Woodfords, Shipley Road, Southwater

Bellway Homes Limited (South London)

Landscape Ecological Management Plan

Pursuant to Condition **23 of DC/21/2180**

Version	Created By	Approved By	Date
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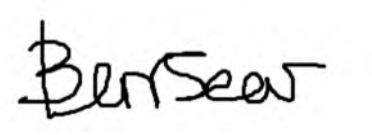

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1. Introduction

1.1 Background

1.1.1 Ecology Solutions was commissioned in June 2025 by Bellway Homes Limited (South London) to complete a Landscape and Ecological Management Plan (LEMP) for Woodfords, Shipley Road, Southwater, hereafter referred to as the 'Site'.

1.1.2 The Development Proposals for the Site are for creation of up to 73 new dwellings, associated public open space, landscaping, drainage and highway infrastructure works, including vehicular access from Shipley Road.

1.1.3 Ecology solutions have prepared a Landscape and Ecological Management Plan (LEMP) to address Condition 23 of the planning permission (DC/21/2180). The condition states:

> *"Any Reserved Matters application shall include a Landscape and Ecological Management Plan. The plan shall include the following:*
>
> *a. Description and evaluation of features to be managed.*
> *b. Ecological trends and constraints on site that might influence management.*
> *c. Aims and objectives of management.*
> *d. Appropriate management options for achieving aims and objectives.*
> *e. Prescriptions for management actions.*
> *f. Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five-year period).*
> *g. Details of the body or organisation responsible for implementation of the plan.*
> *h. Ongoing monitoring and remedial measures*
>
> *Reason: To conserve and enhance Protected and Priority species and allow the LPA to discharge its duties under the Conservation of Habitats and Species Regulations 2017 (as amended), the Wildlife & Countryside Act 1981 as amended and s40 of the NERC Act 2006 (Priority habitats & species) and Policy 31 of the Horsham Development Framework."*

1.1.4 This document sets out the management features of ecological interest due to be retained, enhanced or created as part of the development in order to ensure that a betterment for biodiversity is achieved. It should be read alongside the landscape proposal produced by Allen Pyke Associates (see Appendix 1).

1.1.5 The document is set out as follows:

- Ecological baseline and evaluation of important features within the Site, including any trends and constraints that might influence management.
- Aims and objectives of the LEMP in order to maximise the ecological potential of features due to be retained and established within the Site.
- Management prescriptions in order to achieve objectives. These include any monitoring and remedial requirements;
- Details of the body or organisation responsible for implementation of the plan; and
- A work schedule, capable of being rolled forward over a five-year period.

2. Ecological Baseline

2.1 Designated Sites

2.1.1 **Statutory Sites.** There are no statutory designations of nature conservation value within the Site or immediately adjacent to it. The closest statutory site is St Leonards Forest Site of Special Scientific Interest (SSSI) located approximately 6.6km to the north-east of the Site.

2.1.2 The closest 'habitats site' is Arun Valley SAC/SPA, located approximately 11.7km south-west of the Site and designated on account of it's wetland marshes supporting a wide variety of waterfowl and waders as well as supporting a population of little whirlpool ramshorn snail *Anisus vorticulus*. Arun Valley is also designated as a Ramsar site on account of supporting seven threatened wetland invertebrate species as listed in the British Red Data Book and several nationally rare and scarce plant species. Other reason for designation are the rich and diverse flora present generally and the assemblage of waterfowl present.

2.1.3 It is not considered that development of the Site would have a significant adverse effect on any of the above designated sites due to the nature of the proposal, the reasons for designation and the distances involved.

2.1.4 **Non-statutory Sites.** There are no non-statutory designations within the Site or immediately adjacent. Several non-statutory sites are present within the local area. The closest of these are Southwater Country Park Complex (0.43km), The Downs Link, Nutham Wood & Greatseeds Farms Meadow (0.56km) and Horsham Common, Alder Copse, Coate's Furzefield & Constable's Furze (0.63km). All of which are designated as Local Wildlife Sites (LWS).

2.1.5 Given the spatial separation between these LWS and the Site, and the reasons for designation of the LWS, it is considered that the proposed development will not have an impact on these LWS or any other non-statutory designated site.

2.2 Habitats

2.2.1 The following main habitat / vegetation types were identified within the Site during updated surveys undertaken by Ecology Solutions in July 2025:

- Bramble Scrub;
- Developed Land; Sealed Surface;
- Introduced Shrub;
- Modified Grassland;
- Ruderal / ephemeral;
- Vegetated Garden; and
- Hedgerows / Hedgerows with trees.

2.2.2 The locations of the habitats identified by Ecology Solutions are shown on Plan ECO1 with full descriptions of the habitats detailed below.

2.2.3 The habitats within the Site are generally not considered to be of any particular ecological importance with the majority of the Site being comprised of horse grazed grassland, buildings and hardstanding.

2.2.4 Previous surveys completed by The Ecology Partnership in October 2019 recorded mixed scrub to be present along the majority of the boundaries. However, Ecology Solutions found these to be better described as hedgerows and they are described as such below. Scrub was limited to small patches of bramble scrub.

Bramble scrub

2.2.5 Two small areas of bramble scrub are present, one in the north-eastern corner of the Site, and one within the area of ruderal / ephemeral vegetation.

Developed Land; Sealed Surface

2.2.6 Areas of hardstanding and buildings present near to the centre of the Site. A swimming pool is also present which has been assigned as developed land.

Introduced Shrub

2.2.7 Introduced shrub is present in the form of areas of amenity / garden planting associated with the dwelling.

Modified grassland

2.2.8 Modified grassland makes up the majority of the Site, the grassland is grazed by horses. Species present across all the modified grassland include: false oat grass *Arrhenatherum elatius*, timothy *Phleum pratense*, barren brome *Bromus sterilis*, white clover *Trifolium repens*, wild garlic *Allium ursinum*, ribwort plantain *Plantago lanceolata*, creeping buttercup *Ranunculus repens*, rough meadow grass *Poa trivialis*, perennial ryegrass *Lolium perenne*, cock's foot *Dactylis glomerata*, germander speedwell Veronica *chamaedrys*, common couch *Elymus repens*, meadow foxtail *Alopecurus pratensis* oak sapling *Quercus sp*, sweet vernal grass *Anthoxanthum odoratum,* meadow buttercup *Ranunculus acris*, crested dog's tail *Cynosurus cristatus* and common ragwort *Jacobaea vulgaris.*

Ruderal / ephemeral

2.2.9 Two separate patches of ruderal vegetation were located within the Site, species present include: curled dock *Rumex crispus*, common nettle *Urtica dioica*, field bindweed *Convolvulus arvensis*, cock's foot, timothy, false oat, field thistle *Cirsium arvense*, ragwort, pendulous sedge *Carex pendula*, Fleabane *Erigeron sp*, broad leaved dock Rumex *obtusifolius*, crested dogs tail, willowherb *Epilobium sp*, and ash saplings.

Vegetated garden

2.2.10 Areas of frequently managed vegetated garden were present around the buildings within the Site. The garden was largely dominated by perennial ryegrass and

creeping bent, with annual meadow grass, white clover and daisy *Bellis perennis* also present at lower frequencies.

Hedgerows (with trees)

2.2.11 Ten hedgerows are located within the Site, the majority making up the boundaries of the Site, the remaining bordering some of the on-site buildings. Species found in the hedgerows include; English oak *Quercus robur*, ash *Fraxinus excelsior*, hazel *Corylus avellana*, field maple *Acer campestre*, cypress *Cupressus sp*, horse chestnut *Aesculus hippocastanum*, holly *Ilex aquifolium*, hawthorn *Crataegus monoggyna*, blackthorn *Prunus spinosa*, wild cherry *Prunus avium*, sessile oak *Quercus petraea*, dogrose *Rosa canina*, beech *Fagus sylvatica*, sweet chestnut *Castanea sativa*, pine *Pinus sp*, Eucalyptus *Eucalyptus sp*, and crab apple *Malus sylvestris*.

2.2.12 Habitats of greatest interest (in the context of the Site) are the boundary hedgerows with trees and an overgrown hedgerow that runs east to west to the south of several of the buildings.

2.3 Species

Badgers

2.3.1 **Legislation.** Badgers are protected under the Protection of Badgers Act 1992 and are specifically listed under Schedule 6 in the Wildlife and Countryside Act 1981, as amended. This makes it illegal to:

- Intentionally capture, kill or injure a badger
- Damage, destroy or block access to their setts
- Disturb badgers in setts
- Treat a badger cruelly
- Deliberately send or intentionally allow a dog into a sett
- Bait or dig for badgers
- Have or sell a badger, or offer a live badger for sale
- Have or possess a dead badger or parts of a badger (if you got it illegally)
- Mark or attach a marking device to a badger

2.3.2 **Site use.** No signs of badger were recorded during the update walkover survey completed by Ecology Solutions in June 2025. However, due to the mobile nature of the species. it is considered possible that badgers may use the Site for foraging and commuting purposes.

Bats

2.3.3 **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations"). These include provisions making it an offence to:

- Deliberately kill, injure or take (capture) bats;
- Deliberately disturb bats in such a way as to be likely to significantly affect:-

(i) the ability of any significant group of bats to survive, breed or rear or nurture their young; or to hibernate; or

(ii) to affect significantly the local distribution or abundance of the species concerned;

- Damage or destroy any breeding or resting place used by bats;
- Intentionally or recklessly obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).

2.3.4 While the legislation is deemed to apply even when bats are not in residence, Natural England guidance suggests that certain activities such as re-roofing can be completed outside sensitive periods when bats are not in residence provided these do not damage or destroy the roost.

2.3.5 The words 'deliberately' and 'intentionally' include actions where a court can infer that the defendant knew 'the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.

2.3.6 The offence of damaging (making it worse for the bat) or destroying a breeding site or resting place is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.

2.3.7 Licences can be granted for development purposes by an 'appropriate authority' under Regulation 55 (e) of the Habitats Regulations. In England, the 'appropriate authority' is Natural England (the government's statutory advisors on nature conservation). European Protected Species licences permit activities that would otherwise be considered an offence.

2.3.8 **Site use.** The Site is noted to be utilised by a range of mainly common and widespread bat species, with the majority of activity attributed to common pipistrelle and soprano pipistrelle during surveys completed by The Ecology Partnership across the 2020 active season. The boundary hedgerows are of greatest value for bats and are used for foraging and commuting purposes.

2.3.9 Two buildings (**B1** and **B3**) within the Site contain bat roosts. Roosts present are for common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, daubenton's bat *Myotis daubentonii* and brown long-eared *Plecotus auritus*.

Dormouse

2.3.10 **Legislation.** In the UK, hazel dormice are protected by The Conservation of Habitats and Species Regulations 2017, as amended and The Wildlife and Conservation Act 1981, as amended. This includes:

- Deliberately capturing, injuring and killing hazel dormice
- Damage or destroy a dormouse resting place or breeding site
- Deliberately or recklessly disturb a hazel dormouse while it's in a structure or place of shelter or protection
- Block access to structures or places of shelter or protection
- Possess, sell, control or transport live or dead hazel dormice, or parts of hazel dormice

2.3.11 **Site use.** Hazel dormice surveys were conducted by The Ecology Partnership between July and October 2020. In summary, a maximum count of two dormice were recorded on site, including one with young, along with seven dormouse nests.

2.3.12 Ecology Solutions completed an updated walkover on the 23rd June 2025 to determine whether the suitability of habitats for dormouse within the Site had changed since the previous surveys.

2.3.13 Ecology Solutions determined that the habitats within the Site, specifically the hedgerows at the boundaries of the Site had not changed significantly since the previous surveys and it is considered that dormouse still utilise the boundaries of the Site for breeding, foraging and commuting purposes. In line with current guidance[1] no further surveys were considered necessary.

Hedgehog

2.3.14 **Legislation.** Hedgehog *Erinaceus europaeus* is listed as a Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The NERC Act 2006, as amended places responsibility upon public bodies to have regard for the conservation of biodiversity in England. This makes it illegal to:

- Deliberately capture and kill hedgehog
- Deliberately treat a hedgehog cruelly

2.3.15 **Site use.** Ecology Solutions have found no evidence to suggest evidence of hedgehogs during other surveys completed in 2025. However, hedgehogs are

[1] Wells, D., Chanin P.R.F,. and Gubert, L. (2025) *Hazel Dormouse Mitigation Handbook*. 4th edn. Mammal Society.

known to be in the locality, and the Site contains suitable habitats for foraging, dispersal, and hibernation, including grassland, scrub and hedgerows.

Bird

2.3.16 **Legislation.** Section 1 of the Wildlife & Countryside Act 1981 (as amended) is concerned with the protection of wild birds. With certain exceptions, all wild birds and their eggs are protected from intentional killing, injuring and taking; and their nests, whilst being built or in use, cannot be taken, damaged or destroyed.

2.3.17 **Site use.** The trees, scrub and hedgerows offer suitable habitat for nesting birds, whilst the Site as a whole provides some foraging opportunities. Buildings present also provide nesting opportunities for birds.

Reptiles

2.3.18 **Legislation.** Owing to their abundance in Britain, Common Lizard *Zootoca vivipara*, Slow Worm Anguis fragilis, Grass Snake *Natrix helvetica* and Adder *Vipera berus* are only 'partially protected' under the Wildlife and Countryside Act 1981 (as amended) and as such only receive protection from:

- Deliberate killing and injuring;
- Being sold or other forms of trading.

2.3.19 The habitat of common reptiles is therefore not directly protected. However, because of their partial protection, disturbing or destroying their habitat while they are present may lead to an offence.

2.3.20 All reptile species are listed as Species of Principal Importance under Section 41 of the NERC act 2006. The NERC Act 2006 places responsibility upon public bodies to have regard for the conservation of biodiversity in England.

2.3.21 **Site use.** Suitable reptile habitats are limited to the hedgerows with trees present at the boundaries of the Site. The vast majority of the Site is grassland grazed short by horses and as such, is sub-optimal for reptiles. It is considered likely that reptiles utilise the boundaries of the Site.

Amphibians (Great Crested Newts)

2.3.22 **Legislation.** Great Crested Newts *Triturus cristatus* are subject to the same level of legislative protection as bats (see above). Common Toads *Bufo bufo* are Species of Principal Importance under Section 41 of the NERC Act 2006.

2.3.23 **Site use.** Waterbodies within the Site during the survey completed by Ecology Solutions in June 2025 were limited to a chlorinated swimming pool, all other depressions that might hold water were dry and contained no aquatic vegetation indicating that they are dry for the majority of the year. The majority of terrestrial habitats are sub-optimal for Great Crested Newt due to regular grazing, only the

boundaries of the Site would present some opportunities for foraging, commuting and hibernating Great Crested Newt. However given the lack of nearby suitable waterbodies, it is considered highly unlikely that Great Crested Newt utilise the Site and no further consideration is given to this species within this report.

Invertebrates

2.3.24 **Site use.** Given the habitats present it is likely an assemblage of common invertebrate species would be present within the Site.

3. Aims and Objectives of Management

3.1 This section sets out the vision and conservation objectives for the development.

The vision for the strategy is to provide a framework for enhancement and management across the site such that an increase in valuable habitat and opportunities for protected and notable species is achieved.

3.2 Defining the Conservation Objectives

3.2.1 Defining a set of objectives is central to the effectiveness of this strategy, given that it is intended to provide a framework that will safeguard existing nature conservation interest and provide guidance on enhancement and future management.

3.2.2 Specific objectives for the conservation of particular species or groups and particular habitats of nature conservation interest are set out in the relevant sections to follow. The nature of these objectives has been guided by the principles set out in UK and European wildlife legislation, notably the Wildlife & Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. Furthermore, the formulation of these objectives has also been influenced by national and local biodiversity and conservation targets, as set out in the UK 2024 Biodiversity Framework and the Sussex Biodiversity Action Plan (BAP).

3.2.3 The overarching objectives for nature conservation are as follows:

Objective 1 - Maintain and Enhance Retained and Created Habitats

Objective 2 - Maintain Populations of Protected Species at a Favourable Conservation Status

Objective 3 - To enhance the biodiversity of the Site by Maximising Opportunities for Flora and Fauna

3.3 Achieving the Objectives

3.3.1 Information on the existing situation at the Site and its environs with regard to any habitats of ecological interest and the presence of protected species has been collated as part of the preparation of this document. It is upon this foundation that the specific enhancements and management prescriptions to follow are based.

3.3.2 This document should be provided to all interested parties and followed to ensure that habitats are established and maintained appropriately to ensure a betterment for biodiversity is realised.

3.3.3 This LEMP includes specifications for monitoring and remediation in the event that habitats have failed to establish or where management measures are proving to be detrimental or insufficient.

4. Management Measures

4.1 Management prescriptions and monitoring requirements are described below, in relation to each of the three objectives.

Objective 1: Maintain and Enhance Retained and Created Habitats

4.2 Trees / Treelines

4.2.1 The Site contains existing trees both within boundary hedgerows and associated with the existing dwelling. The majority of these are to be retained as part of the Development Proposals, with losses limited to the access, non-native species and those required to be lost for H&S purposes. As part of the Development Proposals a considerable number of mostly native trees are to be planted throughout the Site.

Implementation

4.2.2 Species to be planted within the Site are detailed in Table 4.1 below.

4.2.3 Planting of new trees will be undertaken between the end of October and the end of March.

4.2.4 A root barrier should be installed should services be located within close proximity to tree rooting areas. Planting is to be protected from deer and rabbits by spiral guards, where deemed necessary.

Table 4.1. Tree Planting.

No.	Common Name	Latin Name
9	Field maple	*Acer campestre 'Streetwise'*
5	Field maple	*Acer campestre*
5	Silver birch (multi stem)	*Betula pendula* (multi-stem)
7	Silver birch	*Betula pendula*
4	Hornbeam 'Lucas'	*Carpinus betulus*
4	Hawthorn	*Crataegus monogyna*
1	Copper beech	*Fagus sylvatica 'Purpurea'*
2	Holly cultivar	*Ilex 'Nellie Stevens'*
9	Sweet gum	*Liquidambar styraciflua*
1	Apple 'Discovery'	*Malus 'Discovery'*
2	Apple 'Evereste'	*Malus 'Evereste'*
1	Apple 'Scrumptious'	*Malus 'Scrumptious'*
8	Cherry 'Sunset Boulevard'	*Prunus 'Sunset Boulevard'*
3	Sweet cherry 'Sunburst'	*Prunus avium 'Sunburst'*
10	Sweet cherry	*Prunus avium*

1	Plum 'Victoria'	*Prunus domestica 'Victoria'*
3	Winter-flowering cherry	*Prunus x subhirtella 'Autumnalis Rosea'*
3	Callery pear	*Pyrus calleryana 'Chanticleer'*
2	Pear 'Conference'	*Pyrus communis 'Conference'*
1	Pin oak	*Quercus palustris*
3	English oak	*Quercus robur*
3	Whitebeam	*Sorbus aria*
4	Rowan 'Sheerwater Seedling'	*Sorbus aucuparia 'Sheerwater Seedling'*
3	Rowan	*Sorbus aucuparia*
4	Small-leaved lime	*Tilia cordata*
2	Laurustinus 'Lucidum'	*Viburnum tinus 'Lucidum'*

Initial Aftercare and Long-term Management, Maintenance and Monitoring

4.2.5 New planting shall be inspected monthly between March and September for the first two years to ensure that they are straight, upright, healthy, not diseased or damaged, or dead. After the first two years, trees can be inspected annually if found to be establishing well.

4.2.6 Regular health checks of the trees will also be undertaken during periods of dry weather, to ensure that the trees are not affected by drought. Trees planted within grass shall be fitted with mower / strimmer guards or mulched with a 500mm diameter circle.

4.2.7 Regular watering will occur weekly during the main growing season (May to September inclusive) and only as required outside these months.

4.2.8 Retained trees to be checked annually and after major storms for necessary remedial works with works undertaken as advised by a suitably qualified arborist (and ecologist where necessary).

4.2.9 Ongoing management must ensure any branches within and / or overhanging the Site are safe. Where trees are rooted off-site, any work to overhanging branches must follow the law including no works beyond the Site boundary, not compromising the health of the tree and branches to be offered back to the owners of the tree. Any safety concerns with off-site trees are to be raised with tree owners.

4.2.10 Any newly planted trees which die should be replaced in the following early spring or autumn with the same species to the same specification and quality.

4.2.11 Any necessary arboricultural management will be carried out by a qualified arboriculturist outside the bird nesting season (March – August inclusive) to avoid any potential offence, or after a suitably qualified ecologist has undertaken checks to ensure no nesting birds are present.

4.2.12 Where possible any dead wood produced will be retained as an ecological feature, either as standing deadwood or added as log piles.

4.3 Native Mixed Scrub

4.3.1 New scrub is to be planted mainly at the boundaries of the Site as part of the proposals, this will constitute a mix of native species that will provide opportunities for a range of species.

Implementation

4.3.2 Scrub species will be planted together in small irregular shaped groups to create a naturalistic pattern between end of October and end of March. This will bolster the ecological value of the site and provide opportunities for species including dormouse, invertebrates and birds. See Tables 4.2, 4.3 and 4.4 below for species to be planted.

Table 4.2. Native understorey scrub planting.

Composition (%)	Common Name	Latin Name
10	Hazel	*Corylus avellana*
10	Dogwood	*Cornus sanguinea*
20	Hawthorn	*Crataegus monogyna*
10	Spindle	*Euonymus europaeus*
5	Holly	*Ilex aquifolium*
10	Wild privet	*Ligustrum vulgare*
10	Blackthorn	*Prunus spinosa*
5	Dog rose	*Rosa canina*
10	Wayfaring tree	*Viburnum lantana*
10	Guelder rose	*Viburnum opulus*

Table 4.3. Native understorey scrub planting for deep shade.

Composition (%)	Common Name	Latin Name
10	Common Box	*Buxus sempervirens*
5	Hazel	*Corylus avellana*
5	Common dogwood	*Cornus sanguinea*
5	Hawthorn	*Crataegus monogyna*
5	Spurge Laurel	*Daphne laureola*
10	Spindle	*Euonymus europaeus*
15	Holly	*Ilex aquifolium*
10	Wild privet	*Ligustrum vulgare*
15	Butcher's broom	*Ruscus aculeatus*

10	Yew	*Taxus baccata*
10	Guelder rose	*Viburnum opulus*

Table 4.4. Native thorny buffer planting (Ancient Woodland buffer).

Composition (%)	Common Name	Latin Name
5	Common Dogwood	*Cornus sanguinea*
15	Hawthorn	*Crataegus monogyna*
20	Holly	*Ilex aquifolium*
5	Honeysuckle	*Lonicera peryclimenum*
20	Blackthorn	*Prunus spinosa*
12.5	Dog Rose	*Rosa canina*
7.5	Elder	*Sambucus nigra*
15	Gorse	*Ulex europaeus*

Initial Aftercare and Long-term Management, Maintenance and Monitoring

4.3.3 Planting of scrub will be completed between the end of October and the end of March, with subsequent monitoring required in order to identify any potential gaps where plants have not survived. Planting is to be protected with spiral guards initially.

4.3.4 The planting will be watered between March and September and only as required outside these months for the first year. After the first year, water as required between March and September only.

4.3.5 Planting will be inspected monthly between March and September during the first year of establishment for any unsuccessful specimen and bi-monthly thereafter. Where plants are seen to have failed, these will be removed and replaced with advice sought as to why the failure occurred.

4.3.6 Planting will be maintained through the removal of undesirable species on a monthly basis. The use of pesticides (herbicides, insecticides, fungicides, and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.

4.3.7 Once established, scrub planting will be subject to a sensitive cutting regime to encourage an even and healthy growth pattern and develop a dense understorey for wildlife use. Plant protection guards are to be removed once plants have established.

4.3.8 Scrub will be cut on a three year rotation with no more than 1/3 of the scrub cut in any one year. To ensure that structure is maintained, each cut will be ~10cm higher and wider than the previous cut. Cuts will be completed during the period November to March, during which dormouse will be hibernating.

4.3.9 Where scrub is noted to have thinned at the base, or be getting leggy, consideration will be given to coppicing to reinstate the structure over time, no

more than 10% of scrub will be coppiced in any one year to ensure connectivity and fruit and seed production are not significantly affected. Coppicing will be completed in the period November to March.

4.3.10 Disturbance to the ground layer will be strictly avoided during the winter months when dormouse are hibernating.

4.3.11 Litter and rubbish will be removed from the scrub planting as necessary during the on-going management of the Site.

4.4 Hedgerows

4.4.1 New native hedgerows will be planted adjacent to areas of open space (see Appendix 1). Hedgerows will increase the floristic diversity of the site and provide additional foraging opportunities for dormouse, invertebrates, birds and bats (see Tables 4.5 and 4.6 below).

4.4.2 Ornamental hedgerows will be planted associated with new dwellings, these will provide increased foraging opportunities for invertebrates, but are mainly outside of the scope of this LEMP due to being in private ownership.

Table 4.5. Ornamental Hedgerow planting.

Length (M)	Species
202	*Escallonia 'Apple Blossom'*
233	*Eunonymus japonicus 'Jean Hugues'*
88	Wild privet *Ligustrum vulgare*
122	Portuguese laurel *Prunus lusitanica*
83	*Viburnum tinus*

Table 4.6. Native Hedge Mixes

Composition (%)	Common Name	Latin Name
15	Hazel	*Corylus avellana*
15	Dogwood	*Cornus sanguinea*
25	Hornbeam	*Carpinus betulus*
5	Holly	*Ilex aquifolium*
25	Wild privet	*Ligustrum vulgare*
15	Guelder rose	*Viburnum opulus*

Initial Aftercare and Long-term Management and Maintenance

4.4.3 Planting of the new hedgerows will be undertaken between the end of October and the end of March, with subsequent monitoring required in order to identify any potential gaps where plants have not survived.

4.4.4 Hedgerows will be reinforced with post and wire fencing to a height of 800mm to aid establishment, prevent cutting through and trampling.

4.4.5 Hedgerow planting will be inspected monthly between March and September during the first year of establishment, to ensure that they are healthy, not diseased or damaged, or dead. Hedgerows will be inspected bi-monthly in year two. Any failed species will be removed and replaced with the same species and size. After the first two years, hedgerows can be inspected annually if found to be establishing well.

4.4.6 Hedgerow trimming will be carried out outside the bird nesting season (March to August inclusive) and ideally in winter to avoid any potential offence, or after a suitably qualified ecologist has undertaken checks to ensure no nesting birds are present. Management should also be conscious of the presence of dormouse.

4.4.7 Hedgerows will be watered between March and September and only as required outside these months for the first year. After the first year, water as required between March and September only.

4.4.8 Management of native hedgerows will aim to ensure continued good structure. Hedgerows will be cut on a three year rotation. To ensure that structure is maintained, each cut will be ~10cm higher and wider than the previous cut. Cuts will be completed during the period November to March, during which dormouse will be hibernating.

4.4.9 Where native hedgerows are noted to be thinning at the base or are getting leggy, consideration will be given to rejuvenation methods i.e., laying or coppicing to reinstate the structure over time, no more than 5% of hedgerows will be coppiced or laid in any one year to ensure connectivity and fruit and seed production are not significantly affected. Rejuvenation will be completed in the period November to March.

4.5 Ornamental Planting

4.5.1 Ornamental shrub planting (introduced shrub and bulb plant mixes) will be established throughout the site (see Appendix 1). These areas will comprise ornamental non-native perennials and shrubs, providing nectar resources for invertebrates (see Table 4.7, 4.8 and 4.9).

Table 4.7. Ornamental Shrub Planting.

Species
Choisya ternate 'Aztec Pearl'
Cistus 'Silver Pink'
Cornus kousa 'Chinensis'
Elaegnus x ebbinggei
Euonymus europaeus
Hebe 'Great Orme'
Hebe 'White Gem'

Hypericum 'Hidcote'
Ilex aquifolium 'J.C. van Tol'
Lavandula angustifolia 'Munstead'
Lavandula angustifolia 'Nana Alba'
Pittosporum tenuifolium 'Golf Ball'
Sarococca confuse
Skimmia japonica 'Rubella'
Skimmia x confuse 'Kew Green'
Viburnum tinus

Table 4.8. Bulb Planting Mix

Composition (%)	Species
25	*Crocus speciosus 'Conqueror'*
25	*Crocus chysanthus 'Cream Beauty'*
20	*Crocus 'Vanguard'*
15	*Narcissus pseudonarcissus*
15	*Narcissus poeticus var. recurvus*

Table 4.9. Herbaceous Plants

Species
Bear's breech *Acanthus mollis*
White african lily *Agapanthum album*
Japanese anemone 'Honorine Jobert' *Anemone x hybrida 'Honorine Jobert'*
Elephant's ears 'Bressingham White' *Bergenia 'Bressingham White'*
Geranium x oxonianum 'Wargrave Pink'
Rudbeckia fulgida sullivanti 'Goldsturm'

Initial Aftercare and Long-term Management and Maintenance

4.5.2 Planting of ornamental species will be undertaken from the end of October to the end of March with subsequent monitoring required in order to identify any potential gaps where plants have not survived.

4.5.3 Planting will be maintained through the removal of undesirable species on a monthly basis. The use of pesticides (herbicides, insecticides, fungicides and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.

4.5.4 Deadheading of herbaceous plants will be undertaken following flowering and when flower heads have died off. This will be done on an annual basis and as required. All arisings will again need to be removed.

4.5.5 Watering will be required during periods of drought to ensure satisfactory establishment. Watering will be undertaken as required to maintain healthy plant growth.

4.5.6 Monthly checks of plants will be carried out during the first year of establishment for any unsuccessful specimen and bi-monthly thereafter. Where plants are seen to have failed, these will be removed and replaced with an alternative species on the advice of the landscape architect. If particular species are spreading vigorously and are impacting other species establishment or success, then these will be divided, and the excess plant material removed from the development.

4.5.7 Litter and rubbish will be removed from the amenity planting as necessary during the on-going management of the site.

4.5.8 Any management applied to the shrub species suitable for nesting birds will be applied outside of the nesting bird season (March to August inclusive) to avoid any disturbance to nesting birds.

4.6 Meadow Grassland (Emorsage EM2 and EM8)

4.6.1 Meadow grassland will be established in open space areas at the boundaries of the Site (see Appendix 1). The grassland habitat areas will enhance the appearance and ecological interest of the Site. The grassland will consist of a range of grass species and wildflowers and provide foraging opportunities for a range of species including bats, badgers, hedgehogs and invertebrates (see Tables 4.10 and 4.11).

Table 4.10. General purpose meadow mix (Emorsgate EM2)

Common Name	Latin Name
Grasses	
Common Bent	*Agrostis capillaris*
Crested Dog's-tail	*Cynosurus cristatus*
Red Fescue	*Festuca rubra*
Smaller Cat's-tail	*Phleum bertolonii*
Smooth-stalked Meadow-grass	*Poa pratensis*
Wildflowers	
Betony	*Betonica officinalis*
Common knapweed	*Centaurea nigra*
Wild carrot	*Daucus carota*
Hedge bedstraw	*Galium album*
Meadow crane's-bill	*Geranium pratense*
Oxeye daisy	*Leucanthemum vulgare*
Ribwort plantain	*Plantago lanceolata*
Salad burnet	*Poterium sanguisorba ssp sanguisorba*
Cowslip	*Primula veris*
Selfheal	*Prunella vulgaris*
Meadow buttercup	*Ranunculus acris*

Bulbous buttercup	*Ranunculus bulbosus*
Yellow rattle	*Rhinanthus minor*
Red campion	*Silene dioica*
Bladder campion	*Silene vulgaris*

Table 4.11. Wetland meadow mix (Emorsgate EM8)

Common Name	Latin Name
Grasses	
Common Bent	*Agrostis capillaris*
Star Sedge	*Carex echinata*
Crested Dogstail	*Cynosurus cristatus*
Red Fescue	*Festuca rubra*
Meadow Barley	*Hordeum secalinum*
Smaller Cat's-tail	*Phleum bertolonii*
Smooth-stalked Meadow-grass	*Poa pratensis*
Wildflowers	
Yarrow	*Achillea millefolium*
Agrimony	*Agrimonia eupatoria*
Wild Angelica	*Angelica sylvestris*
Betony	*Betonica officinalis*
Common Knapweed	*Centaurea nigra*
Meadowsweet	*Filipendula ulmaria*
Hedge Bedstraw	*Galium album*
Lady's Bedstraw	*Galium verum*
Meadow Vetchling	*Lathyrus pratensis*
Rough Hawkbit	*Leontodon hispidus*
Oxeye Daisy	*Leucanthemum vulgare*
Birdsfoot Trefoil	*Lotus corniculatus*
Greater Birdsfoot Trefoil	*Lotus pedunculatus*
Black Medick	*Medicago lupulina*
Ribwort Plantain	*Plantago lancelata*
Cowslip	*Primula veris*
Selfheal	*Prunella vulgaris*
Meadow Buttercup	*Ranunculus acris*
Yellow Rattle	*Rhinanthus minor*
Common Sorrel	*Rumex acetosa*
Great Burnet	*Sanguisorba officinalis*
Ragged Robin	*Silene flos-cuculi*
Dandelion	*Taraxacum officinale*
Tufted Vetch	*Vicia cracca*

Initial Aftercare and Long-term Management and Maintenance

4.6.2 Before seeding the ground will be prepared with topsoil levelled as required, debris and stones above 30mm diameter removed, and the ground will be de-compacted.

4.6.3 Seeding will occur in either autumn or spring with seeds spread either by hand or by use of a seed spreader and rolled immediately after spreading to ensure good soil contact.

4.6.4 Regular watering will occur weekly during the main growing season (May to September inclusive) and only as required outside these months. Watering will also occur during periods of drought to avoid the death of the planting.

4.6.5 Meadow grassland areas will be monitored annually. Seeding found to have not established during bi-monthly health visits between March and September will be over-seeded with the same seed mix in autumn or early spring.

4.6.6 The meadow grassland will be left to grow throughout year 1, being cut later in the year (mid-late summer). The grassland will be cut to a height of 100 mm and arisings will be removed.

4.6.7 Once established, traditional meadow management will be followed, based around a main summer hay cut in combination with autumn and possibly spring cuts depending on the year. It is likely that 3 cuts will be required during the first few years with the number of cuts reduced as the grassland becomes more established and undesirable 'weed' species are removed.

4.6.8 Grass cuttings will be left in situ for between 1 and 7 days prior to being collected and removed, in order to allow seeds to shed. Removing once seeds have shed will reduce nutrient enrichment and encourage low-growing plants to flourish.

4.6.9 Litter and rubbish will be removed from the grassland as necessary during the on-going management of the Site. Monthly hand pulling of perennial weeds (e.g., docks, thistles) will be completed as required.

4.7 Amenity grassland (amenity seeds and amenity turf)

4.7.1 Amenity grassland will be provided, associated with the proposed dwellings and in a large area of open space in the centre of the Site (see Appendix 1). This will be established and managed in line with the supplier's recommendations.

Objective 2: Maintain Populations of Protected Species at a Favourable Conservation Status

4.7.2 Habitat retention and creation, and the introduction of a sensitive management regime will ensure opportunities for wildlife continue to be present within the site post-development. This will be of benefit to key species, such as bats, dormouse, birds, hedgehogs and invertebrates.

4.8 Bats

4.8.1 The Site contains suitable habitat for roosting, foraging and commuting bats and several bat roosts have been recorded within buildings both due to be retained and demolished. Mitigation during the construction phase is outlined within the CEMP produced by Ecology Solutions.

4.8.2 Habitats of greatest value to bats such as the boundary hedgerows and trees will be retained as part of the development and enhanced with scrub and wildflower grassland planting. This will retain commuting opportunities for bats and provide increased foraging opportunities.

Bat boxes

4.8.3 A total of 36 new bat boxes (Schwegler 1FF, Schwegler 1FS, Manthorpe ridge roost and Ibstock Enclosed C) will be installed within the Site as part of the Development Proposals either on buildings or retained mature trees. This will provide a significant increase in roosting opportunities for bats.

4.8.4 Once installed, bat boxes will be checked on an annual basis to ensure that they are in place and are not damaged. Where they are found to be damaged or lost, they will be repaired / replaced at the earliest opportunity, following a check for roosting bats by an appropriately licenced ecologist.

Future management of vegetation

4.8.5 Any arboricultural management will have regard for the potential presence of roosting bats. Any trees with features suitable to support roosting bats that are due to be lopped / felled will be subject to appropriate surveys to determine whether bats are present.

4.8.6 Where possible standing dead wood will be retained in place to provide additional roosting opportunities for bats.

Lighting

4.8.7 Full regard to bats has been had within the Lighting Design Strategy for the development produced by MMA lighting consultancy, with the design guided by information produced by the Bat Conservation Trust and Institute of Lighting Professionals (See Appendix 2). Therefore, dark corridors for bats will remain throughout the Site post development.

4.9 Dormouse

4.9.1 Dormouse have been recorded within the Site during previous surveys. Habitats of greatest value to dormouse such as the boundary hedgerows and trees will be retained as part of the development and enhanced with scrub and wildflower grassland planting. This will retain and enhance foraging and nesting opportunities for dormouse within the Site.

Dormouse nest boxes

4.9.2 A total of 10 dormouse nest boxes will be installed on retained mature trees at the boundary of the Site.

4.9.3 Once installed, boxes will be checked on an annual basis to ensure that they are in place and are not damaged. Where they are found to be damaged or lost, they will be repaired / replaced at the earliest opportunity following a check by an appropriately licenced ecologist.

Future management of vegetation

4.9.4 Appropriate management of suitable dormouse habitat (hedgerows, scrub and trees) will be undertaken in order to enhance their ecological value. Cuts will only be undertaken during winter months, when berries are no longer present to maximise foraging opportunities and to avoid impacts on active dormice.

4.9.5 Suitable dormouse habitat will be cut on a three year rotation, with no more than 1/3 cut during any one year. This will allow fruit and seed producing species to go through their entire lifecycle.

4.9.6 Each cut will be higher and wider than the previous cut (~10cm) to ensure that good structure and health of the vegetation is maintained.

4.10 Hedgehogs

4.10.1 The Site contains suitable habitats for hedgehog in the form of grassland, scrub and hedgerow. No evidence of Hedgehogs was recorded during the site surveys conducted.

4.10.2 Scrub within the Site will be retained and new habitats established that will be of benefit for this species. Species-rich grassland will provide foraging opportunities post-development and new hedgerows, and ornamental planting will provide further foraging and dispersal opportunities. A hedgehog highway will be established throughout the Site, which will retain foraging and dispersal through gardens.

4.10.3 Provision of several log piles will provide additional opportunities for hedgehog within the Site.

Future management of vegetation

4.10.4 Future management will be conscious of the potential presence of hedgehog particularly in suitable areas such as bases of hedgerows, log piles and wildflower grassland.

4.11 Birds

4.11.1 The trees, scrub and hedgerows/treelines offer potential nesting and foraging habitat for common and widespread bird species.

4.11.2 The retention and establishment of trees and scrub, in addition to the planting of hedgerows, will provide continued nesting and foraging opportunities post-development. The planting of berry-bearing species will provide further foraging opportunities.

Bird boxes

4.11.3 New nesting opportunities for birds will be provided via the installation of bird boxes. Twenty nest boxes, comprising ten Vivara Pro Seville 28mm Woodstone Nest Boxes and ten Vivara Pro Seville 32mm Woodstone Nest Boxes or similar will be installed on retained mature trees within the Site boundary (See Plan ECO1 for indicative locations). Further nesting opportunities will be provided in the form of Swift nest bricks, which will be installed into the northern or eastern façades of new residential properties. Additionally swallow nest bowls and house sparrow terrace nest boxes will be installed onto the new residential properties. Eleven Schwegler no. 10 Swallow Nest, twenty Schwegler 1SP Sparrow Terrace Nest Boxes, eleven Manthorpe Swift Nesting Brick, eleven Manthorpe Dual Swift Brick).

Future management of vegetation

4.11.4 Any suitable nesting habitat to be affected by proposed management would be completed outside the nesting season (March to August inclusive) or only undertaken following the confirmation of no active nests by a suitably experienced ecologist.

4.11.5 Management of fruiting scrub and hedgerow will only be undertaken during winter months, when berries are no longer present to maximise foraging opportunities and to avoid impacts on nesting birds.

4.12 Reptiles

4.12.1 The retention and establishment of species-rich grassland and scrub, in addition to the planting of hedgerows, will provide continued foraging and dispersal opportunities for reptiles post-development.

4.12.2 Provision of several log piles as part of the proposals will result in enhanced foraging, resting and hibernation opportunities for reptiles.

Future management of vegetation

4.12.3 Management of suitable vegetation for reptiles including scrub and grassland will be completed conscious of the potential presence of reptiles. Where dense vegetation is to be managed this will be completed under a stage cut methodology, whereby an initial cut is completed to a height no lower than 150mm. A second cut can then be completed to the desired height.

4.13 Badgers

4.13.1 Currently no evidence of badger has been recorded at the Site. However, the newly planted trees, new and retained native hedgerows as well as the creation of new wildflower grassland and scrub will offer new potential foraging resources for Badgers through encouraging different varieties of invertebrates, as well as the provision of fruit bearing species.

4.14 Invertebrates

4.14.1 Given the habitats present, the site likely supports a common assemblage of invertebrate species. The provision of species-rich grassland, amenity planting, trees and hedgerows will provide greater floristic diversity, providing new opportunities for a range of invertebrate species. This will enhance current opportunities for invertebrates.

4.14.2 A total of five insect CJ wildlife duo-insect and ladybird houses will be installed on mature retained trees providing additional opportunities for a range of species.

Objective 3: Increase Biodiversity by Maximising Opportunities for Flora and Fauna

4.14.3 The establishment of new areas of grassland, amenity planting, hedgerows, trees and scrub will diversify the habitats present at the Site and encourage a greater range of wildlife use.

4.14.4 The provision of species specific enhancements including bat, dormouse, insect and bird boxes on retained trees within the Site, as well as on new buildings will provide enhanced opportunities for a range of species.

4.14.5 Overall the proposals will result in an increase in opportunities for a wide range of flora and fauna.

5. Implementation and Responsibilities

5.1 Bellway Homes Limited (South London) has ultimate responsibility for the implementation of this strategy.

5.2 It is the responsibility of Bellway Homes (South London) Limited to instruct appropriately experienced contractors to establish the various features and habitats proposed, and also to instruct appropriate experienced ecologists and / or landscape contractors to check the work as set out in this management plan, where necessary.

5.3 Clear channels between these parties and their associates on the ground will be in operation at all times, by email and telephone as appropriate.

5.4 It is envisioned that a management company appointed by Bellway Homes (South London) Limited will be responsible for managing and maintaining the development and landscaping in the long term.

5.5 A review of the management plan will be undertaken every five years, over a period of no less than 30 years, to determine its success. If warranted, appropriate remedial actions to the management plan will be undertaken to ensure that the landscaping and ecological aims of the management plan are achieved.

6. Schedule of Landscape and Ecological Works

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
Trees (Existing)	Routine maintenance operations	Health inspections	Existing, retained trees to be inspected annually and after major storms.	X	X	X	X	X	X	X	X	X	X	X	X
		Pruning	Undertake any scheduled tree works identified during inspections outside of the nesting bird season (March to August inclusive). If works need to be completed outside of this season due to safety concerns, works must wait until after a suitably qualified ecologist has undertaken checks to ensure no nesting birds are present.	X	X							X	X	X	X
Trees (New)	Establishment maintenance operations after planting (year 1)	Planting	Planting of new trees will be undertaken between the end of October and the end of March.	X	X	X							X	X	X
		Tree guards / stakes	Root barriers should be installed should services be located within close proximity to tree rooting areas. Planting is to be protected from Rabbits by spiral guards, where necessary. Ensure a 500mm radius around each tree is kept weed and grass free - Trees planted within grass shall be fitted with mower / strimmer guards or mulched with a 500mm diameter circle. To occur at time of planting.	X	X	X							X	X	X
		Health inspections	Should any trees be observed to be diseased, damaged or dead during monthly visits between March and September they will be replaced with the same species to the same specification.			X	X	X	X	X	X	X			

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
		Watering	Regular watering will occur weekly during the main growing season (May to September inclusive) and only as required outside these months.					X	X	X	X	X			
	Routine maintenance operations (Year 2)	Health inspections	Should any trees be observed to be diseased, damaged or dead during monthly visits between March and September they will be replaced with the same species and to the same specification.			X	X	X	X	X	X	X			
		Pruning	Pruning to occur twice yearly and should avoid the nesting bird season (March to August inclusive). Prune as required to achieve healthy growth and natural shape.	X	X							X	X	X	X
		Watering	Regular watering will occur weekly during the main growing season (May to September inclusive) and only as required outside these months.					X	X	X	X	X			
	Routine maintenance operations (Year 3 onwards)	Health inspections	After the first two years, new trees can be inspected annually if found to be establishing well. Trees to be inspected after major storms.	X	X	X	X	X	X	X	X	X	X	X	X
		Tree guards / stakes	When no longer necessary, typically after three to five years, Rabbit guards may be removed from the planting.	X	X	X	X	X	X	X	X	X	X	X	X
		Pruning	Pruning to occur as required, but should avoid the nesting bird season (March to August inclusive).	X	X							X	X	X	X
		Watering	Regular watering will occur weekly during the main growing season (May to September inclusive) and only as required outside these months.					X	X	X	X	X			

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
Hedgerows	Establishment	Planting	Planting of new hedgerows will be undertaken between the end of October and the end of March.	X	X	X							X	X	X
	Maintenance operations (Year 1)	Reinforcement	Hedgerows will be reinforced with post and 3-wire fencing to a height of 800mm to aid establishment, prevent cutting through and trampling. To occur at the time of planting.	X	X	X						X	X	X	X
		Health inspections	Should any plants be observed to be diseased, damaged or dead during monthly visits between March and September they will be replaced with the same species to the same specification.			X	X	X	X	X	X	X			
		Watering	Hedgerows will be watered between March and September and only as required outside these months for the first year.					X	X	X	X	X			
	Routine maintenance operations (Year 2)	Health inspections	Should any plants be observed to be diseased, damaged or dead during bi-monthly visits between March and September they will be replaced with the same species to the same specification.			X		X		X		X			
		Pruning	Hedges will be pruned / trimmed as necessary (March to August inclusive) and, if done in the fruiting season, should only be performed on one side of the hedgerow. Management should be conscious of the presence of dormouse	X	X							X	X	X	X
		Litter	To be removed as necessary before any cutting or pruning works.	X	X	X	X	X	X	X	X	X	X	X	X

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
		Watering	After the first year, hedgerows will be watered as required between March and September only.					X	X	X	X	X			
	Routine maintenance operations (Year 3 onwards)	Health inspections	Should any plants be observed to be diseased, damaged or dead during bi-monthly visits between March and September they will be replaced with the same species to the same specification.			X		X		X		X			
		Cutting	Boundary hedgerows cut once yearly on a three-year rotation as required outside of the nesting bird season (March to August inclusive).	X	X							X	X	X	X
		Litter	To be removed as necessary before any cutting or pruning works.	X	X	X	X	X	X	X	X	X	X	X	X
		Watering	Hedgerows will be watered as required between March and September only.					X	X	X	X	X			
Scrub	Establishment maintenance operations after planting (Year 1)	Planting	Planting of scrub and underplanting will be completed between the end of October and the end of March. Clusters will be planted together in small irregular shaped groups of between three and nine individual plants to create a naturalistic pattern. Planting to be protected from rabbits with spiral guards.	X	X	X							X	X	X
		Health inspections	Should any plants be observed to be diseased, damaged or dead during monthly visits between March and September they will be replaced with the same species to the same specification in November.			X	X	X	X	X	X	X			

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
		Weeding	Understorey planting will be maintained through the removal of undesirable species on a monthly basis. The use of pesticides (herbicides, insecticides, fungicides, and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.	X	X	X	X	X	X	X	X	X	X	X	X
		Watering	Regular watering will occur weekly during the main growing season (May to September inclusive) and only as required outside these months.					X	X	X	X	X			
	Routine maintenance operations (Year 2)	Health inspections	Should any plants be observed to be diseased, damaged or dead during bi-monthly visits between March and September they will be replaced with the same species to the same specification in November.			X		X		X		X			
		Weeding	Scrub will be maintained through the removal of undesirable species on a monthly basis. The use of pesticides (herbicides, insecticides, fungicides, and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.	X	X	X	X	X	X	X	X	X	X	X	X
		Watering	After the first year, scrub will be watered as required between March and September only.					X	X	X	X	X			
		Health inspections	Plant protection guards to be removed once plants have established (year 5 or sooner). Should any plants be observed to be diseased, damaged or dead during bi-monthly visits between March and September they will be replaced with the same species to the same specification in November.			X		X		X		X			

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
	Routine maintenance operations (Year 3 onwards)	Cutting	After three years of growth, scrub planting will be subject to management to avoid encroachment into areas of grassland and to promote species and age diversity. Cutting to occur annually, with no more than 1/3 of scrub cut per year. Scrub clearance will avoid the nesting bird and dormouse breeding season (March to August inclusive).	X	X	X								X	X
		Weeding	Understorey planting will be maintained through the removal of undesirable species on a monthly basis. The use of pesticides (herbicides, insecticides, fungicides, and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.	X	X	X	X	X	X	X	X	X	X	X	X
		Litter	To be removed as necessary before any pruning / weeding works	X	X	X	X	X	X	X	X	X	X	X	X
		Watering	Scrub will be watered as required between March and September only.					X	X	X	X	X			
Ornamental Shrub Planting	Establishment Maintenance operations after planting (Year 1)	Planting	Planting of ornamental species will be undertaken between the end of October and the end of March.	X	X	X							X	X	X
		Mulching	All planted beds will be mulched with bark to a depth of at least 50mm to discourage weed growth. To occur at time of planting.	X	X	X	X	X				X	X	X	X
		Weeding	Undesirable species will be removed on a monthly basis. The use of pesticides (herbicides, insecticides, fungicides, and slug pellets etc.) will be avoided, and any removal will be undertaken by hand.	X	X	X	X	X	X	X	X	X	X	X	X

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
		Health inspections	Should any plants be observed to be diseased, damaged or dead during monthly visits between March and September they will be replaced with the same species to the same specification in November.			X	X	X	X	X	X	X			
		Watering	Watering will be undertaken as required to maintain healthy plant growth.	X	X	X	X	X	X	X	X	X	X	X	X
	Routine maintenance operations (Year 2 onwards)	Health inspections	Should any plants be observed to be diseased, damaged or dead during bi-monthly visits between March and September they will be replaced with the same species and to the same specification.			X		X		X		X			
		Pruning	Pruning to occur as required and should avoid the nesting bird season (March to August inclusive). Formative pruning and cutting back of plants will be used to maintain a neat, tidy form.	X	X							X	X	X	X
		Cutting	All dead stems of grasses and perennial species from the previous summer's growth will be cut back on an annual basis, with all arisings removed and disposed of off-site. Deadheading of herbaceous plants will be undertaken following flowering and when flower heads have died off. This will be done on an annual basis between August and November depending on the species used. All arisings will again need to be removed.								X	X	X	X	

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
		Weeding	Monthly hand removal of undesirable species and pesticides (herbicides, insecticides, fungicides and slug pellets etc.) to be avoided.	X	X	X	X	X	X	X	X	X	X	X	X
		Litter	To be removed as necessary before any pruning / weeding works.	X	X	X	X	X	X	X	X	X	X	X	X
		Watering	Watering will be undertaken as required to maintain healthy plant growth.	X	X	X	X	X	X	X	X	X	X	X	X
Grassland (Emorsgate EM2 and EM8)	Pre-seeding preparation (Year 0)	Ground preparation	Topsoil levelled as required. Remove debris and stones above 30mm diameter. De-compact ground.	X	X	X	X	X	X	X	X	X	X	X	X
	Establishment maintenance operations (Year 1)	Seeding	New grassland seeding should occur as per manufacturer's guidance during autumn or early spring. Seeds will be spread either by hand or by use of a seed spreader and rolled immediately after spreading to ensure good soil contact.		X	X	X					X	X	X	
		Health inspections	Seeding found to have not established during bi-monthly health visits between March and September will be reseeded with the same seed mix.			X		X		X		X			
		Cutting	The wildflower grassland will be left to grow throughout year 1, being cut later in the year (mid-late summer). The grassland will be cut to a height of 100 mm and arisings will be removed.								X	X			
		Watering	Regular watering will occur weekly during the main growing season (May to September					X	X	X	X	X			

Habitat	Item	Sub-category	Description	Timings											
				J	F	M	A	M	J	J	A	S	O	N	D
			inclusive) and only as required outside these months.												
	Routine maintenance operations (Year 2 onwards)	Health inspections	Seeding found to have not established during bi-monthly health visits between March and September will be reseeded with the same seed mix.			X		X		X		X			
		Cutting	In the second and subsequent years, traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring cuts depending on the year. It is likely that 3 cuts will be required during the first few years with the number of cuts reduced as the wildflower grassland becomes established and undesirable 'weed' species are removed. Grass cuttings will be collected and removed, in order to reduce nutrient enrichment and encourage low-growing plants to flourish.			X				X	X		X		
		Weeding	Monthly hand pulling of perennial weeds (e.g., docks, thistles) will be completed as required.	X	X	X	X	X	X	X	X	X	X	X	X
		Litter	To be removed as necessary before any cutting works.	X	X	X	X	X	X	X	X	X	X	X	X
		Watering	As required during periods of drought to avoid death of the planting.	X	X	X	X	X	X	X	X	X	X	X	X

7. Summary and Conclusions

7.1 Ecology Solutions was commissioned in June 2025 by Bellway Homes (South London) Limited to complete a Landscape and Ecological Management Plan (LEMP) for Woodfords, Shipley Road, Southwater,

7.2 The Development Proposals for the Site are for creation of up to 73 new dwellings, associated public open space, landscaping, drainage and highway infrastructure works, including vehicular access from Shipley Road.

7.3 The purpose of this report is to address Condition 23 of DC/21/2180 which requires a LEMP. This document sets out the management and maintenance of features of ecological interest due to be retained and established as part of the development and describes the wildlife enhancements and mitigation strategies to be implemented.

7.4 Opportunities for wildlife within the Site will be enhanced. Wildlife populations have been considered in the design process, and it is considered that these populations will be retained at a favourable conservation status throughout the development's lifetime.

7.5 Overall, it is considered that the production of this LEMP and adherence to the habitat creation, management and monitoring recommendations in this report will deliver significant ecological enhancements. It is considered that the planning condition can be discharged.

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LANDSCAPE, MITIGATION & BIODIVERSITY
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PLANS

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LANDSCAPE, MITIGATION & BIODIVERSITY
A PHENNA GROUP COMPANY

PLAN ECO1

Ecological Features

Based upon aerial imagery provided by Google Maps

KEY:

- SITE BOUNDARY
- DEVELOPED LAND; SEALED SURFACE (BUILDING)
- DEVELOPED LAND; SEALED SURFACE (HARDSTANDING)
- INTRODUCED SHRUB
- MODIFIED GRASSLAND
- UNVEGETATED UNSEALED
- VEGETATED GARDEN
- RUDERAL OR EPHEMERAL
- BRAMBLE SCRUB
- NATIVE HEDGEROWS WITH TREES
- NON-NATIVE AND ORNAMENTAL HEDGEROW
- LINE OF TREES

N

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Farncombe House, Farncombe Estate, Broadway,
Worcestershire, WR12 7LJ
info@ecologysolutions.co.uk | ecologysolutions.co.uk

12691: WOODFORDS, SOUTHWATER

PLAN ECO1: ECOLOGICAL FEATURES

Rev: A
Sep 2025

ECOLOGY SOLUTIONS
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PLAN ECO2

Landscape Enhancements

KEY:

SITE BOUNDARY

N

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A PHENNA GROUP COMPANY

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Worcestershire, WR12 7LJ
info@ecologysolutions.co.uk | ecologysolutions.co.uk

12691: WOODFORDS, SOUTHWATER

PLAN ECO2: LANDSCAPE ENHANCEMENTS

Rev: A
Oct 2025

Based upon the plan - 3424-APA-ZZ-XX-LA-L-1001

APPENDICES

APPENDIX 1

Detailed Planting Plan (3424-APA-ZZ-XX-PP-L-2001 – 2003
P01 September 2025)

ANCIENT WOODLAND 15M BUFFER ZONE

ANCIENT WOODLAND

367m2 NATIVE UNDERSTORY SHRUB MIX
367No. plants @ 1m centres

40m LOW WATER DEMAND NATIVE HEDGE MIX
200No. plants @ 5/m

2No. Sorbus aucuparia 'Sheerwater Seedling'

2No. Acer campestre 'Streetwise'
1No. Carpinus betulus 'Lucas'
5m Prunus lusitanica Hedge
10No. plants @ 2/m

2No. Ilex 'Nellie Stevens'

14No. Lonicera pileata
14No. Skimmia × confusa 'Kew Green'

3m Ligustrum vulgare Hedge
15No. plants @ 5/m

4m Ligustrum vulgare Hedge
20No. plants @ 5/m

1No. Crataegus monogyna

3No. Betula pendula

127m2 NATIVE THORNY MIX Buffer
381No. plants @ 3/m2

10No. Lonicera pileata
10No. Skimmia japonica 'Rubella'
10No. Lonicera pileata
10No. Skimmia × confusa 'Kew Green'

8No. Skimmia japonica 'Rubella'
9No. Lonicera pileata

3m Ligustrum vulgare Hedge
15No. plants @ 5/m

3m Ligustrum vulgare Hedge
15No. plants @ 5/m

4m Ligustrum vulgare Hedge
20No. plants @ 5/m

6No. Skimmia japonica 'Rubella'

3m Ligustrum vulgare Hedge
15No. plants @ 5/m

2No. Prunus avium

7No. Lavandula angustifolia 'Munstead'
7No. Hebe 'Great Orme'
8No. Lavandula angustifolia 'Munstead'
3No. Hebe 'White Gem'

3m Ligustrum vulgare Hedge
15No. plants @ 5/m

3m Ligustrum vulgare Hedge
15No. plants @ 5/m

3m Ligustrum vulgare Hedge
15No. plants @ 5/m

2m Ligustrum vulgare Hedge
10No. plants @ 5/m

5No. Skimmia japonica 'Rubella'

6No. Sarcococca confusa
4m Ligustrum vulgare Hedge
20No. plants @ 5/m

13No. Bergenia 'Bressingham White'

7m Euonymus japonicus
'Jean Hugues' Hedge
28No. plants @ 4/m

7m Ligustrum vulgare Hedge
35No. plants @ 5/m

4No. Skimmia × confusa 'Kew Green'
5No. Hebe 'Great Orme'

4No. Skimmia × confusa 'Kew Green'

1No. Euonymus europaeus

15m Euonymus japonicus
'Jean Hugues' Hedge
60No. plants @ 4/m

38m LOW WATER DEMAND NATIVE HEDGE MIX
190No. plants @ 5/m

5No. Hebe 'White Gem'
5m Ligustrum vulgare Hedge
25No. plants @ 5/m
5No. Hebe 'White Gem'

13m Euonymus japonicus 'Jean Hugues' Hedge
52No. plants @ 4/m

1m Euonymus japonicus 'Jean Hugues' Hedge
4No. plants @ 4/m

1No. Acer campestre 'Streetwise'

1m2 BULB MIX SUN
20No. plants @ 20/m2

1No. Cornus kousa 'Chinensis'

13m Ligustrum vulgare Hedge
65No. plants @ 5/m

7No. Geranium x oxonianum 'Wargrave Pink'
13No. Skimmia japonica 'Rubella'

6No. Hebe 'Great Orme'
14No. Lavandula angustifolia 'Nana Alba'
8No. Geranium x oxonianum 'Wargrave Pink'

1m2 BULB MIX SUN
20No. plants @ 20/m2
1No. Liquidambar styraciflua 'Worplesdon'

1No. Malus 'Evereste'

4m Euonymus japonicus 'Jean Hugues' Hedge
16No. plants @ 4/m
4m Euonymus japonicus 'Jean Hugues' Hedge
16No. plants @ 4/m

8No. Hypericum 'Hidcote'

7No. Acanthus mollis
22No. Agapanthus album
11No. Lavandula angustifolia 'Munstead'
9No. Hebe 'Great Orme'
3No. Choisya ternata 'Aztec Pearl'
5No. Geranium x oxonianum 'Wargrave Pink'
4m Viburnum tinus Hedge
8No. plants @ 2/m
15No. Lavandula angustifolia 'Nana Alba'

1No. Euonymus europaeus

4m Escallonia 'Apple Blossom' Hedge
12No. plants @ 3/m

3No. Anemone x hybrida 'Honorine Jobert'
10No. Lavandula angustifolia 'Munstead'

6m Escallonia 'Apple Blossom' Hedge
18No. plants @ 3/m

8No. Cistus 'Silver Pink'

12No. Lavandula angustifolia
'Nana Alba'

1No. Sorbus aria

6m Euonymus japonicus 'Jean Hugues' Hedge
24No. plants @ 4/m

1m2 BULB MIX SUN
20No. plants @ 20/m2

10No. Hypericum 'Hidcote'

9No. Hebe 'White Gem'

5m Euonymus japonicus 'Jean Hugues' Hedge
20No. plants @ 4/m

8No. Skimmia × confusa 'Kew Green'
8No. Rudbeckia fulgida sullivantii 'Goldsturm'
11No. Pittosporum tenuifolium 'Golf Ball'

6No. Pittosporum tenuifolium 'Golf Ball'
6No. Agapanthus album
7No. Choisya ternata 'Aztec Pearl'
12No. Acanthus mollis

3No. Sarcococca confusa

8No. Hebe 'Great Orme'
5No. Skimmia japonica 'Rubella'
1No. Pyrus calleryana 'Chanticleer'

2m Viburnum tinus Hedge
4No. plants @ 2/m
5m Viburnum tinus Hedge
10No. plants @ 2/m

4m Viburnum tinus Hedge
8No. plants @ 2/m

10No. Hebe 'White Gem'

1m2 BULB MIX SUN
20No. plants @ 20/m2

13No. Sarcococca confusa

9m Ligustrum vulgare Hedge
45No. plants @ 5/m

2m2 BULB MIX SUN
40No. plants @ 20/m2

1No. Carpinus betulus 'Lucas'

1No. Liquidambar styraciflua 'Worplesdon'

16m Euonymus japonicus 'Jean Hugues' Hedge
64No. plants @ 4/m
4m Euonymus japonicus 'Jean Hugues' Hedge
16No. plants @ 4/m

14m Ligustrum vulgare Hedge
70No. plants @ 5/m

22m Ligustrum vulgare Hedge
110No. plants @ 5/m

0 5 10 20m

APAL FILE REFERENCE
3424-APA-ZZ-XX-PP-L-2000.dwg

Notes

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Do not scale from this drawing.

Based on drawing by DHA Architecture LTD
Drawing number 102108-BEL-SL-01

North

LEGEND

- Application boundary
- Existing Trees and Hedgerows to be retained, refer to arboricultural drawings for RPA's and Tree protection
- Visibility splays

PROPOSED ELEMENTS

PLANTING

- Standard / Extra Heavy Standard Tree, refer to plant schedule
- Edible Fruiting Tree, refer to plant schedule
- Specimen shrub, refer to plant schedule
- Native Mix, refer to plant schedule
- Ornamental Shrubs, refer to plant schedule
- Native Hedge, refer to plant schedule
- Bulb planting
- General purpose amenity turf
- General purpose meadow mix; EM2 Emorsgate or equivalent
- General purpose mown meadow mix; EM2 Emorsgate or equivalent
- General purpose amenity seed
- Wetland meadow mix; EM8 by Emorsgate or equivalent
- Pea shingle gravel

BOUNDARY TREATMENTS

- 500mm high timber knee rail

PLAYABLE FEATURES AND STREET FURNITURE

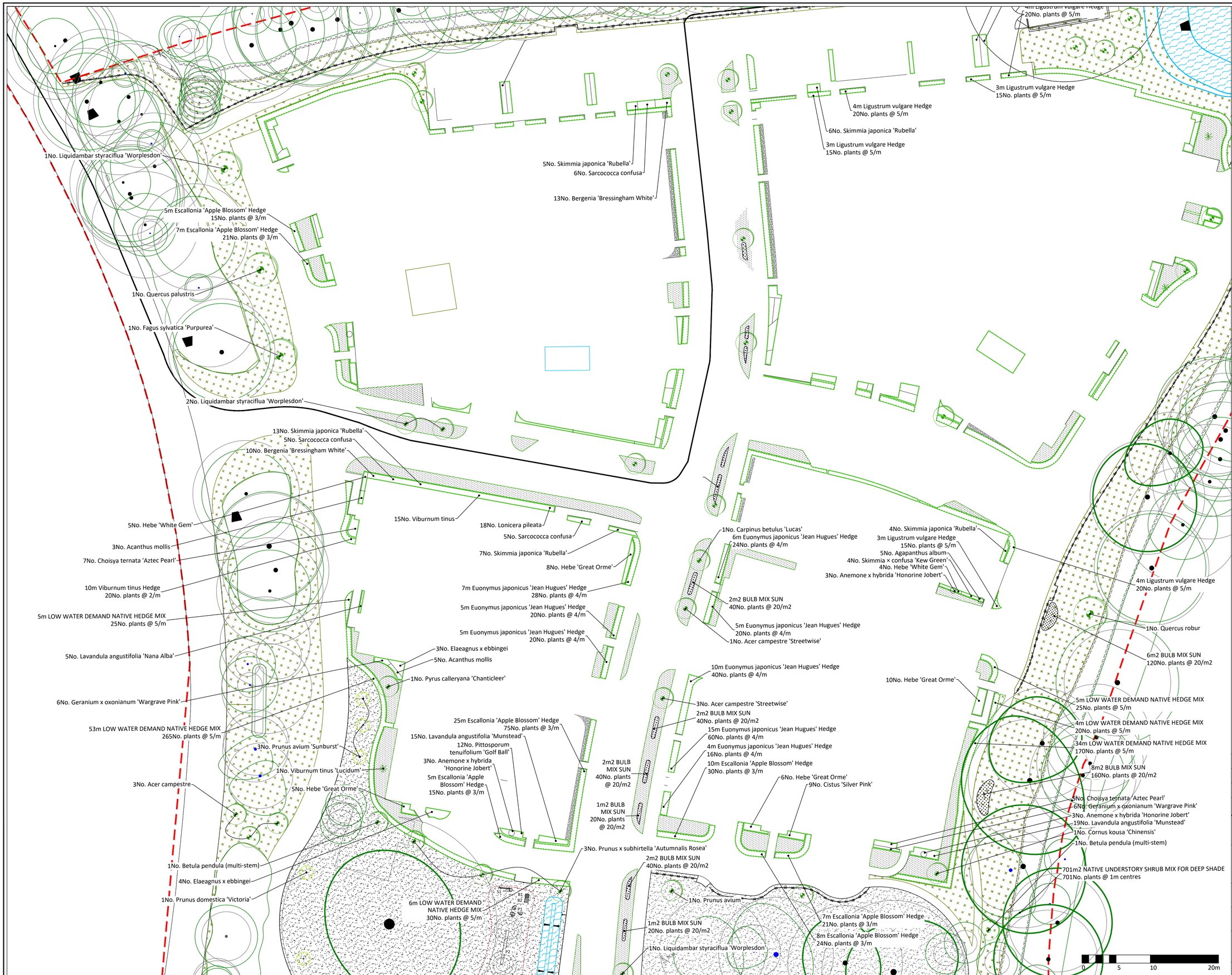
- P1 — Smooth caledonian glacial boulders by CED Natural Stone or similar approved. 250mm minimum spacing
- P2 — Timber balancing beam set in grass mounds. Dimension to match spaces between the grass mounds. By Timber Play or similar approved
- P3 — Stepping Logs, made of larch with steel foot By Timber Play or similar approved
- S1 — Clifton Bench with backrest and armrest by Woodscape or similar approved
- B1 B2 — Litter (B1) and recycling bin (B2) - 580 x 580 x 950 mm, timber bin, by Woodscape or similar approved

Rev	Description	Date	Drawn	Checked
P02	Amendment to new layout	02/10/25	CS	TB
P01	Planning issue	05/09/25	CG	TB
P00.01	First issue	15/08/25	CG	TB

Drawing Status
PLANNING

Allen Pyke
020 8549 3434
www.allenpyke.co.uk
design@allenpyke.co.uk
A registered practice of the Landscape Institute

Client: Bellway Homes Limited (South London)	Scale: 1:250@A1
Project: Land at Woodfords, Shipley Road, Southwater	Project No: 3424
Drawing Title: Planting Plan 1	Date: 15/08/25
	By/Chk: CG/TB
Drawing Number: 3424-APA-ZZ-XX-PP-L-2001	Revision: P02



APAL FILE REFERENCE
3424-APA-ZZ-XX-PP-L-2000.dwg

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Drawing number 102108-BEL-SL-01

North

LEGEND

- Application boundary
- Existing Trees and Hedgerows to be retained, refer to arboricultural drawings for RPA's and Tree protection
- Visibility splays

PROPOSED ELEMENTS

PLANTING

- Standard / Extra Heavy Standard Tree, refer to plant schedule
- Edible Fruiting Tree, refer to plant schedule
- Specimen shrub, refer to plant schedule
- Native Mix, refer to plant schedule
- Ornamental Shrubs, refer to plant schedule
- Native Hedge, refer to plant schedule
- Bulb planting
- General purpose amenity turf
- General purpose meadow mix; EM2 Emorsgate or equivalent
- General purpose mown meadow mix; EM2 Emorsgate or equivalent
- General purpose amenity seed
- Wetland meadow mix; EM8 by Emorsgate or equivalent
- Pea shingle gravel

BOUNDARY TREATMENTS

- 500mm high timber knee rail

PLAYABLE FEATURES AND STREET FURNITURE

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- P2 — Timber balancing beam set in grass mounds. Dimension to match spaces between the grass mounds. By Timber Play or similar approved
- P3 — Stepping Logs, made of larch with steel foot By Timber Play or similar approved
- S1 — Clifton Bench with backrest and armrest by Woodscape or similar approved
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Rev	Description	Date	Drawn	Checked
P02	Amendment to new layout	02/10/25	CS	TB
P01	Planning issue	05/09/25	CG	TB
P00.01	First issue	15/08/25	CG	TB

Drawing Status
PLANNING

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A registered practice of the Landscape Institute

Client
Bellway Homes Limited (South London)

Scale
1:250@A1

Project
Land at Woodfords
Shipley Road, Southwater

Project No
3424

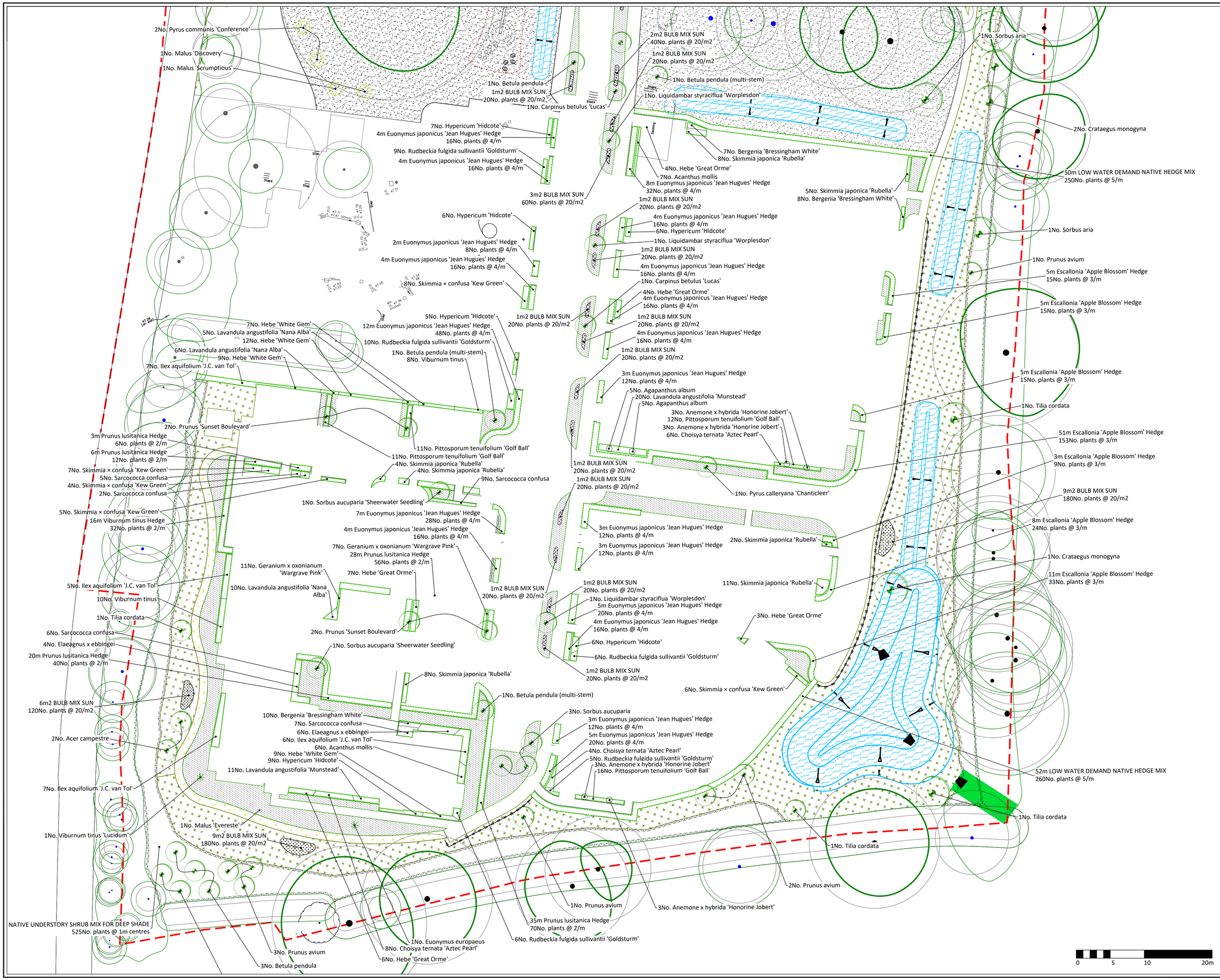
Drawing Title
Planting Plan 2

Date
15/08/25

By/Chk
CG/TB

Drawing Number
3424-APA-ZZ-XX-PP-L-2002

Revision
P02



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Drawing number 102108-BEL-SL-01

North

LEGEND

- Application boundary
- Existing Trees and Hedgerows to be retained, refer to arboricultural drawings for RPA's and Tree protection
- Visibility splays

PROPOSED ELEMENTS

PLANTING

- Standard / Extra Heavy Standard Tree, refer to plant schedule
- Edible Fruiting Tree, refer to plant schedule
- Specimen shrub, refer to plant schedule
- Native Mix, refer to plant schedule
- Ornamental Shrubs, refer to plant schedule
- Native Hedge, refer to plant schedule
- Bulb planting
- General purpose amenity turf
- General purpose meadow mix; EM2 Emorsgate or equivalent
- General purpose mown meadow mix; EM2 Emorsgate or equivalent
- General purpose amenity seed
- Wetland meadow mix; EM8 by Emorsgate or equivalent
- Pea shingle gravel

BOUNDARY TREATMENTS

- 500mm high timber knee rail

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- P1 — Smooth caledonian glacial boulders by CED Natural Stone or similar approved. 250mm minimum spacing
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- S1 — Clifton Bench with backrest and armrest by Woodscape or similar approved
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Rev	Description	Date	Drawn	Checked
P02	Amendment to new layout	02/10/25	CS	TB
P01	Planning issue	05/09/25	CG	TB
P00.01	First issue	15/08/25	CG	TB

Drawing Status
PLANNING

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A registered practice of the Landscape Institute

Client
Bellway Homes Limited (South London)

Scale
1:250@A1

Project
Land at Woodfords
Shipley Road, Southwater

Project No
3424

Drawing Title
Planting Plan 3

Date
15/08/25

By/Chk
CG/TB

Drawing Number
3424-APA-ZZ-XX-PP-L-2003

Revision
P02

APPENDIX 2

Lighting Strategy (MMA19630 – Shipley Road, Southwater – Private Lighting – Print to Scale – R0)

	Luminaire A	Luminaire B	Luminaire C
Supplier			
Type	BGP702I-4312f12b-8ddc-48d1-8de6-9fdc91e9c370	BGP702I-810b29ff-5353-4189-90e3-e136f609eb4f	BGP702I-c9c8d64f-64a5-45f7-b258-672e76ca28f6
Lamp(s)	LED35-4S/727	LED27-4S/727	LED30-4S/727
Lamp Flux (klm)	3.50	2.70	3.00
Maintenance Factor	1.00	1.00	1.00
No. in Project	7	9	4

MMA LIGHTING CONSULTANCY

PROJECT NAME:
Shipley Road, Southwater

PROJECT No:
MMA19630

SCALE: **1:500**

DATE: **3 August 2025**

CALCULATION:
Horizontal Illuminance (lux)

DESIGNER:
MMA Lighting Consultancy Ltd

MMA19630 - Shipley Road, Southwater - Private Lighting - Print to Scale - R0

Proposed 6m road lighting columns with post top mounted Philips Luma Gen2 LED lanterns.

Lighting class P5 selected in accordance with BS5489-1:2020.

Resilts required
Eav = 3.00 to 4.50 Lux
Emin = 0.60 Lux
Emin / Eav = 0.20

Base used "102108-BEL-SL-01 - 28.07.25"

PREPARED BY:

MMA Lighting Consultancy Ltd
99 Old Bath Road
Summer Field House
Charvil
Reading
Berkshire
RG10 9QN
Email: info@mma-consultancy.co.uk
Web: www.mma-consultancy.co.uk

Results Grid 1	
Eav	4.34
Emin	1.07
Emax	6.52
Emin/Emax	0.16
Emin/Eav	0.25
Results Grid 2	
Eav	4.17
Emin	0.82
Emax	8.11
Emin/Emax	0.10
Emin/Eav	0.20
Results Grid 3	
Eav	4.24
Emin	1.08
Emax	8.73
Emin/Emax	0.12
Emin/Eav	0.25
Results Grid 4	
Eav	4.05
Emin	0.92
Emax	7.01
Emin/Emax	0.13
Emin/Eav	0.23
Results Grid 5	
Eav	3.97
Emin	2.48
Emax	5.96
Emin/Emax	0.42
Emin/Eav	0.62
Results Grid 6	
Eav	4.12
Emin	1.60
Emax	5.97
Emin/Emax	0.27
Emin/Eav	0.39
Results Grid 7	
Eav	4.38
Emin	3.00
Emax	5.78
Emin/Emax	0.52
Emin/Eav	0.69

9750998243

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