposed hedgerows	Once established, hedgerows should be trimmed as described in 'existing hedgerows' above to provide dense, well-structured and healthy hedgerows.
9	Shrubs	Shrubs will be managed as appropriate outside the bird nesting season (i.e. outside 1 st March to 31 st August inclusive) to maintain their health and vitality.
10	Wildflower grassland	Wildflower grassland should be subject to a rotational management regime with some areas left long in any given year whilst others are cut, in order to maximise biodiversity. Cutting should normally take place based on one main cut a year in autumn with the arisings left <i>in situ</i> for several days before being raked off and removed from site. Additional cuts will be undertaken over winter and in spring as necessary. Herbicides and fertilisers should be avoided entirely if practicable. This will allow wildflowers to flower and set seed, and will discourage rank growth.

Item	Habitat	Management Principle/Objective
11	Wet grassland	See 'wildflower grassland' above.
12	Amenity grassland	Amenity grassland should be maintained at 25mm – 75mm to provide a neat sward, and all arising removed and composted to prevent rank growth.
13	Attenuation pond	This pond will be created with sinuous margins and a long, shallow draw-down zone to maximise wildlife value. Native species should be encouraged to colonise, and invasive non-native plants should be removed. Overly dominating species can be controlled in autumn to encourage greater biodiversity of aquatic species. Waterside vegetation should be left undisturbed wherever practicable, and any vegetation clearance carried out during winter months only.
14	Ephemeral ponds	These ponds will be sown with a wet wildflower mixture (see management in 'wildflower grassland' above) and will be allowed to sporadically fill with water to provide ephemeral aquatic habitat.

Management during Construction

- 5.29. The planning condition requires that retained habitats are maintained during site works. Accordingly, a number of best practice safeguards will be required. A summary of the safeguards required during works is provided in Appendix 5.

6. MONITORING & REVIEW

Monitoring

- 6.1. Monitoring is an essential part of habitat management. It enables assessment of whether the management has led to successful development of habitat that supports the anticipated flora and fauna. In the event that monitoring reveals that the habitats are not in a condition that is beneficial to biodiversity then it will be necessary to modify the management practises or to take remedial action.
- 6.2. Monitoring is to be carried out by suitably qualified persons; most likely the Consortium's arboricultural, ecological and landscape advisors in conjunction with relevant Council officers.

Review

- 6.3. In order to assess whether the management aims are being met, the management activities should be subject to regular review. The management plan should be reviewed annually for the first five years of management activity, to ensure that the broad aims and objectives are being met. Following this, it is suggested that the plan is reviewed in years seven, 10, 12, 15 and 20 for the duration of the management plan (considered to be 20 years minimum). The habitats within the site will need to be managed for the life of the development, thus new plans will be produced on a fifteen year cycle.
- 6.4. The mechanism for review should involve a survey of the relevant phases / landscape / habitat areas at each milestone to assess performance against the management objectives, which would be carried out by consultants appointed by the Consortium or alternatively by relevant CDC officers, if preferred. An internal review with the consortium would then take place involving the relevant landscape contractor(s), where appropriate. Finally, a formal review with CDC would follow, with subsequent reporting on the actions arising.

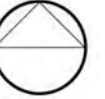
APPENDIX 1

Character Areas

KEY:

- 1 Gateway
- 2 Woodland Glade
- 3 Lower Wetland
- 4 Events Space
- 5 Embankment
- 6 Recreation ground
- 7 Parkland
- 8 Linear Park with community Orchard
- 9 Upper Wetland
- 10 The Plateau
- 11 The Haynesbridge

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REV	DATE	NOTE	Drawn: Cht/D
REVISIONS			

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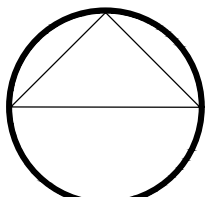
TITLE
Longford Park, Banbury
Character Areas

CLIENT
Barratt Homes, Bovis & Taylor Wimpey Homes

SCALE 1:2000@A1	DATE FEB 2014	DRAWN SB
DRAWING NUMBER 5205/ ASP2 / A1	REVISION B	

APPENDIX 2

Phase 4 Planting Plan Overview



0m 20m 40m 100m

KEY:

- Community Park Boundary
- Existing Trees
- Existing Shrubs
- Proposed Trees
- Proposed Hedge
- Proposed Shrubs
- Proposed Amenity Grass / Turf

PLANTING NOTES

All plants to be supplied in accordance with the HTA 'National Plant Specification' and from a HTA certified nursery. All plants and trees to be planted in accordance with BS5936 and BS58545. Delivery and handling of all plant material to be in accordance with BS4428/CLIC/PCSE Code of Practice for 'Handling and Establishing Landscape Plants' Parts I, II and III and BS8545.

Planting Pit and Trench Preparation
Tree pits in soft soils to be excavated to 1m x 1m x 1m depth prior to topsoiling and all shrub planting areas excavated to 450mm depth. All proposed hedge planting trenches to be excavated to 800mm depth. Unless otherwise specified, all tree pits in hard landscape to be 2m x 2m x 1m, backfilled with compacted Urban Tree Soil.
The preparation of planting pits, beds or trenches shall comply with the appropriate British Standards, namely BS4043, BS4428, BS5837 and BS8545.

Excavation of planting pits, beds or trenches shall not take place when the ground is frozen or waterlogged such that damage may occur to the structure of the soil. All excavated areas to be backfilled with either site won topsoil or imported topsoil to be BS3882-General purpose grade. All topsoiled areas to be clear of rocks and rubble larger than 50mm diameter and any other debris that may interfere with the establishment of plants. The Contractor shall break up and cultivate at the base of the trenches or planting pits. The sides of the trenches or planting pits shall be loosened with a fork or other similar implement. All stones and the like over 75mm in any dimension, deleterious matter, weeds and weed roots brought to the surface by any cultivation or excavation shall be removed off site. The Contractor shall remove off site the excavated subsoil/fill material when preparing planting pits. The imported topsoil should make up any deficiencies caused by the removal of the subsoil/fill material. Trenches and pits shall have the topsoil and any subsoil/fill material thoroughly broken up and mixed prior to backfilling.

All trees shall be supplied root balled, unless otherwise stated. Root balled trees shall be well grown, healthy and with a compact, contained rootball. They shall be nursery grown and have been regularly watered. Prior to planting, all plant material shall be stored and sorted at in accordance with best practice.

Planting

All plants shall be planted in a random fashion avoiding formal regimented lines at densities indicated in the schedule, unless otherwise specified. Unless otherwise specified, all hedgerows shall be planted in a double staggered rows and hedgerow trees shall be planted in groups of 7, 9 & 13s at densities indicated on the schedule. Ornamental shrub planting mixes shall be planted in groups of 5, 7 & 11s and native shrub planting mixes shall be planted in groups of 9, 13 & 15s. The selection, procurement, handling, storage and planting operations of all proposed trees shall be in accordance with BS8545:2014 - 'Trees: from nursery to independence in the landscape, recommendations'. Planting and associated operations shall comply with BS4043, BS4428, BS5837 and BS8545. Unless otherwise stated planting shall be carried out during the period of 1 Nov to 31 March when the ground is not frozen or water logged. If planting is required outside this period agreement shall be sought and all bare root plants shall be substituted with container grown stock.

Watering
All plants shall be watered in to field capacity immediately after planting and mulched with 50mm depth of medium grade crushed mulch. The Contractor shall water the trees, shrubs and hedges once planted to that the entire tree pit or planted area is moistened to field capacity, i.e. "the amount of water retained by previously saturated soil once full drainage has ceased". Watering to field capacity shall continue frequently and on a regular basis as considered necessary by the landscape contractor and as necessary to ensure the successful establishment and continued thriving of all planting. Additional watering shall be undertaken during summer months and/or periods of drought. Post planting management and maintenance specifically for new tree planting shall include ongoing irrigation and formative pruning as outlined in BS8545. The period over which regular irrigation required for transplanted trees is likely to be at least two full growing seasons to ensure successful establishment. As the root system develops the frequency of irrigation can be reduced.

Staking

All trees within soft landscape areas to be double staked with cross bar and tied, using 1.5m long, 75mm diameter rounded tree stakes 75mm brace, rubber tie and spacer block. Stakes not to extend more than 650mm above ground level. All trees within hardstanding/highways visibility splay to be clear stem to 1.5m high unless otherwise specified. Trees within hardstanding / specific pits to be underground guyed unless otherwise specified.

Root Barriers

Root barriers (ReRoot 1000 or equivalent) to be included adjacent to buildings and services where necessary. Landscape contractor shall check all planting operations comply with appropriate standards and that in the absence of detailed surveys, any necessary underground investigations are undertaken to ensure there are no conflicts with existing or proposed utilities, services or foundations.

PROTECTION OF EXISTING VEGETATION TO BE RETAINED
Existing trees to be retained shall be protected in accordance with BS5837, from commencement to completion of all works on site.

N.B. All planting proposals including tree planting have been developed in order to create a high quality environment and gain planning consent for the development. All tree species have been reviewed in line with NHCBC guidance (2017) and in the absence of any building foundation depths or detailed soil analysis information for the site. Where possible only low and moderate water demand species are proposed in close proximity to new buildings. A number of varied cultivars of these species as well as ornamental species that have a smaller overall mature height (which are not currently assessed within NHCBC guidance 2017) are proposed to provide variety in the scheme and engineer's should consider these locations & species. Where necessary new building foundation depths shall be designed to accommodate the approved tree species, site specific soil shrinkage and tree water demand in line with NHCBC standards 2017 (Chapter 4.2 - Building Near Trees). Planting plans have been prepared for planning purposes and in the absence of fully detailed ground investigations, geological or hydrological surveys and planting design or species choice may be subject to change - suitability should be confirmed on site by the landscape contractor. Detailed site specific soil analysis and suitable site drainage should be checked by landscape contractor to ensure planting can be implemented in accordance with approved drawings prior to implementation.

REVISIONS

B	12.6.2018	Updated to ecology comments to achieve 4th credit	BS	BS
A	6.10.2017	Landscape proposals updated to suit new layout	BS	BS
REV	DATE	NOTE	Drawn	Chkd
REVISIONS				

aspect landscape planning

TITLE
Longford Park, Banbury
Phase 4 - Parcel F Planting Plan Overview

CLIENT
Barratt Homes, Taylor Wimpey, Bovis Homes

SCALE
1:1000@A1

DATE
JUN 2015

DRAWN
CW

CHK'D
AM

DRAWING NUMBER
5205/ PH4.PP.1.0

REVISION
B

Planting Schedule

Trees	Number	Species	Specification	Girth	Height
1 No.	Acer campestre	Advanced Nursery Stock :RB	18-20cm	4.0-5.0m	
12 No.	Acer campestre 'Elsrijk'	Extra Heavy Standard :RB	14-16cm	400-450cm	
10 No.	Acer campestre 'Streetwise'	Heavy Standard :BR	12-14cm	350-400cm	
3 No.	Alnus glutinosa 'Imperialis'	Extra Heavy Standard :RB	14-16cm	4.0-4.5m	
8 No.	Betula albosinensis	Extra Heavy Standard :RB	14-16cm	4.0-4.5m	
2 No.	Betula pendula	Heavy Standard :BR	12-14cm	350-400cm	
14 No.	Carpinus betulus 'Fastigiata'	Extra Heavy Standard :RB	14-16cm	4.0-4.5m	
20 No.	Carpinus betulus 'Frans Fontaine'	Extra Heavy Standard :RB :Clear Stem min. 200	16-18cm	3.5-4.0m	
3 No.	Corylus avellana	Heavy Standard :BR	12-14cm	350-400cm	
5 No.	Malus sylvestris	Extra Heavy Standard :RB :Clear Stem min. 200	14-16cm	4.0-4.5m	
2 No.	Prunus 'Snow Goose'	Extra Heavy Standard :RB	16-18cm	3.5-4.0m	
2 No.	Prunus avium	Extra Heavy Standard :RB	14-16cm	4.0-4.5m	
10 No.	Sorbus aria	Extra Heavy Standard :RB	14-16cm	4.0-4.5m	
9 No.	Sorbus aucuparia	Heavy Standard :BR	12-14cm	3.5-4.0m	
7 No.	Sorbus torminalis	Heavy Standard :RB	12-14cm	3.5-4.0m	
23 No.	Tilia cordata 'Green Spire'	Extra Heavy Standard :RB :Clear Stem min. 200	14-16cm	4.0-4.5m	
1 No.	Tilia europaea	Extra Heavy Standard :RB	16-18cm	3.5-4.0m	

Shrubs	Number	Species	Specification	Height	Pot Size	Density
	106 No.	Brachyglottis 'Sunshine'	Bushy :3 brks	30-40cm	5L	3/m²
	40 No.	Calluna vulgaris	Bushy :5 brks	20-30cm	3L	3/m²
	199 No.	Ceanothus 'Blue Cushion'	Bushy :4 brks	40-60cm	5L	3/m²
	92 No.	Ceanothus 'Blue Mound'	Bushy :3 brks	30-40cm	3L	3/m²
	182 No.	Cistus corbariensis	Bushy :4 brks	30-40cm	5L	3/m²
	34 No.	Cornus alba	Bushy	20-30cm	2L	3/m²
	22 No.	Escallonia 'Red Elf'	Bushy :4 brks	40-60cm	5L	3/m²
	216 No.	Fuchsia 'Lena Dalton'	Bushy :4 brks	40-60cm	5L	3/m²
	125 No.	Genista hispanica	Bushy :3 brks	20-30cm	4L	4/m²
	58 No.	Hebe 'Green Globe'	Bushy :5 brks	30-40cm	3L	3/m²
	331 No.	Hebe 'Mrs Winder'	Bushy :2/3 brks	20-30cm	3L	6/m²
	179 No.	Hebe 'Nicola's Blush'	Bushy :4 brks	40-60cm	5L	3/m²
	109 No.	Hebe albicans	Bushy :3 brks	20-30cm	3L	4/m²
	157 No.	Hebe rakaiensis	Bushy :5 brks	30-40cm	3L	3/m²
	254 No.	Lavandula 'Rosa'	Bushy :4 brks	40-60cm	3L	4/m²
	156 No.	Lavandula angustifolia 'Hidcote'	Bushy :5 brks	10-20cm	2L	5/m²
	164 No.	Lavandula angustifolia 'Munstead'	Bushy :4 brks	40-60cm	4L	4/m²
	41 No.	Lavandula stoechas	Bushy :3 brks	30-40cm	3L	3/m²
	234 No.	Mahonia aquifolium 'Apollo'	Bushy :4 brks :Bushy :5 brks	30-40cm :40-60cm	4L	3/m²
	92 No.	Nepeta racemosa 'Snowflake'	Bushy :3 brks	20-30cm	3L	4/m²
	135 No.	Perovskia atriplicifolia	Bushy :4 brks	30-40cm	5L	3/m²
	185 No.	Potentilla fruticosa 'Abbotswood White'	Bushy :5 brks	30-40cm	3L	3/m²
	138 No.	Potentilla fruticosa 'Red Ace'	Bushy :4 brks	30-40cm	3L	3/m²
	31 No.	Pyracantha 'Soleil d'Or'	Bushy :4 brks	30-40cm	5L	3/m²
	98 No.	Rubus tricolor	Bushy :3/4 brks	20-30cm	2L	3/m²
	101 No.	Salvia officinalis 'Icterinal'	Bushy :5 brks	20-30cm	3L	3/m²
	68 No.	Salvia officinalis 'Purpurascens'	Bushy :5 brks	30-40cm	3L	3/m²
	195 No.	Skimmia japonica 'Rubella'	Bushy :3 brks	30-40cm	5L	3/m²
	65 No.	Spiraea japonica 'Dart's Red'	Bushy :4 brks	30-40cm	5L	3/m²
	103 No.	Spiraea japonica 'Golden Princess'	Bushy :4 brks	30-40cm	5L	3/m²
	41 No.	Symphoricarpos albus	Bushy :4 brks	30-40cm	3L	3/m²
	24 No.	Weigela florida 'Folius Purpureis'	Bushy :4 brks	40-60cm	5L	3/m²

Herbaceous				
Number	Species	Specification	Pot Size	Density
124 No.	Achillea clavennae	Full Pot	3L	5/m²
133 No.	Bergenia 'Sunningdale'	Full Pot	3L	5/m²
134 No.	Iberis sempervirens	Full Pot	3L	5/m²
162 No.	Nepeta 'Six Hills Giant'	Full Pot	3L	4/m²
283 No.	Nepeta racemosa 'Walkers Low'	Full Pot	3L	4/m²
151 No.	Pulmonaria officinalis 'Sissinghurst White'	Full Pot	3L	4/m²
269 No.	Stachys byzantina	Full Pot	3L	5/m²

Hornbeam Hedge				
Number	Species	Specification	Height	Density
1421 No.	Carpinus betulus	BR: Double staggered row	60-80cm	3/m
Total :1421 No.				

Buxus Hedge					
Number	Species	Specification	Height	Pot Size	Density
206 No.	Buxus sempervirens	Bushy :4 brks :BR	30-40cm	5L	3/m
Total :206 No.					

Ligustrum Aureum hedge				
Number	Species	Specification	Height	Density
610 No.	Ligustrum ovalifolium 'Aureum'	2 brks :BR	30-40cm	4/m
Total :610 No.				

Escallonia Hedge						
Number	Species	Specification	Height	Pot Size	Density	
896 No.	Escallonia 'Apple Blossom'	Double staggered row	60-80cm	3L	4/m	
Total :896 No.						

Ornamental Groundcover Mix							
Number	Species	Specification	Height	Pot Size	Density	%	
71 No.	Geranium dalmaticum	Bushy :3 brks	20-30cm	2L	4/m ²	20%	
87 No.	Hebe rakaiensis	Bushy :5 brks	20-30cm	3L	4/m ²	25%	
53 No.	Hedera helix	Several Shoots :2 brks	30-40cm	0.5L	4/m ²	15%	
87 No.	Potentilla fruticosa 'Elizabeth'	Bushy :3 brks	10-20cm	2L	4/m ²	25%	
53 No.	Rubus tricolor	Bushy :5 brks	30-40cm	3L	4/m ²	15%	
Total :351 No.							

Groundcover Mix 3							
Number	Species	Specification	Height	Pot Size	Density	%	
36 No.	Calamintha nepeta nepeta 'Dwarf'	Full Pot		3L	3/m²	20%	
36 No.	Genista Lydia	Bushy :3 brks	20-30cm	3L	3/m²	20%	
36 No.	Hebe 'Red Edge'	Bushy :3 brks	20-30cm	3L	3/m²	20%	
36 No.	Potentilla fruticosa 'Tangerine'	Bushy :3 brks	20-30cm	3L	3/m²	20%	
36 No.	Stachys byzantina 'Silver Carpet'	Full Pot		2L	3/m²	20%	
Total :180 No.							

Ornamental Mix							
Number	Species	Specification	Height	Pot Size	Density	%	
13 No.	Caryopteris clandonensis	Bushy :3/5 brks	30-40cm	3L	3/m²	10%	
13 No.	Ceanothus 'Blue Mound'	Bushy :3/5 brks	30-40cm	3L	3/m²	10%	
19 No.	Ceanothus 'Blue Mound'	Bushy :3/5 brks	30-40cm	3L	3/m²	15%	
19 No.	Cornus sanguinea 'Midwinter Fire'	Leader With Laterals :2/3 brks	60-80cm	5L	3/m²	15%	
13 No.	Eleagnus pungens	Bushy :3/5 brks	30-40cm	3L	3/m²	10%	
13 No.	Escallonia 'Apple Blossom'	Bushy :3/5 brks	30-40cm	3L	3/m²	15%	
19 No.	Prunus laurocerasus 'Otto Luyken'	Bushy :3/5 brks	30-40cm	3L	3/m²	15%	
13 No.	Pyracantha coccinea 'Red Cushion'	Bushy :3/5 brks	30-40cm	3L	3/m²	10%	
Total :128 No.							

Ornamental Mix 2							
Number	Species	Specification	Height	Pot Size	Density	%	
29 No.	Campanula lactiflora	Full Pot		3L	3/m²	20%	
16 No.	Escallonia 'Donard Seeding'	Bushy :3/4 brks	30-40cm	3L	3/m²	10%	
29 No.	Geranium dalmaticum	Full Pot		3L	3/m²	20%	
29 No.	Helleborus argutifolius	Full Pot		3L	3/m²	20%	
44 No.	Lavandula angustifolia 'Vera'	Bushy :3/4 brks	30-40cm	3L	3/m²	30%	
Total :147 No.							

Low Mix 2	Species	Specification	Height	Pot Size	Density	%
Number						
76 No.	Buxus sempervirens	Bushy :3/4 brks	20-30cm	5L	4/m²	20%
76 No.	Ceanothus thyrsiflorus repens	Bushy :3/4 brks	20-30cm	5L	4/m²	20%
76 No.	Hebe rakaiensis	Bushy :3/4 brks	20-30cm	5L	4/m²	20%
76 No.	Prunus laurocerasus 'Otto Luyken'	Bushy :3/4 brks	20-30cm	5L	4/m²	20%
76 No.	Spiraea japonica 'Fire Light'	Bushy :3/4 brks	20-30cm	5L	4/m²	20%
Total :380 No.						

Medium Mix 1	Species	Specification	Height	Pot Size	Density	%
174 No.	Berberis thunbergii 'Bonanza Gold'	Bushy :2/4 brks	30-40cm	3L	4/m ²	25%
109 No.	Brachyglottis 'Sunshine'	Bushy :2/4 brks	20-30cm	5L	4/m ²	15%
142 No.	Escallonia 'Red Elf'	Bushy :2/4 brks	20-30cm	5L	4/m ²	20%
142 No.	Hebe 'Nicola's Blush'	Bushy :2/4 brks	20-30cm	5L	4/m ²	20%
142 No.	Rosa Blue Moon	Bushy :2/4 brks	30-40cm	3L	4/m ²	20%
Total :709 No.						

APPENDIX 3

Ecological Features Plan



- KEY:
- SURVEY AREA
 - BUILDING
 - ARABLE
 - BARE SOIL
 - IMPROVED GRASSLAND
 - TALL RUDERAL VEGETATION
 - WOODLAND
 - TREE
 - TREE WITH BAT POTENTIAL CATAGORY 2a
 - TREE WITH BAT POTENTIAL CATAGORY 2b
 - HEDGEROW
 - DENSE SCRUB
 - SCATTERED SCRUB
 - DITCH/DRY DITCH
 - CANAL
 - BUND
 - ACTIVE BADGER SETT
 - INACTIVE/ DISUSED BADGER SETT
 - LATRINE
 - MAMMAL PATH
 - PUSH THROUGH

LONGFORD PARK, BANKSIDE,
BANBURY - COMMUNITY PARK

HABITATS AND ECOLOGICAL
FEATURES

3266/ECO3

OCTOBER 2014

PROJECT
TITLE
DRAWING NO.
REV.
DATE



Aspect Ecology Limited - West Court - Hardwick Business Park
Noral Way - Banbury - Oxfordshire - OX16 2AF
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aspect ecology

APPENDIX 4

Landscape Management Schedules

LANDSCAPE MANAGEMENT SCHEDULE – YEARS 1-5

(Schedule to be reviewed every five years between the client and the management firm to review management scheme)

Area	Management Objective	Operation	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Amenity Grass Areas	To maintain high standard of appearance and ensure all amenity grassed areas are not overgrown and are suitable for use at all times.	CDC B Cut. Grass cutting fortnightly and edged to a height of no less than 25mm; arisings spread on site if suitable. Length of grass not to exceed 75mm.			2	2	2	2	2	2	2	2		
Wildflower Grass Areas	To maintain high standard of appearance and ensure all wildflower grassed areas offer floral and structural diversity.	CDC Combination Meadow E Cut. Grass cutting/trimming to height of 100mm in June. Further cut in late September. Leave c.25% of grassland uncut each year or maintained at no less than 200-300mm every 2-3 years. Cuttings to be removed 1-7 days following cut.						1			1			
Proposed Tree Planting	To ensure success of scheme and to promote healthy future growth and keep all footpaths and routes clear from obstructions	Check all trees. Removal of dead, dying or diseased trees & pruning as required. Replacement with same or an approved substitution if unavailable.	1	1	1	1	1	1	1	1	1	1	1	1
	To provide planting with the greatest opportunity for success	Repair/replace/reinstate all stakes, guards and ties as required.	1	1	1	1	1	1	1	1	1	1	1	1
	To minimise competition from surrounding weed/grass growth	Spray off 1200mm radius around the base of each tree				1			1					
Existing Retained Trees	To promote healthy future growth and keep all footpaths and routes clear from obstructions	Check all trees. Removal of dead, dying or diseased trees & pruning as required.	1	1	1	1	1	1	1	1	1	1	1	1
	To maintain tree specimens with regard to nesting season.	Tree pruning outside of bird nesting season.		1								1		
Existing Retained Hedges	To maintain hedges to promote healthy growth.	Prune hedges to remove half of new extension growth following original flail cut in February or October.		1								1		
	To maintain hedges with regard to nesting season.	Hedge pruning outside of bird nesting season. Every other year in February or October.		1								1		
Proposed Hedges	To ensure success of scheme and to promote healthy future growth and robust hedgerow is created.	Check all plants. Removal of dead, dying or diseased plants & pruning as required. Replacement with same or an approved substitution if unavailable.	1	1	1	1	1	1	1	1	1	1	1	1
	To provide planting with the greatest opportunity for success.	Repair/replace/reinstate all stakes, guards and ties as required.	1	1	1	1	1	1	1	1	1	1	1	1
	To maintain hedges with regard to nesting season.	Hedge pruning outside of bird nesting season. Annually in February or October until established.		1								1		
Shrub Planting	To ensure success of scheme and to promote healthy future growth and keep all footpaths and routes clear from obstructions	Check all plants. Removal of dead, dying or diseased plants & pruning as required. Replacement with same or an approved substitution if unavailable.	1	1	1	1	1	1	1	1	1	1	1	1
	To provide planting with the greatest opportunity for success	Repair/replace/reinstate all stakes, guards and ties as required.	1	1	1	1	1	1	1	1	1	1	1	1

Area	Management Objective	Operation	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Surface Water Attenuation Features / Ponds	Ensure attenuation features and ponds are maintained for ecological value.	Remove non-native species from attenuation features and ponds. Cleared vegetation should be left adjacent to the attenuation feature / pond for 24hrs before removal from the site.									1	1		
	Ensure attenuation features and ponds are maintained for ecological value.	CDC Combination Meadow E Cut as above for grass margins associated with attenuation features and ponds.						1			1			
	Ensure attenuation features and ponds are maintained for ecological value.	All debris and litter to be removed with specific attention paid to any inlet or outlet structures to ensure good working order.	1	1						1	1	1	1	1
	Prevent excessive shading of attenuation features and ponds.	Selective removal of over-hanging shrubs / branches / trees.	1	1									1	1
Bird / Bat Boxes	To ensure Bird and Bat boxes remain in good condition, and as such do not pose a health and safety risk.	Annual visual inspections of bird and bat boxes. If any items dislodged or unsafe to be re-secured.		1								1		
Woodland	Ensure structural diversity development including canopy trees and well developed understorey and ground flora.	Check all trees. Removal of dead, dying or diseased trees & pruning as required. Removal of invasive or over-dominant understorey species. Replacement with same or an approved substitution if unavailable.	1	1	1	1	1	1	1	1	1	1	1	1
Orchard trees	Establishment of trees. Underlying grassland managed as per wildflower grassland. No pesticides to be used.	Check all trees. Removal of dead, dying or diseased trees & pruning as required. Replacement with same or an approved substitution if unavailable.	1	1	1	1	1	1	1	1	1	1	1	1

LANDSCAPE MANAGEMENT SCHEDULE – YEARS 6-10

(Schedule to be reviewed every five years between the client and the management firm to review management scheme)

Area	Management Objective	Operation	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Expected Variation
Amenity Grass Areas	To maintain high standard of appearance and ensure all amenity grassed areas are not overgrown and are suitable for use at all times.	CDC B Cut. Grass cutting fortnightly and edged to a height of no less than 25mm; arisings spread on site if suitable. Length of grass not to exceed 75mm.			2	2	2	2	2	2	2	2			No reduction
Wildflower Grass Areas	To maintain high standard of appearance and ensure all wildflower grassed areas offer floral and structural diversity.	CDC Combination Meadow E Cut. Grass cutting/trimming to height of 100mm in June. Further cut in late September. Leave c.25% of grassland uncut each year or maintained at no less than 200-300mm every 2-3 years. Cuttings to be removed 1-7 days following cut.						1			1				No reduction
All Trees	To ensure success of scheme and to promote healthy future growth and keep all footpaths and routes clear from obstructions	Check all trees. Removal of dead, dying or diseased trees & pruning as required. Replacement trees reviewed with the client, if required to maintain landscape structure should be replaced with same or an approved substitution if unavailable.		1								1			Once scheme matures, plant losses should be minimal. Once tree planting is established after 5 years tree guards and stakes can be removed.
	To maintain tree specimens with regard to nesting season.	Tree pruning where required outside of bird nesting season.		1								1			No reduction
All Hedges	To maintain hedges to promote healthy growth.	Prune hedges to remove half of new extension growth following original flail cut every other year in February or October		1								1			No reduction
	To maintain hedges with regard to nesting season.	Hedge pruning outside of bird nesting season. Every other year in February or October.		1								1			No reduction
	To ensure success of scheme and to promote healthy future growth and robust hedgerow is created.	Check all hedges. Removal of dead, dying or diseased hedges & pruning as required. Replacement hedge reviewed with the client, if required to maintain landscape structure should be replaced with same or an approved substitution if unavailable.		1								1			Once scheme matures, plant losses should be minimal Once hedge planting is established after 5 years tree guards and stakes can be removed.
Shrub Planting	To ensure success of scheme and to promote healthy future growth and keep all footpaths and routes clear from obstructions	Check all shrubs. Removal of dead, dying or diseased shrubs & pruning as required. Replacement shrubs reviewed with the client, if required to maintain landscape structure should be replaced with same or an approved substitution if unavailable.		1				1				1			Once scheme matures, plant losses should be minimal

Area	Management Objective	Operation	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Expected Variation
Surface Water Attenuation Features / Ponds	Ensure attenuation features and ponds are maintained for ecological value.	Remove non-native species from attenuation features and ponds. Cleared vegetation should be left adjacent to the attenuation feature / pond for 24hrs before removal from the site.									1	1			No reduction
	Ensure attenuation features and ponds are maintained for ecological value.	CDC Combination Meadow E Cut as above for grass margins associated with attenuation features and ponds.						1			1				No reduction
	Ensure attenuation features and ponds are maintained for ecological value.	All debris and litter to be removed with specific attention paid to any inlet or outlet structures to ensure good working order.	1	1						1	1	1	1	1	No reduction
	Prevent excessive shading of attenuation features and ponds.	Selective removal of over-hanging shrubs / branches / trees.	1	1									1	1	No reduction
Bird / Bat Boxes	To ensure Bird and Bat boxes remain in good condition, and as such do not pose a health and safety risk.	Annual visual inspections of bird and bat boxes. If any items dislodged or unsafe to be re-secured.		1								1			No reduction
Woodland	Ensure structural diversity development including canopy trees and well developed understorey and ground flora.	Check all trees. Removal of dead, dying or diseased trees & pruning as required (thinning of Bramble and the understorey as appropriate). Removal of invasive or over-dominant understorey species. Replacement with same or an approved substitution if unavailable.	1	1								1	1	1	Once scheme matures, plant losses should be minimal. Once tree planting is established after 5 years tree guards and stakes can be removed.
Orchard trees	Establishment of trees. Underlying grassland managed as per wildflower grassland. No pesticides to be used.	Check all trees. Removal of dead, dying or diseased trees & pruning as required. Replacement with same or an approved substitution if unavailable.	1	1								1	1	1	Once scheme matures, plant losses should be minimal. Once tree planting is established after 5 years tree guards and stakes can be removed.

LANDSCAPE MANAGEMENT SCHEDULE – YEARS 11- 20

(Schedule to be reviewed ten years between the client and the management firm to review management scheme)

Area	Management Objective	Operation	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Expected Variation
Amenity Grass Areas	To maintain high standard of appearance and ensure all amenity grassed areas are not overgrown and are suitable for use at all times.	CDC B Cut. Grass cutting fortnightly and edged to a height of no less than 25mm; arisings spread on site if suitable. Length of grass not to exceed 75mm.			2	2	2	2	2	2	2	2			No reduction
Wildflower Grass Areas	To maintain high standard of appearance and ensure all wildflower grassed areas offer floral and structural diversity.	CDC Combination Meadow E Cut. Grass cutting/stripping to height of 100mm in June. Further cut in late September. Leave c.25% of grassland uncut each year or maintained at no less than 200-300mm every 2-3 years. Cuttings to be removed 1-7 days following cut.						1			1				No reduction
All Trees	To ensure success of scheme and to promote healthy future growth and keep all footpaths and routes clear from obstructions	Check all trees. Removal of dead, dying or diseased trees & pruning as required. Replacement trees reviewed with the client, if required to maintain landscape structure should be replaced with same or an approved substitution if unavailable.		1								1			Plant losses should be minimal
	To maintain tree specimens with regard to nesting season.	Tree pruning outside of bird nesting season.		1								1			No reduction
All Hedges	To maintain hedges to promote healthy growth.	Prune hedges to remove half of new extension growth following original flail cut every other year in February or October		1								1			No reduction
	To maintain hedges with regard to nesting season.	Hedge pruning outside of bird nesting season. Every other year in February or October.		1								1			No reduction
	To ensure success of scheme and to promote healthy future growth and robust hedgerow is created.	Check all hedges. Removal of dead, dying or diseased hedge & pruning as required. Replacement hedge reviewed with the client, if required to maintain landscape structure should be replaced with same or an approved substitution if unavailable.		1								1			Once scheme matures, plant losses should be minimal
Shrub Planting	To ensure success of scheme and to promote healthy future growth and keep all footpaths and routes clear from obstructions	Check all shrubs. Removal of dead, dying or diseased shrubs & pruning as required. Replacement shrubs reviewed with the client, if required to maintain landscape structure should be replaced with same or an approved substitution if unavailable.		1				1				1			Plant losses should be minimal
Surface Water Attenuation Features / Ponds	Ensure attenuation features and ponds are maintained for ecological value.	Remove non-native species from attenuation features and ponds. Cleared vegetation should be left adjacent to the attenuation feature / pond for 24hrs before removal from the site.									1	1			No reduction
	Ensure attenuation features and ponds are maintained for ecological value.	CDC Combination Meadow E Cut as above for grass margins associated with attenuation features and ponds.						1			1				No reduction
	Ensure attenuation features and ponds are maintained for ecological value.	All debris and litter to be removed with specific attention paid to any inlet or outlet structures to ensure good working order.	1	1						1	1	1	1	1	No reduction
	Prevent excessive shading of attenuation features and ponds.	Selective removal of over-hanging shrubs / branches / trees.	1	1									1	1	No reduction
Bird / Bat Boxes	To ensure Bird and Bat boxes remain in good condition, and as such do not pose a health and safety risk.	Annual visual inspections of bird and bat boxes. If any items dislodged or unsafe to be re-secured.		1								1			No reduction

Area	Management Objective	Operation	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Expected Variation
Woodland	Ensure structural diversity development including canopy trees and well developed understorey and ground flora.	Control of invasive or over-dominant understorey. Coppicing regime of understorey will be undertaken once between October and February in year 11 and every 5 years thereafter (thinning of Bramble and the understorey as appropriate). Canopy trees inspected for general health during coppicing regime.	1	1								1	1	1	No reduction
Orchard trees	Establishment of trees. Underlying grassland managed as per wildflower grassland. No pesticides to be used.	Check all trees. Removal of dead, dying or diseased trees & pruning as required. Replacement with same or an approved substitution if unavailable.	1	1								1	1	1	No reduction

APPENDIX 5

Protection of Ecological Resources

Longford Park, Banbury - Protection of Ecological Resources during Works

1. General Construction Safeguards

- 1.1 All chemicals, oils, fuels and other potential contaminants shall be stored in bunded tanks or structures in order to minimise the risk of a pollution event occurring.
- 1.2 A surface water management scheme will be implemented where appropriate to ensure that soil, ground water and water courses are not degraded.
- 1.3 Dust monitoring will be undertaken during construction. If a rise in dust above background levels is detected then immediate dust suppression measures will be implemented.
- 1.4 Noise control and abatement measures will be implemented, which will include the restriction of noisy construction activities during night time hours.

2. Trees and Hedgerows

- 2.1 Trees and hedgerows identified for retention will be protected using standard working practices, such as protective fencing, in line with relevant specifications stated in arboricultural best practice guidelines (BS5837:2012), consistent with the Arboricultural Method Statement applicable to each phase.

3. Canal

- 3.1 The Canal will be safeguarded in line with the measures set out in section 5 of Aspect Ecology's 'River Corridor Survey Report' dated April 2013. This will include the following key measures:
 - Prior to the commencement of any works to the canal, including any associated vegetation clearance, a suitably qualified ecologist will conduct a checking survey in respect of Otter and Water Vole.
 - Any removal of bankside vegetation will be undertaken by strimming under the supervision of a suitably qualified ecologist.
 - Environment Agency guidelines for working practices near watercourses will be adhered to.
 - Pollution control and abatement measures listed in the 'General Construction Safeguards' section above will also serve to protect the canal habitat.