



**R10/R14 Link Road
South Wokingham Strategic Development Location
Landscape & Ecological Management Plan**

Kier Ventures, Kingacre Estates & Miller Homes | Sept 2025 | P23-1686_EN_010 Environment



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NOTE: THIS DOCUMENT IS DESIGNED TO BE VIEWED AS A3 DOUBLE SIDED

1 Introduction

- 1.1 The objective of this Landscape and Ecological Management Plan (LEMP) is to set out the management and maintenance procedures for the areas of public open space landscape around the residential dwellings at Parcel R10, Phase 2b South Wokingham Strategic Development Location.
- 1.2 This LEMP is designed for the operational phase of the development and will commence from the handover date from the landscape contractor to the management company.
- 1.3 This document is supported by;
- P23_1686_EN_O8 Detailed Soft Landscape Proposals
 - Arboricultural Impact Assessment & Method Statement MILL24614aiaams Rev A by ACD Environmental
 - Ecological Mitigation Strategy March 2025 by Ecosa
 - Biodiversity Net Gain Design Stage Assessment March 2025 by Ecosa

Purpose of Management Plan

- 1.4 The Purpose of this management plan is:
- To ensure the design intent and vision for the public open spaces at Parcel R10 (referred to as 'the site') is realised and maintained;
 - To ensure that clear long term objectives for the public open space landscaped areas are agreed and laid down;
 - To provide detailed management prescriptions for habitat features within the site to ensure that the ecological interest is protected and biodiversity is improved where possible in line with Biodiversity Net Gain (BNG) metric that has been submitted as part of the reserved matters application;
 - To set clear standards for the performance of landscape maintenance work following handover from the landscape contractor at the beginning of the operational phase;
 - To develop detailed maintenance schedules for landscape maintenance staff; and
 - To provide details of the body or organisations responsible for the implementation of the plan and help in the allocation of financial resources for landscape maintenance.

Planning Background

- 1.5 Full Planning Permission (Ref: 240892) was granted in May 2025 for
- "A new road to provide an alternative route to Waterloo Road from South of the roundabout at the junction of Waterloo Road with William Hellas Way to a point further east of Waterloo Road, together with a turning head between the two new junctions."*
- 1.6 Condition 7 of the approval states;
- "Before the road hereby approved is open to the public to pass and repass a Landscape and Ecological Management Plan (LEMP), including long term design objectives, management responsibilities, timescales and maintenance schedules for all landscape areas shall be submitted to and approved in writing by the local planning authority."*
- The Landscape and Ecological Management Plan shall be carried out as approved.*
- Reason: to ensure that provision is made for satisfactory maintenance of the landscaping hereby approved in accordance with Core Strategy policies CP1, CP3, CP7 & CP21; Managing Development Delivery Local Plan policies CC03, TB21 & TB23; and the South Wokingham SDL SPD and in line with the strategy set out to satisfy the general biodiversity net gain requirement under the Environment Act 2021. Details are required before commencement because then need to be assessed in conjunction with the landscaping proposals."*

- 1.7 Condition 6 also states
- iii) Details of quality control measures, including supervision of landscape contract(s) by a suitably qualified landscape specialist and annual landscape audits for the five-year period from completion of the landscaping for the Landscape Phase or until adoption (whichever is longer). The annual Landscape Audit shall be submitted to the Local Planning Authority for information prior to the next planting season and replacement planting undertaken in accordance with the landscape audit and iv) below.*
- iv) Any trees or plants which, within a period of five years after planting, are removed, die or become seriously damaged or defective, shall be replaced in the next planting season with others of species, size and number as originally approved and permanently retained.*

1.8 These points are also covered within this LEMP.

Scope

- 1.9 This LEMP details the management of the highway verge tree planting and hard and soft landscaping that is not covered by approved LEMPs associated with the RM for R10 and R14.
- 1.10 This LEMP details the long-term management aims and objectives, management prescriptions and maintenance schedules, the body or organisation responsible for the implementation of the plan and the monitoring framework including actions for any breaches of the approved LEMP.

- 1.11 Areas of open space associated with the residential parcels of R10 and R14 are to be dealt with separately within their own LEMPs.
- 1.12 R10 landscaping is considered under the LEMP P24-2114_07 produced by Pegasus Group.
- 1.13 At the time of writing R14 landscaping does not have a submitted LEMP therefore the relevant landscaping maintenance and management for landscaping associated with the road application that are contained within the R14 POS landscaping has been included within this document but may be superseded in future when the R14 LEMP is produced.
- 1.14 This LEMP does not cover works associated with site clearance and constructions works.

CDM Regulations

- 1.15 The Construction Design and Management Regulations 2015 Regulation 4 requires Clients to make suitable arrangements for managing a project. Regulation 5 states that they must appoint a Principal Designer and Principal Contractor where applicable. For full details the CDM 2015 Client duties please refer to HSE Guidance Notes L153. For the avoidance of doubt Pegasus Group are not providing the CDM Principal Designer role. Pegasus can provide a copy of the safety assessment of design work in liaison with the Principal Designer when required.

Review

- 1.16 The document should be seen as an operational guide subject to change and improvement as the different landscape features mature and develop.
- 1.17 This LEMP details the management prescriptions for the first five years and we recommend that this management plan is reviewed and republished at five year intervals to ensure the management aims are still required and relevant. This review should be undertaken by a suitably qualified professional who will recommend necessary changes to the LEMP.

Ecological trends and constraints

- 1.18 This LEMP is to be seen as an operational guide subject to review to incorporate landscape and ecological trends that may impact on the landscape management aims, objectives and maintenance regime. The review process would also allow future constraints such as Natural England licenses, working method and conservation targets to be included as the LEMP evolves. Changes to management practice for ecological trends for habitat and species which may be updated to local policy and biodiversity targets would be incorporated as necessary. This would help to ensure that the LEMP remains fit for purpose in the evolving dynamic of landscape and help to ensure resilience to the effects of climate change and social pressure.

Managing Risk and Competencies

- 1.19 It is assumed that a competent contractor shall have the necessary PPE, training and skills to undertake the management and maintenance tasks as set out within this LEMP.
- 1.20 The landscape management company shall be responsible to undertake a written risk assessment in relation to the landscape, arboricultural and ecological management and maintenance prescriptions detailed within this LEMP (in addition to any other site risks). This shall be provided to the clients prior to the start of works.

Legal and Funding Mechanisms.

- 1.21 The funding for the landscape maintenance will be covered by a maintenance fee collected from the residents
- 1.22 The developer will be responsible for appointing a suitable qualified contractor to implement the management and maintenance as set out within this LEMP. They will also appoint an suitably experienced/qualified ecologist to ensure all ecological responsibilities within the LEMP are delivered.

Insolvency/Administration

- 1.23 Should the landscape maintenance body or one of their subcontractors be made insolvent/ or enter administration, the developer has the ability to re-tender the maintenance contract and engage a suitable alternative contractor to carry out the landscape maintenance. This will ensure that the maintenance regime is delivered.

Landscape Auditing

- 1.24 For the first years following completion or until adoption (whichever is longer) a landscaping audit shall be carried out annually by a suitably qualified Landscape Architect and will include details of the condition of landscaping features within the scheme. The audit will also note any works required to rectify defaults or known issues that require on-going monitoring prior to the next annual report. The report will be made available to the Local Planning Authority

Replacement Planting

- 1.25 Any trees or plants which, within a period of five years after planting, are removed, die or become seriously damaged or defective, shall be replaced in the next planting season with others of species, size and number as originally approved and permanently retained.

- 1.26 If a particular species develops a disease or known issue and requires replacement, a suitable alternative will be selected and approved with the local planning authority.

Landscape and Ecological Management Aims

1.27 The aims for the landscape and ecological management and maintenance are:

- To present an attractive and safe environment for home owners, residents and visitors;
- To ensure the proposed landscape elements successfully establish, and present a high quality visual appearance of new planting and areas of grassland within the public open spaces and public streetscape;
- To keep areas of public open space in good condition, suitable for amenity and informal recreation;
- To ensure that existing site features (existing trees and hedgerows) are appropriately managed in relation to proposed dwellings and existing habitats. This includes the protection of canopies and rooting environments during maintenance operations according to the guidelines set out in BS 5837:2021 "Trees in relation to design, demolition and construction";
- To help prolong the life and enhance the wildlife value of the existing trees within the site, and retain their function within the existing landscape framework of this site;
- To successfully establish new areas planting,

including trees and maintain their health, visual amenity and species diversity to establish a diverse treed and planted environment;

- To keep the site clear of litter and rubbish and hard landscaping (including footpaths and street furniture) in a state of good repair;
- To provide an appropriate level of management intervention that corresponds the character area of the open space ranging from a moderate within areas of amenity open space to minimal approach to management within areas of natural/semi-natural green space. All areas should monitor and keep weed colonization at a minimum and acceptable level for the character area and to ensure desired ecological habitats can thrive;
- To carry out maintenance work according to best practice using sustainable techniques and materials; and
- To report back on any on-going issues with on site maintenance that will require an update to this document and the associated maintenance practices on site.
- To ensure that the condition of habitats is maintained to the standard targeted in the Biodiversity Net Gain assessment.

2 Site Description

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| <p>2.1 R10/R14 Link road connects the Eastern Gateway to Waterloo Road via the residential parcels of R10 and R14 within Phase 2B of the Strategic Development Location (SDL) at South Wokingham.</p> <p>2.2 Highway verges along the road feature rain gardens with herbaceous planting and tree planting.</p> <p>2.3 Two sustainable urban drainage (SUDS) basins are located within areas of open space associated with R10 and R14. These basins feature grassland, wetland tolerant shrub planting and tree planting as well as wetland scrapes with marginal planting and boulders. Timber steps provide informal access into the basin during dry weather and conditions.</p> <p>2.4 Further areas of open space associated with the residential parcels feature existing trees and hedgerows to be retained. Proposed hedgerow planting and grassland contribute towards the habitat creation on site.</p> | <p>2.5 A summary of the habitat types found within the site are listed below:</p> <ul style="list-style-type: none">• Retained existing trees and hedgerows• Urban Tree (Includes street trees not within private curtilage and trees within the POS)• Native Species Rich Hedgerow• Native Species Rich Hedgerow with trees• Mixed Scrub• Sustainable Urban Drainage and Rain Gardens (including wet tolerant shrubs, marginal planting, wetland grassland, tussock grass mix and rain gardens); and• Ecological Habitats |
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3 Environmental Considerations

Horticultural Peat

- 3.1 Horticultural Peat is not to be used as mulch or as a soil conditioner. Plants to be procured from nurseries which grow without peat; plants grown in peat are only to be purchased in exceptional circumstances.

Recycled Materials

- 3.2 Where appropriate, use should be made of materials made from recycled components, eg wood chip mulch.

Pesticides/Herbicides

- 3.3 Weed control of transplant areas is to be achieved by using mulch mats and hand weeding. The control of invasive (includes species listed on Schedule 9 of the Wildlife and Country Act) and pernicious weeds can be carried out with targeted applications of glyphosate based herbicides.

Water Management

- 3.4 Where necessary, maintenance staff are to water plants at appropriate times of the day to ensure minimum water evaporation. It is anticipated that watering will only be necessary during the establishment period.

Habitat management

- 3.5 Opportunities for the creation of additional micro-habitats and habitat enhancement should be taken wherever possible. Where appropriate habitat creation could include working with the Wildlife Trust and local wildlife groups to create log/habitat piles.
- 3.6 Allow deadwood, jagged stumps, splits, fungal growths/fruited bodies and holes in tree trunks to remain unless they are creating a safety hazard.
- 3.7 Trees should not be felled unless they are classified as dangerous. Where a tree poses as a health and safety hazard, advice shall be sought immediately from an arborist. Ivy should only be severed where it is growing into tree canopies and is likely to create a safety hazard.
- 3.8 The retention, as far as possible, of the existing vegetation is considered an important part of the development. Such areas will be managed appropriately to maintain and develop their value.

4 General Maintenance Requirements

General Maintenance

- 4.1 Maintenance operations are to be carried out with regard to BS 4428: Code of Practice for General Landscape Operations. Maintenance of soft landscaping (other than amenity turf) to have regard to BS 7370-4: Grounds Maintenance. Recommendations for Maintenance of Soft Landscape.

Tree Works

- 4.2 No pruning works to trees, hedgerows or structural planting are to be undertaken during the general bird nesting season of 1st March to 31st August inclusive. Works outside of this time period should be subject to checks by an ecologist to ensure there are no nesting birds present.
- 4.3 All tree surgery work is to be carried out to BS 3998:2010 Tree Work–Recommendations, and should be undertaken by a suitably qualified operative. Any trees with bat potential to be inspected by a qualified bat specialist prior to any tree works commencing.
- 4.4 Hygiene works will be avoided, for example fungal fruiting bodies should not be removed nor trees felled because they have bracket fungi on them unless classified as dangerous by an arborist. Where possible, trees will be allowed to age naturally and dying trees will be allowed to decay in-situ. Where a tree poses a health and safety hazard, advice will be sought from an arboriculturist.

Watering

- 4.5 Until well established all shrubs/trees are to be watered during the growing season. Following any dry periods of 7-10 days soil water content should be assessed and watering undertaken as necessary.
- 4.6 Planting areas are to be brought up to field capacity at each visit and each tree is to receive 40 litres or as required. If trees are showing signs of drought stress the watering regime should be reviewed and increase as required. Care should be taken to ensure applied water is absorbed into the root-zone and does not run off the surface.
- 4.7 Watering is unlikely to be required after year one of the management plan, but all shrubs/trees should be visually monitored for signs of water stress from year 2 onwards and action taken if required. This is especially key during periods of dry weather.
- 4.8 All trees are to be fitted with watering tubes around the rootballs and watering will take place via these systems as per the manufacturers specification.

Failure to thrive

- 4.9 Any shrubs, hedges or trees which fail to thrive in the first five years shall be replaced with the same species and variety at the size specified on the original landscape planting plan. Trees and shrubs should be checked in September and marked with paint, or noted on a plan, as necessary. Replacements will be planted during the following planting season. No substitutes will be planted without written approval from the local planning authority.
- 4.10 If a particular species fails to establish successfully then an alternative, comparable species should be considered as replacement, in agreement with the landscape consultant. Replacement planting of container plants to be undertaken as required, root-ball/bare root planting to be undertaken November to March. Planting of new trees to have regard to Section 10 of BS 8545:2014 Trees: from nursery to independence in the landscape. All plants to conform to BS 3936 and be in accordance with the National Plant Specification.

Litter and Arisings

- 4.11 All arisings from landscape works will be removed from site and disposed of at a registered facility, recycling or composting of arisings should be prioritised. Litter and debris shall be cleared by hand from all open space areas (including prior to mowing areas any areas of grassland) and removed from site on a monthly basis.

5 Maintenance Specification

A summary of the habitat types (included their landscape elements) and landscaped areas are included below:

5.1	Retained existing trees and tree groups
5.2	Retained existing hedgerow
5.3	Urban Tree (Includes street trees not within private curtilage and trees within the POS)
5.4	Native Species Rich Hedgerow (with and without trees)
5.5	Mixed Scrub
5.6	Sustainable Urban Drainage (including wet tolerant shrubs, marginal planting, wetland grassland, tussock grass mix and rain gardens)
5.7	Ecological habitats

5.1 Retained trees and tree groups

Areas and landscape elements included

Refer to ACD Arboricultural Impact Assessment for full location and schedule of retained trees on site ref: CONS24461aia-amsE

Management Aim

- To prolong the life and enhance the aesthetic and wildlife value of the existing trees across the site and along the site's boundaries; and

Management Objectives

- To maintain the health and visual amenity of the retained trees and tree groups;
- To enhance their ecological/ biodiversity value; and
- To maintain the varied age and structure of the trees.

A detailed condition survey of all trees will be carried out by a qualified arborist at least once every two years. Any necessary remedial works will be carried out as soon as possible.

There will be no regular pruning of trees to retain at least 75% of the expected canopy for their age range and height.

Note: deadwood resulting from tree management works will be used on the site to create wood piles as and when required following the completion of the public open space areas. The wood at the bottom of the pile is to be set 1/3rd into the ground. Piles are not to be located in areas of green space with high public usage.

5.2 Existing hedgerow

Areas and landscape elements included

Refer to ACD Arboricultural Impact Assessment for full location and schedule of retained trees on site ref: CONS24461aia-amsE

Management Aim

- To strengthen the commuting routes for wildlife to provide enhanced foraging, resting and nesting habitats for birds, bats, reptiles and invertebrates.

Management Objectives

- To maintain the health and visual amenity of the retained hedgerow;
- To maintain dense, bushy, continuous hedge lines with a good species mix and no gaps;
- To enhance the ecological and biodiversity value of the existing hedgerow;
- To take care due care during maintenance operations near existing hedgerow; and
- To maintain a varied structure of hedgerow through rotational cutting.

Hedgerows shall be cut on a 3 year rotation as the abundance of berries increases from one year to two years after cutting and then slowly declines, cutting annually reduces the availability of food for wildlife.

Existing hedgerows are to be maintained at a minimum height of 1.5m and minimum width of 1.5m.

1/3 of the retained hedgerows shall be trimmed per year, leaving the remaining 2/3 untrimmed, this will prevent encroachment into open space whilst promoting growth of fruiting plants. The untrimmed growth of the hedgerows will allow wildlife to migrate and re-colonise before the next trim, and also allow development of mature fruiting stems.

Any gaps in hedgerows on the site are to be in-filled using native species as soon as identified to prevent short-cuts developing. These will be planted as tall whips and will comprise a similar native species mix to those present within the hedgerow. To ensure that the plants establish new planting will be protected from trampling with appropriate guards and fencing until they are well established.

A 1m width of grassland is to be maintained unmown on either side of the hedge (where practical and at least to one side where it is not practical on both sides) Natural regeneration of herbaceous species is to be encouraged. Areas of bare ground should be sown with a semi-shade tolerant grassland mix to be approved by the project ecologist.

5.3 Urban Tree

Areas and landscape elements included

Trees located within the public open space, as shown on the Landscaping Proposals (P23-1686_EN_011) and trees within the highway verge.

Management Aim

- To successfully establish new tree planting;
- To maintain new tree planting to establish a diverse treed environment with a high quality visual appearance;
- To provide enhanced opportunities for foraging and sheltering for a range of wildlife including birds, bats and invertebrates; and
- To ensure clear stem trees (within the streetscape) are maintain with a 2m clear stem to avoid obscuring visibility splays.

Management Objectives

- To maintain newly planted trees to ensure good survival rate and development;
- To minimise competition from grass and weeds around newly planted trees;
- To maintain appropriate form of trees for future growth; and
- To ensure trees do not present a hazard to site users;

Any necessary remedial works will be carried out as soon as possible. All tree work should be carried out in accordance with BS 3998 (2010) (or any subsequent updates).

Tree stakes and ties will be regularly checked during the establishment period and adjusted as necessary to ensure that the developing trees are not damaged. Stakes and ties will be removed from site (to a legal disposal facility) by the landscape maintenance contractor at the earliest opportunity (between year 3 and year 5) when it is considered that the trees are self supporting.

There will be a minimal pruning policy for trees as pruning wounds can provide a source of infection. Formative pruning of new trees will be carried out to remove dead and diseased wood and to create a well balanced tree with a single leader. Clear stems of 2 metres will be maintained by rubbing off any shoots and when the trees reach 5 to 6 metres high lower branches will be removed to give a canopy height of approximately 3.0 metres.

If trees die the reason for death shall be investigated and addressed before replanting a replacement. If death is due to the planting conditions these shall be ameliorated. If death is due to pests or disease and likely to be present in the future a resistant species of an alternative similar native tree shall be selected.

Where trees have become moribund due to compaction

or lack of nutrients then soil aeration techniques and/or the use of inoculants shall be considered.

Care should be taken not to over-water trees. Until well established trees are to be watered during the growing season following any dry periods of 7 days. Watering is unlikely to be required after year one of the management plan, but trees should be visually monitored for signs of water stress from year 2 onwards and action taken if required.

5.4 New Species Rich Native Hedgerow Planting (with and without trees)

Areas and landscape elements included

Proposed species rich native hedgerow planting with and without trees are located within the public open space, as shown on the Landscaping Proposals (P23-1686_EN_011).

Management Aim

- To assist the establishment of new native species rich hedgerow and native species rich hedgerow with trees to enhance and create green corridors throughout the site.
- To strengthen the commuting routes for wildlife and provide enhanced foraging, resting and nesting habitats for birds, bats, reptiles and invertebrates

Management Objectives

- To help establish and maintain a dense continuous hedge line with no gaps;
- To maintain the health, visual amenity and species diversity of the proposed native hedgerow; and
- To take due care during maintenance operations near new hedgerows.

New hedgerows will be planted such that there is a minimum of 5 native woody species in every 30 meters of hedgerow.

Hedgerow cutting will take place between November and January inclusive, outside of the bird nesting season, unless works are essential for public safety.

Hedgerow plants will be trimmed to create a healthy solid hedge. The frequency of cutting will depend upon growth rates and weather conditions; the requirement for cutting will therefore be assessed annually.

Hedgerow planting will be maintained by weeding, pest & disease control and appropriate guards and fencing until it is well established.

From year 4 the proposed native hedgerow will be pruned/shaped as part of a rotational management regime whereby hedgerows are cut on a 3 year rotation to allow for an abundance of berries from one to two years after cutting

Hedgerows will be maintained at a minimum height of 1.5m and a minimum width of 1.5m.

1/3 of the hedgerows shall be trimmed per year, leaving the remaining 2/3 untrimmed. This will prevent encroachment into the open space whilst promoting growth of fruiting plants.

Any gaps in hedgerows on site are to be in-filled using like-for-like species as soon as identified to prevent short-cuts developing.

A 1m width of grassland is to be maintained unmown on either side of the hedge (where practical and at least to one side where it is not practical on both sides) Natural regeneration of herbaceous species is to be encouraged. Areas of bare ground should be sown with a semi-shade tolerant grassland mix to be approved by the project ecologist.

Trees planted within hedgerows should be managed according to the management prescriptions set out for trees under section 5.3 urban trees.

5.5 Mixed Scrub

Areas and landscape elements included

Proposed mixed scrub habitat includes wet tolerant shrub planting. The habitat is located within the public open space, as shown on the Landscape Proposals (P23-1686_EN_011).

Management Aim

- To establish new areas of wet tolerant shrub planting

Management Objectives

- To maintain newly planted wet tolerant shrub planting to ensure successful establishment.

Mixed scrub is to be maintained to have a minimum of three wood species with no one species comprising more than 75% of the cover. There is to be an absence of invasive non-native species (includes species listed on Schedule 9 of the Wildlife and Country Act) and species indicative of sub-optimal condition make up less than 5% of the ground cover. Where found within the native shrub they are to be removed by hand (and treated as controlled waste where appropriate) to minimise disturbance of establishing/established native shrub plants.

Where possible (in line with maintained edges required to hard standing – see grassland maintenance within 5.9 and 5.10) a 1m edge of tall grassland should be

maintained to the edge of proposed native shrub planting to help a well-developed edge and provide an ecological transition between habitat areas.

Shrubs should be allowed to grow dense where it does not encroach on grassland or amenity areas.

5.6 SuDS Basin and Rain Gardens

Areas and landscape elements included

Proposed SUDS habitat includes wet tolerant shrub planting, wet tolerant grassland, tussock grassland, marginal planting and planting within rain gardens within the streetscape. The habitat is located within the public open space and rain gardens within in the highway verge, as shown on the Landscaping Proposals (P23-1686_EN_011).

Management Aim

- To maintain the SuDS basin and rain gardens as a successful on site water management system;
- To maintain the SuDS basin and rain gardens as a habitat feature to provide foraging area for wildlife and as an attractive landscape feature;
- To create a substantial cover of marginal native vegetation within the wetland scrapes at the base of the SuDS basin;
- To create a substantial cover of herbaceous and perennial planting within the highway rain gardens;
- To avoid dense shading of the margins around the SuDS basin; and
- To ensure boulders and timber steps remain functional and don't become a safety hazard.

Management Objectives

- To ensure the design water management capacity for the basins and rain gardens are achieved through viable equipment associated with the basin;
- To ensure grassland areas within the basin successfully establishes;
- To ensure marginal planting areas within the basin successfully establishes
- To ensure tree planting within the basin successfully establishes;
- To ensure herbaceous and tree planting within the rain gardens successfully establishes;
- To control weeds / scrub invasion detrimental to appearance or usage;
- To maintain boulders and timber steps in safe condition; and
- To keep boulders and timber steps free of debris, litter, graffiti & dog faeces.

The SuDS basin and rain gardens should be maintained according to best practice as set out in The SuDS Manual (C753). Areas of tree and shrub planting and grassland within the basin and rain gardens will be managed and maintained in line with tree and shrub planting and grassland elsewhere within the areas of public open space.

Marginal planting within the basin will be checked regularly throughout the growing season for pests and diseases and treated as necessary. If a particular plant becomes subject to a fatal pest or disease it shall be replaced by an alternative resistant plant with a similar form and habit.

Presence of invasive non-native species (includes species listed on Schedule 9 of the Wildlife and Country Act) will be checked regularly through the growing season to ensure there is a maximum of 5% coverage of total vegetated area. Removal (and treatment as controlled waste where appropriate) will be carried out as necessary to maintain below this level of coverage.

If the waterbody should become heavily shaded (more than 50% at 1m from the pond margins) management will include cutting back overhanging trees and shrubs to reduce shading and leaf fall into the waterbody.

Wetland Meadow Mix and Tussock Grassland Mix Maintenance

Arisings shall be swept from hard surfaces adjacent grass/wildflower areas after each maintenance visit.

Junctions between grass/wildflower areas and plant beds/hard surfaces shall be regularly edged and trimmed to maintain a neat and tidy appearance. In order to avoid damage to trees no mower or strimmer will be allowed within 400mm of a tree trunk.

Areas of greater than 5% failed grass shall be prepared and re-sown with the specified seed mix either in April or September. No fertiliser or grass growth regulator will be permitted on these grassland mixes.

Undesirable plant growth within the sward, such as scrub, dock, thistle, nettles and ragwort, should be controlled by hand excavation /pulling. Any encroaching scrub vegetation shall be removed by hand picking/weeding, this should be undertaken in the winter months, to avoid the bird nesting season.

Litter shall be hand picked and bagged from all grass areas prior to cutting. Bags shall be removed from site and legally disposed of.

Marginal and Rain Garden Planting

Formative pruning will be kept to a minimum, where necessary diseased and damaged plant material will be removed. Where shrubs overhang path edges they will be neatly clipped back in order to maintain the full width of pedestrian access routes. Divide any clump forming plants in early spring as required. Once cleared, keep any removed vegetation at the edge of the basin or rain garden to allow any trapped reptiles, amphibians and invertebrates to migrate to a new habitat.

Planting beds will be checked regularly throughout the growing season for pests and diseases and treated as necessary. Plant losses should be monitored and recorded. If a particular plant becomes subject to a fatal

pest or disease it shall be replaced by an alternative resistant plant with a similar form and habit (refer to note on plant substitution in general maintenance guidance paragraph 4.10).

SUDS Basin Maintenance

Due care will be taken when carrying out management and maintenance operations in and around the SuDS basin and rain gardens. In line with the CIRIA SuDS Manual C753 2015 (Section 32 Operation and Maintenance), slopes have been designed to comply with maximum gradient of 1:3. Maintenance of the grass within the main body of the attenuation feature is to be carried out using hand machinery such as push mowers, with grass around the inlet and outlet infrastructure being trimmed closely to reduce risks to system performance. Appropriate training should be provided to encourage safe working practices on side slopes by water and should not take place during or immediately following periods of excessively wet weather.

Annual monitoring and evaluation of the risk assessment and controls is to take place for the SuDS basin.

Hard Landscaping within the Basin

Proposed boulders and timber steps will be regularly checked for subsidence and damage and will be repaired at the earliest opportunity using the original specified material. Areas where damage poses a hazard to pedestrians shall be cordoned off with bollards and

high visibility tape until repair can be organised.

A “no tolerance” policy will apply to graffiti which shall be removed as soon as it appears and where necessary specialist contractors shall be employed to carry out this work.

5.7 Ecological Habitats

Areas and landscape elements included

The proposed planting plans will provide beneficial habitats to protected species including foraging and commuting bats, breeding birds, reptiles and amphibians

Management Aim

- To establish habitats that provide benefits to protected species

Management Objectives

- To avoid harm and disturbance to protected species during habitat management

Scrub and tree management works will be undertaken outside of the bird nesting season (March to August inclusive)

6 Schedule of Management and Maintenance

6.1 Establishment Years 0–5

The below table sets out how the maintenance tasks for the management aims and objectives will be achieved for the establishment period of years 0–5:

Establishment Years 0–5			
Ref	Management Categories	Timing	Maintenance Task and Method
6.1.1	All planting areas	Every Visit	<ul style="list-style-type: none"> Ensure continued health of all landscaping – water as required to ensure that the planting continues to establish successfully. Investigate any failed growth and take remedial action as necessary.
		Monthly	<ul style="list-style-type: none"> Removal of rubbish and debris – clear litter and fly-tipped rubbish by hand and remove from site. Remove rubbish and debris from all grassland areas before mowing. Inspect for vandalism – visual inspection of all landscaping for vandalism, report to owner. On instruction from owner replace any landscaping damaged by vandalism.
		Annually	<ul style="list-style-type: none"> Monitor and record any plant losses and report to owner – on instruction from owner remove dead plant and replace as per original approved specification, unless otherwise agreed to plant alternative species. Maintain to ensure survival. Re-planting to be undertaken in November/December. Remove exotic plant species that do not belong in each type of habitat/the general environment – check all landscaped areas for exotic species, clear by hand and remove from site Control vigorous plant species that are out competing less vigorous species – check all landscaped areas for invasive species (includes species listed on Schedule 9 of the Wildlife and Country Act) e.g. self seeded sycamore, brambles, ground ivy and nettles. Reduce/clear by hand and remove from site (and treated as controlled waste where appropriate).

Establishment Years 0-5			
Ref	Management Categories	Timing	Maintenance Task and Method
6.1.2	Existing retained trees/ tree groups	Monthly	<ul style="list-style-type: none"> • Ensure trees/shrubs planting are stable – visually inspect tree/shrub guards/shelters to check for signs of bark damage or damage. Check that stakes, ties and guards are not too loose, too tight or broken. On instruction from client/owner, replace or upgrade guards/shelters as necessary. • Monitor transplants to ensure developing healthily – visual inspection of plants, if not stable/upright rectify by replanting in an upright position and re-firm, if plant remains unstable remove by hand and replace. Undertake for the first two years. • Visual inspection for fungal activity (for trees this is to be performed by a qualified arboriculturist) – remove diseased wood or treat as appropriate. Keep use of pesticides to a minimum. Inspection to be undertaken March to October when trees/shrubs are still in leaf.
	Proposed trees within highway verge		
	Proposed trees within species rich hedgerow with trees		
	Proposed trees and wet tolerant shrubs within SUDS habitat	3 times per annum	<ul style="list-style-type: none"> • Visually inspect bark mulch areas around trees and top up to 75mm depth, if required. Remove any weeds within the mulch by hand, do not use strimmers or herbicides in these areas – April/June/August. • Visually inspect native shrub areas for grass/weeds – remove by hand. Do not use strimmers – April/June/August
		Annually	<ul style="list-style-type: none"> • For first 5 years – establishment survey for new trees to be undertaken by a qualified arboriculturist, any recommendations to assist with establishment must be undertaken as soon as possible. • Keep paths/highway/parking clear from branches/vegetation – pruning/cut back any tree branches/vegetation encroaching. Trees shall be pruned to a height of 5m if overhanging highways and 3m if over paths. • Remove dead, damaged or dying branches as appropriate. Deadwood is to be retained on site in location to be agreed with project landscape architect and ecologist. • Formative pruning of new trees (excluding trees within the lowland mixed deciduous woodland habitat) – to create a well balanced tree with a single leader and, by rubbing off any shoots, creating a clear stem of 2m. When the trees reach 5-6m in height, lower branches will be removed to give a canopy height of approximately 3m.
		Biennial (or as recommended)	<ul style="list-style-type: none"> • Check tree safety – identify hazards and carry out necessary maintenance works. A visual tree assessment is to be undertaken by a qualified arboriculturist of all new and existing tree planting, with instrumental back up where necessary. Any resulting tree works are to be carried out to BS 3998:2010. Keep records up to date.
		3 to 5 years after planting	<ul style="list-style-type: none"> • Confirm root growth is well established and remove shelters, stakes, guards and ties from trees/transplants – to avoid damage cut shelters away then remove stakes.

Establishment Years 0-5			
Ref	Management Categories	Timing	Maintenance Task and Method
6.1.3	Retained Hedgerows	Monthly	<ul style="list-style-type: none"> Check hedgerows for gaps, record and infill during late October to March. Plant replacement tall whips, of a species mix to match the hedgerow or to increase native diversity, in a suitably prepared soil bed. Ensure successful establishment and protect from trampling/use as a shortcut using a temporary fence/guards. Keep hedgerow planting free from weeds – visually inspect bark mulch areas around planting and top up to 75mm depth, if required. Remove any weeds by hand, hoe or fork. Take care not to disturb shrub roots and excessive treading of bed surface. Do not use strimmers or herbicides in these areas – March to October.
	Proposed native species rich hedgerows with trees	Annually (year 4 onwards for newly planted native hedgerow)	<p><u>Retained hedgerows, proposed native species rich hedgerow, proposed native species rich hedgerow with trees:</u></p> <ul style="list-style-type: none"> To ensure two years growth can accumulate, only 1/3rd of each retained hedgerow will be cut every year, on a three year rotation. Prune retained hedgerows to ensure a good shape and healthy growth. Prune to maintain an 'A' shape and control future growth. Management to be undertaken in January/February. Prune/shape new hedgerow planting to a shape and form appropriate to the species with formative and seasonal pruning to create and maintain a natural 'A' shape hedgerow, pruning dead foliage and extension growth as necessary– Autumn (November onwards). Hedgerows to be maintained to a minimum height of 1.5m and a minimum width of 1.5m Re-plant in an upright position and re-firm plants that suffer from wind-rock – January/February. <p><u>Proposed native hedgerow:</u></p> <ul style="list-style-type: none"> To be cut annually to maintain a height between 1m and 1.2m and a width of 1m Re-plant in an upright position and re-firm plants that suffer from wind-rock – January/February.
	Proposed native species rich hedgerows		<p><u>Proposed native hedgerow:</u></p> <ul style="list-style-type: none"> To be cut annually to maintain a height between 1m and 1.2m and a width of 1m Re-plant in an upright position and re-firm plants that suffer from wind-rock – January/February.
		3-5 years after planting	<ul style="list-style-type: none"> Confirm root growth is well established and remove shelters, stakes, guards and ties from hedgerow transplants – to avoid damage cut shelters away then remove stakes.

Establishment Years 0-5			
Ref	Management Categories		Maintenance Task and Method
6.1.4	Other Neutral Grassland Habitat including		<u>General Maintenance for all grassland types</u> <ul style="list-style-type: none"> All UK species of reptile are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species which protects them from intentionally or recklessly killing or injuring these species. If reptiles are found frequently during site management a suitably qualified ecologist should be contacted to make a further assessment on how best operations should continue. Do not cut grass in drought conditions. Mow with suitable machinery – no mower or strimmer will be allowed within 400mm of a tree trunk. Edge and trim junctions between grassland / wildflower and hard surfaces to maintain a neat and tidy appearance. Remove arisings from site and dispose of responsibly. Clean adjoining path areas after mowing. Keep all grassland areas free from weeds – remove weeds and encroaching scrub by hand, hoe or fork, as appropriate. Undertake monthly from March to October, or as required. Keep grassland areas in good condition – check and report to client/owner on damaged areas. On instruction from client/owner repair damaged/failed areas and re-sow seed. <u>Do not apply feed to any grassland on site.</u> Review bulb planting during growing/flowering period to ensure bulbs are thriving. Schedule in supplemental bulb planting as appropriate.
	Wildflower Meadow		
	Wetland Meadow		
	Wildflower Meadow and Wetland Meadow	Cutting Regime – Year 1	<ul style="list-style-type: none"> Most of the sown meadow species are perennial and are slow to establish. Soon after sowing there will be a flush of annual weeds, arising from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for bugs, and they will die before the year is out. So resist cutting the annual weeds until early August, then cut to a maximum of 40mm, remove and compost.
		Cutting Regime – Year 2	<ul style="list-style-type: none"> Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut back with a scythe, petrol strimmer or tractor mower to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow or graze the re-growth through to late autumn/winter to c 50mm and again in spring if needed.
6.1.5	Marginal Planting within Rain Gardens	Monthly	<ul style="list-style-type: none"> Control invasive plants (includes species listed on Schedule 9 of the Wildlife and Country Act) and naturally occurring weed within the marginal planting areas and areas of rain garden planting. Remove waste from site and dispose of responsibly (and treated as controlled waste where appropriate).
		Annually	<ul style="list-style-type: none"> Monitor and record any plant losses within marginal planting and rain garden planting areas. Report losses to the client and replace on instruction. Prune planting as required to maintain attractive and healthy appearance. Divide any clump forming plants in early spring as required. Once cleared, keep any removed vegetation at the edge of the basin or rain garden to allow any trapped reptiles, amphibians and invertebrates to migrate to a new habitat.

Establishment Years 0–5			
Ref	Management Categories	Timing	Maintenance Task and Method
6.1.6	Hard Landscape (boulders and timber steps within SUDS basin)	As necessary	<ul style="list-style-type: none"> Remove graffiti – a ‘no tolerance’ policy will apply to graffiti which shall be removed as soon as it appears, where necessary specialist contractors shall be employed to carry out this work.
		Fortnightly	<ul style="list-style-type: none"> Keep hard landscape areas clean – remove litter, debris and faeces. Use pressure washer to remove chewing gum and staining. Fortnightly March to October and as required during the winter months.
		Monthly	<ul style="list-style-type: none"> Maintain all hard landscape areas/elements. Monitor and report to client on damaged areas/items and repair as instructed by the client. Repair using the original material/product to maintain the integrity of the design. Areas where damage poses a hazard to pedestrians shall be cordoned off with bollards and high visibility tape until repair can be organised.
		2 or 3 times per annum	<ul style="list-style-type: none"> Removal of excessive leaf litter and fallen twigs and branches – use leaf blower and leaf litter collection equipment – November to December. Keep hard landscaped areas clear of weeds – kill weeds using a herbicide spray containing glyphosate using a knapsack sprayer – April, June and August.
6.1.7	SuDS Basins and Rain Gardens	Monthly	<ul style="list-style-type: none"> Inspect inlets, outlets and overflows for blockages, and clear if required Inspect banksides, structures, pipework etc for evidence of physical damage. During the first year, inspect inlets and facility surface for silt accumulation. Control invasive plants (includes species listed on Schedule 9 of the Wildlife and Country Act) and naturally occurring weed within the marginal planting areas. Remove waste from site and dispose of responsibly (and treated as controlled waste where appropriate).
		Annually	<ul style="list-style-type: none"> Check mechanical devices associated with the SuDS basins, report faults or failures and suggest appropriate remedial action. As necessary, remove sediment from devices associated with the SuDS basin.
6.1.8	Ecological Habitats	Annually	<ul style="list-style-type: none"> ECOSA INPUT
		Biennially	<ul style="list-style-type: none"> ECOSA INPUT

6.2 Landscape Management Review

The below table sets out how the review processes:

Monitoring and Review			
Ref	Management Categories	Timing	Maintenance Task and Method
6.2.1	Landscape and Habitat Management	As necessary	<ul style="list-style-type: none"> Monitor comments/suggestions from residents and other users – feedback comments to client/ owner and respond as instructed and incorporate into LEMP as required. Respond to comments from client/ owner and incorporate into LEMP as required.
6.2.2	Habitat Management – annual monitoring report	Annual	<ul style="list-style-type: none"> Review of habitat conditions (including grassland, hedgerows, shrub, scrub and trees) and species to be undertaken by a qualified ecological professional. The review and report will be used to determine whether or not objectives for the site and component features have been met. Once the review has been completed a monitoring report is to be produced. Any amendments set out within the report to be incorporated within this LEMP following discussions with the client/ owner.
6.2.3	LEMP Review	Every 5 years	<ul style="list-style-type: none"> Suitably experienced professional to undertake a review of habitat / landscape establishment and quality, respond to review and incorporate into LEMP as required.

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