



Land at Gosford

Biodiversity Improvement and Landscape Management Plan

Prepared by
CSA Environmental

on behalf of
Barwood Development
Securities Ltd

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This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

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1.0 INTRODUCTION

- 1.1 This report has been prepared by CSA Environmental on behalf of Barwood Development Securities Ltd.
- 1.2 It provides an overview of biodiversity protection and enhancement measures, in addition to landscape management prescriptions for the proposed development south east of Kidlington.
- 1.3 The proposed development is allocated within the Cherwell Local Plan Partial Review. Policy PR7a states that the application shall be supported by a Biodiversity Improvement and Management Plan (BIMP) as well as details of the long-term maintenance of sports pitches and play areas. As the implementation of new habitats and the ongoing maintenance of both new and existing features is intrinsically linked to the on-site biodiversity, this document has been prepared to combine both elements of the 'BIMP' and the landscape management plan for the Site, to form a comprehensive, overarching strategy for landscape and biodiversity within the development.
- 1.4 The measures described herein are also linked to a Biodiversity Net Gain (BNG) assessment undertaken for the proposed development, which has been submitted as part of the planning application. The habitat management prescriptions given herein are tailored to suit the target habitat type and condition scores given within the BNG metric.
- 1.5 It is important to note that this document and the associated BNG assessment are based on an Illustrative Landscape Strategy (CSA/3263/124) and Development Framework Plan (CSA/3263/123). As such, some of the prescriptions herein will need to be updated as part of any Reserved Matters application(s) to incorporate the finalised proposals.

Document Overview

- 1.6 This report has been split into three key sections to enable the necessary information to be set out in the most streamlined way:
 - **Section A: Background Information**
 - Overview of the ecological features of interest on site and the Biodiversity Net Gain assessment.
 - **Section B: Biodiversity Protection and Enhancement Measures**
 - Details of protective measures to be implemented to avoid harm to ecological assets.
 - **Section C: Management Plan**
 - Management objectives and prescriptions for each habitat type/feature on-site, with reference to protection and enhancement measures where relevant.
 - Roles and responsibilities.
 - Management timetable.

2.0 SECTION A: BACKGROUND INFORMATION

Site Overview

- 2.1 The Site is 27.75ha in size, located to the south east of Kidlington in Oxfordshire.
- 2.2 A suite of detailed habitat and protected species surveys were undertaken between 2017 and 2021 by CSA Environmental to inform an ecological impact assessment of the proposed development. The following features of ecological importance were identified:
- Native hedgerows.
 - Mature trees.
 - Pond habitat (including rare water-crowfoot).
 - Bat populations (foraging on-site and using boundary vegetation as flight corridors; potential for roosting in trees).
 - Nesting bird habitat.
 - Oxford Meadows SAC.
- 2.3 Although not confirmed on-site, the following legally protected species are also considered as there is suitable habitat on-site and/or there are records of them nearby:
- Badger.
 - Grass snake.

Biodiversity Net Gain

- 2.4 The BNG assessment identified potential for a net gain in Habitat Units (1.6 %) and Linear (hedgerow) Units (8.73%).
- 2.5 Whilst this score is based on outline and indicative proposals, it relies on the following assumptions for habitat retention, enhancement and creation:
- Retention of all hedgerows (with the exceptions of small losses for access breaks) to maintain habitat connectivity.
 - Enhancement of hedgerows through infill planting and improved management.
 - New native hedgerow creation (c. 330m).
 - Retention and enhancement of c. 5.75ha of existing grassland and its protection during the construction period.
 - Provision of new grassland, wildflower, trees, native scrub, wetland and woodland habitats.
- 2.6 Although the quantum of habitats will change slightly within the detailed development design, the overall provision will remain the same and so the prescriptions within this report will remain relevant.

3.0 SECTION B: BIODIVERSITY PROTECTION AND ENHANCEMENT MEASURES

Protection of Biodiversity During Construction

General

- 3.1 The protection of biodiversity and the environment will be a key component of the Site Induction for all construction workers throughout the duration of the construction. The induction will include details of the important ecological features on-site and the measures which are in place (as described below) for their protection.
- 3.2 A pre-commencement survey for badger setts and other ecological issues will be undertaken prior to works. The results will inform the need for any additional mitigation or protective measures.
- 3.3 Sufficient litter bins and waste disposal areas will be provided at the Site and emptied regularly to prevent pollution of surrounding habitats.
- 3.4 Routine checks of the construction area will be undertaken by both the Site Manager and an overseeing Ecological Clerk of Works to enable any issues to be identified and rectified in a timely manner.
- 3.5 Contact details for the Ecological Clerk or Works will be displayed within the Site Office at all times so that site workers can seek advice when needed.

Protective fencing

- 3.6 Heras-style fencing will be used to establish protection zones around retained trees, hedgerows, pond and retained areas of grassland. The fencing will be installed in-line with BS5387:2012 '*Trees in relation to design, demolition and construction*' and will be fully encompass root protection areas as identified within the Arboricultural Impact Assessment (BHA_2999).
- 3.7 No unauthorised access will be permitted within the protected areas.
- 3.8 There will be no storage of machinery, vehicles, materials, stockpiled soil within the protected areas and there will be no other harmful activities e.g. cement mixing.

Protection of the Water Environment

- 3.9 Protective measures are required to ensure that the water quality of both onsite and offsite habitats is preserved. On-site, protective fencing will be used to prevent damage or pollution of the pond and ditches from harmful construction activities. Silt-control measures including the use of silt fencing/barriers/bags and the conservation of soil, will be implemented to prevent silt and other particulate matter from washing into the pond and ditches. By providing on-site preventative measures,

harm to downstream ecological assets including the internationally significant Oxford Meadows SAC will be avoided.

Site Clearance

Roosting Bats

- 3.10 Tree removal at the Site could impact bats and their roosts, which receive strict legal protection. Prior to any impacts to trees (including pruning or removal of branches), the tree will be assessed for its bat roosting potential by a licensed ecologist. Where potential is found, the ecologist will recommend precautionary felling measures, further inspection of suitable features or nocturnal survey work, as appropriate. In the event that a bat roost is found, no impacts will be permitted. If impacts are unavoidable they must be covered by a licence from Natural England.

Nesting Birds

- 3.11 All wild birds, their nests and eggs are legally protected under the Wildlife and Countryside Act, 1981.
- 3.12 There is a risk of harm to nesting birds if the clearance of scrub, hedgerows or trees is undertaken during the period March – August (inclusive). Removal of potential nesting habitat will be timed to occur outside this key period. Where this isn't possible a pre-commencement check will need to be undertaken by an experienced ecologist to confirm that no nesting birds are present which may be impacted. Where an active nest is found, works would need to be delayed until the breeding attempt had naturally concluded, which may take several weeks.
- 3.13 There is currently low risk of nesting birds within the open grassland habitat but this risk should be reviewed prior to the start of commencement works, particularly if management of the Site has lapsed. The same precautions would apply as for scrub habitats above.

Grass snake

- 3.14 There is low risk of grass snake at the Site. This species is legally protected from killing and injury under the Wildlife and Countryside Act, 1981. To avoid an offence, clearance works to scrub, hedgerow bases and any long grass or vegetation around hedgerows and ditches should be undertaken carefully, using hand tools to reduce the vegetation height and encourage any animals to disperse away from the impact zone. This should ideally be undertaken during the spring, summer or autumn months when reptiles are not hibernating. To avoid a conflict with nesting birds, September is the ideal time period, however a two-stage approach can be used by reducing scrubby growth during the winter months and undertaking the final ground clearance in the spring.

Safe Working Methods

- 3.15 To avoid potential harm to wildlife moving across the construction site, safe working methods will be employed including:
- Safe and secure storage of tools, chemicals and hazardous materials.
 - Closing excavations at night, or ramping the sides to prevent animals becoming trapped.

Monitoring and Remediation/Contingency

- 3.16 The results of routine monitoring checks undertaken by the Site Manager and ECoW will be recorded and circulated so that any points of action can be addressed.
- 3.17 Mechanisms for the monitoring of environmental issues and incident reporting within the Site will be detailed within the Site induction for all construction workers.
- 3.18 Spill kits will be available at key locations across the Site for use in the event of a pollution incident. Incidents will be reported to the ECoW, the Local Authority and Environment Agency as appropriate.

Post-construction Protection Measures

Timing of Management

- 3.19 Management activities have been scheduled to avoid sensitive periods for wildlife. For example, hedgerow or scrub management will take place outside the main nesting bird period, and management works to the pond will take place in the autumn when there is less risk to wildlife.
- 3.20 Consideration of bats and their roosts is built into the management plan to ensure that management works to trees do not inadvertently impact roost sites.

Lighting

- 3.21 A sensitive lighting strategy will be prepared at the Reserved Matters Stage to minimise light-spill onto retained and new habitats, particularly the hedgerows, trees and pond.

Sustainable Drainage Measures

- 3.22 Two attenuation basins and a swale are proposed at the Site to filter and attenuate excess surface water before being discharged to surrounding water courses. The drainage strategy for the Site has been designed to fulfil local planning policy requirements for the avoidance of harm to the Oxford Meadows SAC and other designated sites. Appropriate management of these drainage features is incorporated into the management plan to ensure they continue to meet this requirement in the long-term.

Monitoring and Remediation

- 3.23 As discussed in more detail below, the Landscape Management Plan has built-in monitoring prescriptions to ensure that newly planted habitats are establishing successfully and that any failure or deterioration of habitats is detected and remedied promptly.
- 3.24 Monitoring will also be undertaken with respect to Biodiversity Net Gain to ensure the on-site habitats achieve their target condition. Detailed prescriptions will be included in the subsequent review of this document at Reserved Matters stage.

Biodiversity Enhancement Measures

- 3.25 The following biodiversity mitigation and enhancement measures have been built into the development scheme:
- Increased native tree and scrub planting throughout the development.
 - Woodland planting to improve green infrastructure corridors with Stratfield Brake nature reserve to the south-west.
 - Provision of native and wildlife-friendly plant varieties within the soft landscaping strategy (full detail to be prepared at a later date).
 - Infill planting and improved management of existing hedgerows.
 - Provision and maintenance of log piles for invertebrates and other wildlife.
 - Provision of inter-connectivity between gardens for hedgehog and other wildlife by creating 'hedgehog highways' (c. 12cm x 12cm gap) in all boundary fences.
 - Provision of bird and bat boxes within the Site, to comprise:
 - 30 in-built bat boxes within new buildings (Schwegler 1FR bat tube, Habibat box, Vivara Pro bat tube, or similar).
 - 10 bat boxes on mature trees (of a durable, long-lasting material such as Schwegler 2FN, Schwegler 1FF or Vivaro Pro Woodstone Box).
 - 30 in-built bird boxes within new buildings to include at least 10 boxes suitable for swift, 10 boxes suitable for house martins and 10 boxes suitable for house sparrow.
 - 5 bird boxes on trees to suit starling and other hole-nesting species (e.g. Schwegler 3S and 1B bird boxes).
- 3.26 Full detail of the 'hedgehog highways' and bird and bat box locations will be provided within an updated report at the Reserved Matters stage, once the detailed layout is known, as the housing layout, design and materials will affect the influence the optimum location for bird and bat boxes.
- 3.27 Prescriptions within the following management plan ensure the long-term maintenance of these features.

4.0 SECTION C: LANDSCAPE MANAGEMENT PLAN

Overview

- 4.1 The following sections are ordered by habitat type to allow easy reference by the appointed management company. Management aims and objectives for each habitat are given as well as prescriptions for the implementation of new habitats and their ongoing management.
- 4.2 This management plan will be updated to reflect the finalised landscape strategy and development design at the Reserved Matters Stage. It is designed to cover the implementation year (Year 0) followed by a five year establishment period (Year 1-5).
- 4.3 Initial habitat implementation and management in Year 0 will be the responsibility of the developer, with responsibility passing to the appointed Management Company for Years 1-5.
- 4.4 At the end of the 5-year management period, there will be a review by the Management Company. This will assess each habitat/feature against its management objectives, creating the opportunity for any remediation or altered management regimes to be implemented within a subsequent iteration of the Plan for the following five years and in longevity.

General Management Prescriptions

- 4.5 Detailed prescriptions for implementation and maintenance will be given on the detailed Hard and Soft Landscaping Plans to be finalised at the Reserved Matters stage.
- 4.6 All new planting will be maintained in accordance with good horticultural practice to ensure the thriving of individual species.
- 4.7 All new / replacement planting will be conducted into well-prepared ground and follow good horticultural practice.
- 4.8 All new native transplants should be protected with proprietary rabbit guards or shrub shelters.
- 4.9 All new shrubs and trees will have a c. 75mm depth of bark mulch applied to the planting beds to conserve moisture and limit competition from weeds. Trees in grass areas will have a 1m diameter circle of mulch, to a depth of c. 75mm applied to their base.
- 4.10 Sufficient watering will be undertaken by the contractor to establish and maintain healthy plant growth.
- 4.11 Peat-based composts will be avoided.

- 4.12 Dead-wood will be left in-situ wherever possible. Where dead wood must be removed for health and safety reasons this will be used to create habitat piles. Potential risks to nesting birds and roosting bats will be considered prior to the removal of any dead wood from trees.
- 4.13 All plants will be maintained in a disease and pest free state. In most instances, 'natural' methods of pest control are to be undertaken prior to any chemical application. In the event that natural methods of eradication are unsuccessful, plants will be treated through the application of a suitable proprietary herbicide/pesticide.
- 4.14 All planting areas will be kept tidy and free from weeds, trimmings, debris and litter.
- 4.15 Weeds should be removed by hand unless it is unfeasible; whereby weeds can be treated by the application of a suitable proprietary herbicide.

Hedgerows and Trees

- 4.16 All hedgerows on-site are due to be retained, except for short sections requiring removal for access. New hedge planting is proposed around the allotments and widespread tree planting is proposed for formal and informal open spaces. Mature trees are present in the hedgerows and there is a line of mature willow trees in the east of the Site of high biodiversity value.

Management Objectives

- Protect and enhance the existing resource of hedgerows and trees by maximising health, structure and longevity.
- Conserve dead wood *in situ* wherever possible.
- Undertake management processes with due regard to protected and notable species.
- Use minimal intervention management to promote natural processes.
- Increase the net amount and diversity of hedgerow, tree and woodland habitat for the benefit of wildlife.
- Provide new willow tree planting to enhance existing line of trees
- To create and maintain high quality linear habitat features for local wildlife, including bats.
- To provide nesting/foraging opportunities for bats and other wildlife.
- To provide screening, structure and visual interest within the proposed landscape scheme.

Management Prescriptions

Year 0: Implementation

- 4.17 New trees and hedgerow shrubs (including infill planting) will be planted as per the General Management Prescriptions above.

- 4.18 All newly planted trees and hedgerow shrubs will be monitored for any sign of poor health annually or after severe weather. Any signs of ill health or damage will be noted and remedial action taken when required.
- 4.19 Newly planted trees will be re-firmed in the ground after strong winds, frost heave or other disturbances.
- 4.20 Formative pruning of new young trees will be undertaken during the winter months to encourage an open canopy and healthy growth.
- 4.21 New hedgerow plants will be pruned and re-shaped to promote dense, bushy growth and good form.
- 4.22 Mature hedgerow to be cut (outside of bird nesting season) to a height no greater than 2m, promoting an 'A' line profile.
- 4.23 Bat and bird boxes will be installed on suitable trees, as per guidance from an ecologist. More precise information will be added to this report at the Reserved Matters stage.
- 4.24 Habitat piles will be created using cut material from hedgerow and tree clearance works. These will be located at the bases of hedgerows or woodland areas where they will not be disturbed or interfere with ongoing management.

Years 1-5: Ongoing Management

- 4.25 New planting will be monitored to ensure successful establishment. The area at the base of new planting will be retained free from weed growth by occasional strimming between new plantings. Lateral growth of new hedgerow species should be pruned annually in October in years 1-3 after planting to encourage bushy growth. Shrub / tree shelters / rabbit and deer guards should be regularly checked and removed once no longer required.
- 4.26 Watering of new plantings will continue as necessary during prolonged dry spells.
- 4.27 Areas of shrub / tree planting with a bark mulch layer will be topped up annually in the spring to retain moisture and limit weed growth, to a nominal depth of 75mm.
- 4.28 If deer damage is considered to be an issue all new tree and shrub planting will be protected through the implementation of shrub /tree guards at a height of 1.2m high.
- 4.29 Any replacement planting should be undertaken in the soonest available planting season to ensure a continued coverage of growth. Replacement plants should be of the same species and specification as the failed specimens.

- 4.30 Newly planted trees will be gently pruned and shaped during the winter months to encourage growth. Low shoots or epicormic growth will be removed. Any stone-fruit trees (cherries, plums) will not be pruned during the winter months to prevent silver leaf disease.
- 4.31 The newly planted native hedgerows will be subject to an annual light trim in winter until established when they can be managed on a two year rotation with only one side cut per year to ensure an ongoing food source for wildlife through the winter. Where hedgerow lies adjacent to a highway / footpath an annual cut is likely to be required to maintain clearance and visibility.
- 4.32 The existing hedgerows will be monitored for any sign of defects or poor health annually or after severe weather. Any signs of ill health or damage will be noted and remedial action taken when required.
- 4.33 Established sections of the hedgerows will be managed with a cut every three years in January to February, to a typical height of between 1.5-1.8m.
- 4.34 Dead wood will be kept on site to form log piles within the woodlands and thicket areas to form habitat that can be used by saprophytic organisms and hibernating fauna.
- 4.35 The line of willow trees in the east of the Site will be predominantly non-intervention as the cracks, hollows and splits created naturally in this species are of high wildlife value. Newly planted willows will be managed as for other new planting until established.
- 4.36 An annual tree safety assessment will be undertaken by a qualified arboriculturist. Only trees or branches posing a high risk to public safety will be removed, with input from an ecologist to determine any conflict with protected species.
- 4.37 Bat and bird boxes will be monitored annually for damage and to visually check they are securely affixed. Any remediation works will be undertaken under the guidance and/or supervision of an ecologist to ensure protected species are not disturbed. Any boxes needing replacement will be like-for-like.
- 4.38 Habitat piles will be topped up using arisings from any tree or hedgerow clearance works, when available.

Woodland

- 4.39 New woodland planting is proposed in the south of the Site. As well as providing valuable habitat for wildlife, woodland creation in this area helps to strengthen green corridors with the nearby Stratfield Brake nature reserve.

Management Objectives

- Increase the net amount and diversity of habitat on-site.

- Maximise the biodiversity, structural diversity and age diversity of the woodland.
- Create and maintain new pathways through the on-site woodland for recreational use.
- Encourage the public to stick to the pathways provided within the woodland area to reduce trampling and disturbance elsewhere.
- Undertake management processes with due regard to protected and notable species.
- Conserve dead wood *in situ* wherever possible.
- Use minimal intervention management to promote natural processes.

Management Prescriptions

Year 0: Implementation

- 4.40 Planting will incorporate native tree and shrub species appropriate to the local area. Planting will be undertaken in accordance with the species set out in the planting schedules.
- 4.41 New woodland tree, shrub and herb-layer plants will be conducted into prepared ground as per the conditions above, with mulching and regular watering as required.
- 4.42 Tree stakes and guards will be applied. Temporary fencing will be erected if necessary to avoid trampling or grazing of woodland ground-flora.
- 4.43 All newly planted trees and hedgerow shrubs will be monitored for any sign of poor health annually or after severe weather. Any signs of ill health or damage will be noted and remedial action taken when required.
- 4.44 Newly planted trees will be re-firmed in the ground after strong winds, frost heave or other disturbances.
- 4.45 Formative pruning of new young trees will be undertaken during the winter months to encourage an open canopy and healthy growth.

Years 1-5: Ongoing Management

- 4.46 Inspect tree/shrub shelters monthly to ensure they are secure in position and re-firm/replace as required.
- 4.47 Watering of new plantings will continue as necessary during prolonged dry spells.
- 4.48 The bark mulch layer will be topped up annually in the spring to retain moisture and limit weed growth, to a nominal depth of 75mm.
- 4.49 Prune and re-shape native transplants at the appropriate time according to individual requirements to promote good form and encourage strong growth.

- 4.50 Transplants will be re-firmed in the ground after strong winds, frost heave or other disturbances. Trees will be routinely inspected, at least annually, for pests and diseases.
- 4.51 New planting will be monitored to ensure successful establishment. The area at the base of new planting should be retained free from weed growth by occasional strimming between new plantings.
- 4.52 New woodland planting blocks will be assessed in years 5 and 10 and thinned by up to 30% to remove poor quality specimens and permit development of healthy mature trees. New planting will be monitored to ensure successful establishment. The area at the base of new planting will be retained free from weed growth by occasional strimming between new plantings.
- 4.53 Tree guards should be regularly checked and removed once no longer required.

Native Thicket Planting

- 4.54 Several areas of native thicket are proposed across the Site, including to the noise bund to provide wildlife habitat, screening and seasonal interest. Wetland thicket species will be planted within the SuDS basins.

Management Objectives

- To maximise biodiversity value of new thicket planting and provide new habitat features for local wildlife, such as foraging badgers.
- To maximise visual interest of landscaping, including fruiting and flowering.

Management Prescriptions

Year 0: Implementation

- 4.55 Thicket planting will comprise planting native shrubs of local provenance.
- 4.56 All planting will be conducted into well-prepared ground in accordance with good horticultural practice.
- 4.57 Inspect shrub shelters monthly to ensure they are secure in position and re-firm/replace as required.

Years 1-5: Ongoing Management

- 4.58 Prune and re-shape native transplants at the appropriate time according to individual requirements to promote good form and encourage strong growth.
- 4.59 New planting will be monitored to ensure successful establishment. The area at the base of new planting should be retained free from weed growth by occasional strimming between new plantings.

- 4.60 Thicket will be re-firmed in ground after strong winds, frost heave or other disturbances. Pruning will be carried out in accordance with BS 42020:2013.

Wildflower Grassland

- 4.61 Grassland habitats at the Site include regularly managed short grassland within amenity areas, less regularly managed open grassland within areas of informal public open space, and wildflower meadow areas. Non-wildflower grassland is covered under the Formal Landscaping section below.

Management Objectives

- To provide areas of species-rich wildflower meadow of varying type to provide visual interest for local residents and maximise biodiversity value.
- To create a highly diverse sward, with variation in sward height and structure.
- To provide nectar and food-plants for invertebrates, in particular bees and butterflies. The presence of bees may, in turn, be of benefit to allotment holders at the Site.
- To provide additional and better quality foraging habitat for bats.

Management Prescriptions

Year 0: Implementation

- 4.62 The agreed, locally appropriate wildflower meadow seed-mix should be nectar-rich and will be sown onto pre-prepared seed beds in accordance with the planting specification. No nutrient improvement to the existing soil will be undertaken prior to sowing or during management and where feasible, topsoil and subsoil should be mixed through deep ploughing to reduce fertility.
- 4.63 In all cases, special care should be taken to ensure the seed beds are as free from weeds as possible, through continued cultivation and herbicide applications with the aim of creating a 'stale seed' bed prior to seeding

Years 1-5: Ongoing Management

- 4.64 The wildflower meadow areas will be managed as follows:
- Year 1 – Following establishment, once the sward has reached 100mm, it should be maintained at this height between April and October through regular cuts (minimum monthly) for the first growing season to control weed growth and allow for the slower growing perennial wildflowers to establish.
 - Year 2 – Regular cutting to maintain a grass height of approximately 100mm should continue from April until May, at which point the sward should be left to establish to a greater height, before 2 further cuts in late July and Sept down to 100mm.

- Year 3 onwards - A standard hay meadow cutting regime will be implemented with the grassland cut to a height no lower than 200mm in July and September to maximise vascular plant vitality. Top in spring if required to take off excess grass growth
- 4.65 Remove arisings from all meadow cuts to prevent nutrient build-up which will adversely affect the floristic diversity.
- 4.66 The wildflower areas will be hand-weeded or spot swiped for any perennial weeds such as docks *Rumex* sp., nettles *Urtica* sp. and ragwort *Senecio jacobaea*. Failed areas will be re-sown in the spring or autumn.

Aquatic Habitats

- 4.67 There is an existing pond on-site which will be retained within an area of open space and improved wildlife habitat. Two attenuations basins and a swale are proposed which will be seeded with a wet grassland mix. Aquatic marginal planting and reedbed will also be provided (full details of which will be subject to Reserved Matters).

Management Objectives

- To improve the wildlife value and habitat condition of the existing pond.
- To maximise the multi-functional value of surface water attenuation features for biodiversity and amenity use.

Management Prescriptions

Year 0: Implementation

- 4.68 The basins and swale will be seeded with the specified wet wildflower grassland seed mix to form grassland areas that provide opportunities for wildlife. Implementation works are the same as for wildflower grassland areas specified above.
- 4.69 No initial works are proposed for the existing pond.

Years 1-5: Ongoing Management

- 4.70 Grassland within the SuDS features will be cut when the sward reaches 100mm and then every six weeks in year 1. In years 2-5 wildflower margins will be cut annually in July/early August (as a standard hay meadow cut). A summer cut is necessary to maintain a herb-rich sward in the long term. Arisings will be removed to prevent nutrient build-up and encourage less vigorous species to germinate/regrow. Wetland thicket (see below) will be planted at the margins.
- 4.71 Minimal habitat intervention for the existing pond is proposed although it should be monitored to ensure that aggressive plant species do not take over at the detriment of the rare water-crowfoot. These will be trimmed or cut-back by hand in the autumn as necessary.
- 4.72 The SuDS features and retained pond will be inspected at regular intervals, minimum every quarter, for the presence of litter and general

debris that may obstruct the water and/or provide pollutants to the water. Litter and debris should be removed by hand and taken off-site. Other potential damaging activities should also be recorded and monitored (such as dog swimming within the retained pond), with preventative measures installed where necessary to prevent habitat degradation.

Allotments

Management Objectives

- To provide an accessible and secure area incorporating communal and private allotments to enable growing of local produce and for physical and mental wellbeing of local people.

Management Prescriptions

- 4.73 A native hedgerow will be planted to the perimeter of the allotments and managed at a height of around 1.5m in accordance with the prescriptions set out above.
- 4.74 Once this area has been laid out the future management will be taken on by the appropriate authority or a management company, who will establish an Allotment Holders Association to be responsible for the day to day running of the Site.

Sports Pitches and Equipped Areas of Play

The Site includes substantial provision of land for sports in the south-west of the Site, comprising a community club house and car park as well as space for multiple sports pitches. The land will be subject to an onsite management regime, although it has not yet been determined whether that will be through the site wide Management Company, a bespoke leisure management company, or potentially the Parish Council. The S106 agreement accompanying any planning permission will provide flexibility on who the operator is, but certainty that a management regime will be in place. Two other play areas are proposed within the development.

Management Objectives

- To facilitate active recreation and field sports and to ensure the provision of a useable playing surface for the anticipated level of use.
- To provide designated play spaces that provide a range of opportunities for play, with dedicated areas for all age groups.
- To provide play areas that are safe and free from hazards, with all playable items maintained in a safe working condition that complies with all relevant legislation.

Management Prescriptions

Year 0: Implementation

- 4.75 It is anticipated that the final design of the playing fields will be subject to detailed design at the Reserved Matters stage and the responsibility of a specialist playing field contractor. Any drainage requirements will

be established following an assessment of the existing ground conditions. Once the pitches are established a detailed maintenance plan will be drawn up in order to maintain a useable playing surface. Prescriptions will be adapted to meet the anticipated level of use of the pitches.

Years 1-5: Ongoing Management

- 4.76 An overview of the likely management prescriptions for the sports pitches is set out below, and will be dependent on the types of pitches, sports being played and their intended level of use;
- Regular grass cutting will be required throughout the growing season, maintained at a height of approximately 25mm throughout the playing season (not exceeding a height of 50mm).
 - A spring and summer fertiliser should be applied to the playing fields.
 - Annual scarification and aeration of sports pitches.
 - Any bare patches on the playing fields should be dressed and over-sown in spring.
 - Regular line marking and checking of goalposts should be undertaken.
- 4.77 Inspect play equipment and surfacing weekly and report any damage to the management company. Immediately fence-off any equipment that is deemed to be faulty or unsafe. Undertake remedial works when instructed.
- 4.78 Maintain safety surfaces within play area free from litter and debris as part of weekly inspections, ensuring safety surfaces are sound and fit for purpose. Any section of surface deemed unsafe should be cordoned off and repaired immediately.
- 4.79 Undertake an annual inspection of the play equipment in the form of an independent audit by an organisation registered with the Register of Playground Inspectors International (RPII) e.g. ROSPA to check the functionality and safety of the installed equipment. The result of such an inspection should be sent to the Local Authority Recreation Officer and a copy kept on files by the Management Company.
- 4.80 Any remedial action required as a result of the annual inspection to make safe the equipment should be undertaken with immediate effect and any failed equipment should be removed or fenced-off accordingly until such a point in time at which it can be fixed.

Formal Soft Landscaping

- 4.81 The formal landscaping will include amenity grassland as well as ornamental/formal hedgerow, tree and shrub planting.

Management Objectives

- To provide short grassland for active and passive recreation for the benefit of the new residents and the wider community.

- To provide a contrasting short grassland habitat to long grassland and wildflower meadows, which encourages a different range of bird and invertebrate species.
- To establish immediate biodiversity value, landscape structure and visual interest to areas of open space.

Management Prescriptions

Year 0: Implementation

- 4.82 All new tree, hedgerow, shrub and herbaceous planting will be conducted into prepared ground, in accordance with the General Management Prescriptions above and the planting schedule (to be agreed at Reserved Matters stage).
- 4.83 Amenity grass areas will be established using either seed or turf. The planting bed will be prepared by levelling and grading the surface and removing any large stones or debris.
- 4.84 All amenity seeded areas will be raked and lightly rolled after sowing and a pre-seeding fertiliser applied and raked into the top surface c. 7 days prior to seeding. Seeding/turf laying will take place during the growing season (April – October) and will be fully watered at the time of installation. Seeded areas will also be raked and lightly rolled to encourage germination. The first cut/mow will be undertaken when the established sward reaches a height of 50mm, down to a minimum height of 25mm after which all amenity grass areas will be maintained at a nominal height of 25mm during the growing season. All arisings will be removed and composted.
- 4.85 Informal grassland areas in the south of the Site will comprise retained habitat. This will be enhanced through a combination of over-sowing (e.g. scarifying the existing grassland and sowing native wildflowers plus yellow-rattle to reduce grass vigour) and regular management with removal of arisings to reduce fertility. These areas will be mown short over the first winter with arisings collected. Cutting will stop in spring to allow yellow-rattle to flower.
- 4.86 During and following the establishment of the planting ensure that sufficient water is applied to maintain healthy growth as required. Ensure that full depth of topsoil is saturated. Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.

Years 1-5: Ongoing Management

Amenity Grassland

- 4.87 Establish and maintain all amenity grassland areas to a height of between 25mm and 35mm by cutting as necessary through the growing season. In practice, cuts every 2-3 weeks are likely to be required during the summer.

- 4.88 Where grass areas have become worn or have failed to establish, areas will be over-seeded with amenity grass seed. All grassed areas will receive an application of a proprietary granular slow-release fertilizer twice yearly in the spring and the autumn.
- 4.89 Provide dedicated bins for the disposal of dog mess at strategic points within the amenity areas.
- 4.90 Grass cutting will be avoided in areas planted with bulbs during late winter/early spring when bulbs are growing/flowering and for a period 6-8 weeks after flowering to allow bulbs to regain nutrients, after which a normal mowing regime can resume.
- 4.91 All grass cuttings will be collected and composted.

Informal grassland areas

- 4.92 Allow informal grassland areas to grow longer during the summer, when there should be a naturally diversity in grassland height and structure within high/low-use areas. Mow paths as required to c. 25mm throughout the growing season. Maintain grassland to <50mm over winter, leaving edges longer where appropriate as a wildlife refuge. Remove arisings.

Trees, shrubs and hedgerows

- 4.93 Ensure that sufficient water is applied to maintain healthy growth as required.
- 4.94 Regularly check for plantings which have been loosened by wind or frost and re-firm any loose plants back into the ground.
- 4.95 Monitor and replace failed planting with new equivalent plants between October and March. All plants should be maintained in a disease and pest free state through the application of a suitable proprietary herbicide/pesticide.
- 4.96 Guards, stakes and ties will be inspected twice yearly or after any severe weather. Test for soundness will be undertaken in early and late winter and replace tight or ineffective ties.
- 4.97 Ties will be replaced in slightly different positions. Stakes and ties will be removed as soon as trees are self-supporting to benefit tree establishment. Stake(s) will be wholly removed from the ground and the remaining hole will be filled with clean topsoil.
- 4.98 Trees will be re-firmed in ground after strong winds, frost heave or other disturbances. Trees will be routinely inspected, at least annually, for pests and diseases.
- 4.99 Formative pruning of young trees will be undertaken to remove any dead branches and reduce selected side branches, ensuring

development of a single strong leader and good overall form. Pruning will be carried out in accordance with BS 42020:2013.

- 4.100 Ornamental hedges are to be pruned annually in January or February to an average height of 1.2m.
- 4.101 Prune and re-shape shrub species at the appropriate time according to individual requirements. Remove dead or dying wood, in order to promote healthy growth and attractive form. Shrubs should be prevented from becoming overgrown, with particular attention to plants adjacent to windows, footpaths and roads to prevent obstruction. Avoid hard pruning to bare wood.
- 4.102 Keep all beds clear of weeds by cultivating and use of approved herbicides. Fork-over/hoe beds as necessary to keep soil loose, disposing of arisings off-site.
- 4.103 Apply an annual single dose of evenly spread, 11:22:9 NPK slow release fertiliser at a rate of 60g per m² to ornamental planting beds, in March - April.
- 4.104 Mulch the surface of the planting beds with chipped tree bark following planting, to a depth of 75mm. Regularly monitor mulch levels and re-mulch in July to original depth, or when required.
- 4.105 Regularly check planting beds on routine visits to assess whether thinning is required. When plantings are starting to overlap it may be necessary to remove some individual plants to retain the character of the bed. Thinning should take place as required in a logical process over several stages.
- 4.106 Dead head flowering shrubs following the flowering period to promote further flowering. Remove arisings from Site.

Hard Landscaping, Fencing & Street Furniture

- 4.107 All communal hard surfaces, not adopted by the LPA, as well as boundary fencing to open spaces (including the allotments) and street furniture including seating, bins and signage.

Management Objectives

- To maintain all street furniture and fencing in a safe and secure state.
- To maintain hard surfaces in a safe, debris free state to facilitate year round use.

Management Prescriptions

- 4.108 Maintain all hard surfaces free from debris, litter and fallen leaves, removing arisings from site.
- 4.109 Grit hard surfaces and remove snow build up where necessary.

- 4.110 Inspect hard surfaces regularly to ensure they are sound, free from cracks or trip hazards. Fence off clearly worn or failing areas and repair as new as soon as possible.
- 4.111 Undertake bi-annual checks of all street furniture and fencing to ensure that it remains soundly and safely installed. Re-install any loose furniture or fencing, repair and replace damaged sections as required.
- 4.112 In the case of street furniture containing timber elements, ensure that the timber has not become worn or the preservative treatment eroded by continual use or UV exposure. Any worn or damaged timber should receive an application of proprietary timber preservative to match the colour and treatment of the adjacent timber.
- 4.113 In the case of street furniture containing painted metal elements, ensure that any painted surface has not become worn or eroded through continual use. Any worn or damaged paint work should be rectified by the application of an appropriate paint to match the existing.
- 4.114 Undertake bi-annual checks for graffiti. The contractor should keep accurate records of any graffiti and should make every endeavour to remove/remediate street furniture that is subject to graffiti.
- 4.115 Litter and dog waste bins should be emptied weekly.

5.0 MANAGEMENT TIMETABLE

- 5.1 A schedule for all prescriptions is provided in the tables below, giving a timetable for management actions for a period of five years.
- 5.2 Before the end of this Management Plan period the management company will review these prescriptions, in consultation with interested parties and provide an updated Management Plan for on-going management.

Hedgerows and Trees	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Implement new hedgerow and tree planting. Apply mulch to 75mm. Formative pruning as needed													Landscape Contractor.	Year 0
Water new tree and hedgerow planting as required													Landscape Contractor.	Year 0
Monitor newly planted trees and hedgerows, check stakes and ties													Landscape Contractor.	Year 0
Trim existing hedgerows Promoting an 'A-line' profile, to 2m height													Landscape Contractor.	Year 0
Install bat and bird boxes on retained trees Following detailed prescriptions TBC													Ecologist	Year 0
Create habitat piles from cut material Locate at base of hedgerows or 'wild' areas. Detailed prescriptions TBC													Landscape Contractor.	Year 0
Continue to monitor new planting, check stakes and ties and remove when appropriate Replace any failed planting during Nov-Feb													Landscape Contractor.	Years 1-5; annually
Continue to water new tree and hedgerow planting as required													Landscape Contractor.	Years 1-5, or until established
Top up bark mulch To 75mm													Landscape Contractor.	Years 1-5; annually
Lightly trim new hedgerow planting (until established) Cut one side per year on 2 year rotation													Landscape Contractor.	Years 1-3; annually (rotation)

Hedgerows and Trees	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Prune newly planted trees/fruit trees to encourage good shape and new growth In winter months except stone fruit(*) (e.g. cherry/plum family) which should be pruned in the summer					*	*	*						Landscape Contractor.	Years 1-5 as needed; annually
Rotational cut of all new hedgerow planting Two year rotation, with one side cut each year													Landscape Contractor.	Years 3-5; annually (rotation)
Rotational cut of mature hedgerows 1/3 of hedgerows every three years to 1.5m-2m (cut hedgerows next to paths annually or as needed)													Landscape Contractor.	Years 1-5; annually (rotation)
Monitor for potentially hazardous trees/limbs. With action where necessary, alongside other management/monitoring works. Make habitat piles with cut material.													Landscape / Arboricultural Contractor	Years 1-5; annually
Removal of any dangerous deadwood in publically accessible areas; timber used to create habitat piles. Works subject to precautionary measures for nesting bird and bats.													Landscape / Arboricultural Contractor – informed by Ecologist.	Years 1-5, as required
Check for and remove litter. At least once a month (or as required) throughout the year.													Landscape Contractor	Years 1-5; Monthly
Monitor condition of bat and bird boxes Consult ecologist for replacement or advice as necessary													Landscape Contractor – informed by Ecologist.	Years 1-5; ongoing
Monitoring for disease and pests. Alongside other management works, with treatment/management where necessary.													Landscape Contractor / Arboricultural consultant	Years 1-5; ongoing

Woodland	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Implement new woodland planting as appropriate for species Apply mulch to 75mm. Formative pruning as needed													Landscape Contractor.	Year 0
Water new tree and hedgerow planting as required													Landscape Contractor.	Year 0
Monitor newly planted trees and hedgerows, check stakes and ties													Landscape Contractor.	Year 0
Continue to monitor new planting, check stakes and ties and remove when appropriate Replace any failed planting during Nov-Feb													Landscape Contractor.	Years 1-5; annually
Water new planting as required													Landscape Contractor.	Years 1-5, or until established
Top up bark mulch. To 75mm													Landscape Contractor.	Years 1-5; annually
Prune trees to encourage good shape and new growth In winter months except stone fruit(*) (e.g. cherry family) which should be pruned in the summer					*	*	*						Landscape Contractor.	Years 1-5 as needed; annually
Check for and remove litter. At least once a month (or as required) throughout the year.													Landscape Contractor	Years 1-5; Monthly
Monitoring for disease and pests. Alongside other management works, with treatment/management where necessary.													Landscape Contractor / Arboricultural consultant	Years 1-5; ongoing
Assess woodland blocks and thin planting by <30% To be informed by specialist arboricultural advice													Landscape Contractor / Arboricultural consultant	Year 5

Native Thicket Planting	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Implement new thicket planting Apply mulch to 75mm.													Landscape Contractor.	Year 0
Water new planting as required													Landscape Contractor.	Year 0; as required
Inspect any shrub shelters, replace/re-firm as required													Landscape Contractor.	Year 0; monthly
Prune and re-shape planting Appropriate to variety, to promote good form and strong growth													Landscape Contractor.	Years 1-5; annually; as appropriate for variety
Top up bark mulch. To 75mm													Landscape Contractor.	Years 1-5; annually
Continue to water as required until established													Landscape Contractor.	Years 1-5, or until established
Monitor success of planting and replace any failed specimens. Re-firm after bad weather													Landscape Contractor.	Years 1-5; annually
Check for and remove litter. At least once a month (or as required) throughout the year.													Landscape Contractor	Years 1-5; Monthly
Monitoring for disease and pests. Alongside other management works, with treatment/management where necessary.													Landscape Contractor	Years 1-5; ongoing

Wildflower Grassland	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Sow approved wildflower mix into prepared ground. Firm-in after sowing.													Landscape Contractor.	Year 0
Water meadow areas as needed													Landscape Contractor.	Year 0; as required
Monitor growth of weeds, hand-weed or spot-swipe as required													Landscape Contractor.	Year 0; as required
Initial Meadow Management Maintain at height of c.100mm													Landscape Contractor.	Years 1, as required
Second-year Meadow Management Maintain to 100mm until May, then allow to establish to full height. Cut back to 100mm in late July and September													Landscape Contractor.	Year 2
Ongoing Meadow Management Allow to grow during the summer months, cut to no lower than 200mm in July and September. Top in spring if required to take off excess grass growth													Landscape Contractor.	Years 3-5
Continue to monitor weed growth and establishment Hand-pull or spot swipe aggressive weeds. Re-sow or over-sow failed planting in spring or autumn													Landscape Contractor.	Years 1-5
Check for and remove litter. At least once a month (or as required) throughout the year.													Landscape Contractor	Years 1-5; Monthly

Aquatic Habitats	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Sow approved wildflower mix into prepared ground. Firm-in after sowing.													Landscape Contractor.	Year 0
Water meadow areas as needed													Landscape Contractor.	Year 0; as required
Monitor growth of weeds, hand-weed or spots-wipe as required													Landscape Contractor.	Year 0; as required
Initial Meadow Management Maintain at height of c.100mm. Remove arisings													Landscape Contractor.	Years 1, as required
Ongoing Meadow Management Allow to grow during the summer months, cut to no lower than 200mm in July and September. Top in spring if required to take off excess grass growth													Landscape Contractor.	Years 2-5
Continue to monitor weed growth and establishment Hand-pull or spot swipe aggressive weeds. Re-sow or over-sow failed planting in spring or autumn													Landscape Contractor.	Years 1-5
Monitor existing pond Cut back aggressive marginal vegetation as needed. Monitor for invasive species														
Check for and remove litter. At least once a month (or as required) throughout the year.													Landscape Contractor	Years 1-5; Monthly

Allotments	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Implement new hedgerow planting at boundary													Landscape Contractor/Council-appointed contractor	Year 0
Implement other allotment design features/infrastructure as required Detailed prescriptions TBC													Landscape Contractor/Council-appointed contractor	Year 0

Sports Pitches and Equipped Areas of Play	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Pitch/play area implementation To agreed detailed specification													Specialist contractor	Year 0
Cut grass regularly through growing season Remove arisings													Landscape contractor	Years 1-5
Apply fertiliser to playing fields													Landscape contractor	Years 1-5
Annual scarification of sports pitches													Landscape contractor	Years 1-5
Dress and over-sow bare grass patches in sports pitches													Landscape contractor	Years 1-5
Inspect play equipment and surfacing Weekly. Remediation as required													Landscape contractor/specialist advisor	Years 1-5; weekly
Annual independent inspection of play equipment Undertake remedial action as required													Registered independent organisation	Years 1-5; annually
Check for and remove litter. At least once a month (or as required) throughout the year.													Landscape Contractor	Years 1-5; Monthly

Formal Soft Landscaping	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Plant new tree, hedgerow and shrubs into prepared ground. Apply guards/stakes as required. Apply mulch To agreed detailed specification													Landscape contractor	Year 0
Plant new herbaceous planting into prepared ground To agreed detailed specification													Landscape contractor	Year 0
Establish amenity seed or turf areas into prepared seedbed													Landscape contractor	Year 0
Mow amenity grassland areas When sward reaches 50mm to minimum height to 25mm Maintain at 25mm through growing season. Remove arisings													Landscape contractor	Year 0
Scarify and over-sow wildflower mix to informal grass areas Detailed prescriptions TBC. Mix to include yellow-rattle													Landscape contractor	Year 0
Cut informal grassland areas during winter To c. 25mm. Remove arisings to help reduce fertility													Landscape contractor	Year 0
Water new planting as required													Landscape contractor	Year 0
Cut amenity grass regularly through growing season Height of 25-35mm. Remove arisings													Landscape contractor	Years 1-5; as required
Over-sow failed grassland planting or replace turf													Landscape contractor	Years 1-5
Manage informal grassland areas Allow to grow during the summer months. Maintain at <50mm during the winter, keep some edge areas long. Maintain mown paths throughout year. Remove arisings													Landscape contractor	Years 1-5

Formal Soft Landscaping	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Monitor and replace failed planting In appropriate season for variety													Landscape contractor	Years 1-5; as required
Check tree/shrub stakes and ties Remove and adjust as necessary													Landscape contractor	Years 1-5; as required
Formative pruning or young trees and hedgerows Trim hedges to average 1.2m height													Landscape contractor	
Keep planting beds tidy and free of weeds													Landscape contractor	Years 1-5; as required
Apply slow-release fertiliser to ornamental planting beds Single dose, 60g/m ²													Landscape contractor	Years 1-5; annually
Top up mulch to 75mm													Landscape contractor	Years 1-5; annually
Monitor planting beds Thin or trim back plants as required. Dead-head after flowering													Landscape contractor	Years 1-5; as required
Monitor success of planting and replace any failed specimens. Re-firm after bad weather													Landscape contractor	Years 1-5; as required
Check for and remove litter. At least once a month (or as required) throughout the year													Landscape contractor	Years 1-5; as required
Monitoring for disease and pests. Alongside other management works, with treatment/management where necessary													Landscape contractor	Years 1-5; as required

Hard Landscaping, Fencing & Street Furniture	J	F	M	A	M	J	J	A	S	O	N	D	Implemented By	Phasing
Check for and remove litter. At least once a month (or as required) throughout the year													Landscape contractor	Years 1-5; as required
Inspect hard surfaces regularly Fence off dangerous areas and repair asap													Landscape contractor	Years 1-5; monthly
Undertake bi-annual checks of street furniture and fencing Reinstall/repair as required. Add wood preservative or paint to timber as required. Remove/remediate graffiti.													Landscape contractor	Years 1-5; twice annually
Empty litter and dog waste bins Weekly													Landscape contractor	Years 1-5; weekly



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