

**NORTH LITTLEHAMPTON (PHASE 5), TODDINGTON
LANE, WEST SUSSEX**

**ECOLOGICAL MITIGATION AND MANAGEMENT
PLAN**

Final Document (Revision 1)

October 2021

Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EcIA • HRA • Management Plans
Habitats • Badger • Bats • Hazel Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

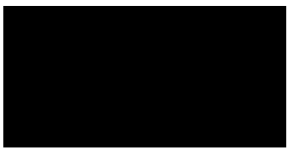
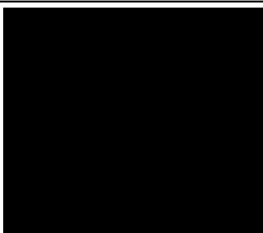
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ECOSA Quality Assurance Record

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¹ Chartered Institute of Ecology and Environmental Management (2017). *Guidelines for Ecological Report Writing*. Technical Guidance Series. <http://www.cieem.net/publications/23/ecological-report-writing>

**NORTH LITTLEHAMPTON (PHASE 5), TODDINGTON
LANE, WEST SUSSEX**

ECOLOGICAL MITIGATION AND MANAGEMENT PLAN

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1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by Persimmon Homes Limited to prepare an Ecological Mitigation and Management Plan for North Littlehampton (Phase 5), Toddington Lane, West Sussex.

Phase 5 is located within the wider North Littlehampton development which comprises the construction of up to 1,260 dwellings, associated facilities, employment areas and open space (Arun District Council planning reference LU/47/11).

Within this document where reference is made to 'the site' this refers to Phase 5 and reference to the 'wider site' relates to the wider North Littlehampton development. The location of the site in relation to the wider site is shown in **Map 1**.

This Ecological Mitigation and Management Plan has been written to support a Reserved Matters application to Arun District Council for the site. Under planning reference LU/47/11 there are three conditions relating to ecology (**Table 1**).

Table 1: Ecological conditions

Condition	Details
17	Prior to the submission of any reserved matters applications, a scheme shall be submitted for the creation of the proposed central wetland area and the restoration of habitat onsite. The scheme shall be submitted to and approved in writing by the Local Planning Authority. Thereafter the development shall be constructed as set out in the approved scheme and any subsequent amendments shall be agreed in writing with the Local Planning Authority.
19	Development shall not begin until further ecological surveys have been carried out and submitted to the Local Planning Authority. These surveys shall relate to water voles, bats, birds, invertebrates and reptiles.
20	Prior to the commencement of development on any phases of development east of the new road than spans the railway line (running north – south), details of appropriate mitigation, and a programme of implementation, in relation to water voles, bats, birds, invertebrates and reptiles shall be submitted to an approved in writing by the LPA.
21	No development within any phase or sub phase shall commence until details of an ecological management plan for the construction phase of that element of the development has been submitted to and approved in writing by the Local Planning Authority. The management plan shall be implemented in accordance with the approved plans.

The Ecological Mitigation and Management Plan is based on the results of ecological surveys and assessments carried out by ECOSA and White Young and Green (WYG) between 2008 and 2018 (**Table 2**). Further details of the species surveys and results are provided in Section 4.0.

Table 2: Summary of ecological surveys

Species Group/Species	2008	2009	2014	2017	2018
Ecological scoping Phase One habitat survey ²	✓	-	-	-	-
Ecological constraints appraisal ³	-	-	✓	-	-
Updating walkover survey ⁴	-	-	-	✓	-
Bat transect surveys		✓	✓	✓	
Reptile survey ⁵	-	✓	✓	-	-
Water vole survey ⁶	-	-	✓	✓	✓
Breeding Bird Survey ⁷	✓	-	✓	-	-

The results of the surveys have been used to provide mitigation and enhancement proposals within Phase 5. Surveys for birds, have not been updated since 2014 as the site provides limited habitat for this species group.

1.2 The Site

The site is located in Littlehampton, West Sussex, centred on National Grid Reference (NGR) TQ 0365 0399 (**Map 1**).

The site is located in the centre of the wider development site and covers an area of 8.5 hectares. Prior to demolition and clearance works taking place on site between 2016 and early 2017 the site contained greenhouses, scrub, hardstanding and a number of overgrown ditches. During 2017 the site was cleared of all existing buildings and grassland habitats.

The wider landscape comprises the agricultural land associated with the floodplain of the Black Ditch (a river) to the north, residential dwellings to the west and south, and an industrial estate to the south-east of the site. The main south coast railway line and its associated bankside vegetation is located close to the site's southern boundary. Littlehampton town centre is located approximately 1.3 kilometres south.

1.3 Aims and Scope of Report

The aim of this document is to outline the proposed ecological mitigation and management required at the site. The mitigation and management plan sets out the mitigation and management prescriptions for the site in order to retain the long-term

² White Young and Green (2009) Proposed Lyminster Bypass (South) North Littlehampton - Ecological Scoping / Phase 1 Habitat Survey. White Young and Green, Droxford, Hampshire

³ White Young and Green (2014) Toddington Lane, North Littlehampton - Ecological Constraints Appraisal. White Young and Green, Droxford, Hampshire

⁴ An ecological walkover survey was undertaken by ECOSA on 13th January 2017

⁵ White Young and Green (2014) Proposed Lyminster Bypass (South) North Littlehampton - Reptile Presence / Absence Survey Report. White Young and Green, Droxford, Hampshire

⁶ White Young and Green (2014) Toddington Lane, North Littlehampton - Water Vole Presence / Likely Absence Survey Report. White Young and Green, Droxford, Hampshire

⁷ White Young and Green (2014) Toddington Lane, North Littlehampton – Breeding Bird Report. White Young and Green, Droxford, Hampshire

ecological value. This plan covers a period of 10 years following the commencement of the development.

1.4 Site Proposals

The proposals for the site are for the construction of 261 new residential units with associated landscaping and car parking. Site access will come from existing Persimmon sites to the west, with the central access linked to the proposed road to run through the Central Wetlands Area.

The report is based on the site layout plan by Persimmon Homes Limited (Drawing no. 546_PL_100a, Revision B) dated April 2021 (**Appendix 1**).

2.0 MITIGATION AND MANAGEMENT PLAN OBJECTIVES

2.1 Introduction

This section provides an overview of the objectives of the Ecological Mitigation and Management Plan for the site. Specific objectives for each individual habitat type are detailed within the management prescriptions.

2.2 Overview of Mitigation and Management Plan Objectives

The overarching objective of the Ecological Mitigation and Management Plan is to retain and enhance the long-term ecological value of the site. These will be achieved through the following measures:

- Creation of new, native species-rich and wildlife friendly habitats to enhance biodiversity at the site; and
- Establishment of long-term management prescriptions for new and retained habitats to ensure the habitat diversity and suitability for wildlife is maintained.

2.3 Structure of the Mitigation and Management Plan

The general overarching management prescriptions for the site are provided within Section 3.0, with species specific management and mitigation measures detailed in Section 4.0.

The main habitat types which are the focus of this management plan are grassland, native trees and hedgerows, seasonally wet grassland and meadow grassland. Management prescriptions for each of these habitat types are detailed individually within Section 5.0.

3.0 GENERAL MANAGEMENT PRESCRIPTIONS

3.1 Introduction

This section provides an overview of the general management prescriptions for the site.

3.2 Review

As part of on-going monitoring and review process, the management plan will be periodically reviewed in order to ensure that the objectives are being met. Details of this review process are provided within Section 6.0.

3.3 Responsibilities

The implementation of the management plan will be the responsibility of the landowner, who will likely transfer the ownership of the land to a third party following the completion of the development. This third party will be responsible for implementing the management plan. For the purposes of this management plan the “management site” is the area of the site which will be retained by the third party and outside of residential ownership.

3.4 Contractors

The proposed management works will be undertaken by specialist contractors with suitable experience in the management measures proposed. Monitoring and review will be undertaken in conjunction with suitably qualified ecologists with other specialists, such as arboricultural consultants employed/consulted as necessary.

4.0 SPECIES-SPECIFIC MITIGATION AND MANAGEMENT

4.1 Introduction

This section provides an overview of the species-specific mitigation measures and management prescriptions for the site.

4.2 Bats

Pre-demolition the site contained large greenhouses and an office building. All greenhouses were assessed to have negligible bat roosting potential, while the office building was assessed to be of low/negligible suitability by WYG Ecology³. An endoscope survey was undertaken of the office building prior to demolition in spring 2017, no bats were recorded. In addition, trees on site were surveyed by ECOSA in January 2017 for potential bat roosting features such as cracks, splits or holes, but none were identified as containing bat roosting features.

Prior to clearance works, the site provided limited bat foraging and commuting opportunities in the form of hedgerows, scattered trees and scrub. Bat transect surveys undertaken by WYG Ecology² had recorded a small range of common and widespread species across the wider site. Bat transect surveys undertaken in 2017 by ECOSA to the east of the wider site, and adjacent to Phase 4, recorded the presence of common and widespread species including common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, long-eared *Plecotus*⁸ bat species, and noctule *Nyctalus noctula*.

The new lighting scheme has been sensitively designed to take into account foraging and commuting bats which may be using the boundary hedgerows. Lighting will comprise hooded luminaires directed away from vegetation, particularly the boundary trees and hedgerows. Ideally the bulbs will be LED and at the warmer end of the spectrum (e.g. avoiding blue or white light). LED lights emit much lower levels of UV and therefore have a lower impact on wildlife⁹. The new lighting will be task related, associated with specific entrance/exit points of the development. The lux level will be as low as possible to allow the task to be carried out safely and effectively. Guidance on task related lighting levels and mitigation options as described within the Bats and Artificial Lighting in the UK report will be followed (Institution of Lighting Professionals, Bat Conservation Trust, 2018).

⁸ There are two species of long-eared bat, the brown long-eared bat *Plecotus auritus* and the grey long-eared bat *Plecotus austriacus*. These species can only be separated by examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the two species shall be referred to in this report as long-eared bat. The brown long-eared bat is the commonest of the two species typically being found roosting within large roof voids although small voids and trees are also utilised. The grey long-eared bat is rare and confined to southern England and like the brown long-eared typically roosts in roof voids.

⁹ *Wildlife and Artificial Lighting Seminar*, 21st – 22nd March 2014, Arup London, Bat Conservation Trust.

To enhance the site for bats, 20 Vivara Pro Build-in WoodStone bat boxes will be integrated into newly constructed units on site. Indicative locations of these bat boxes are shown on **Map 2**.

4.3 Birds

During the Phase 1 Habitat survey undertaken by WYG during 2008, the site was considered to provide suitable habitat for nesting birds particularly within boundary hedgerows and treelines. Breeding bird surveys were carried out by WYG Ecology in 2008² covering the floodplain grazing land to the north of the wider development site. Updating surveys carried out by WYG Ecology in 2014⁷ covered the whole site, these surveys recorded eight red listed and seven amber listed Birds of Conservation Concern¹⁰.

Where possible, vegetation removal will be undertaken outside of the main bird nesting season which extends from March to August, inclusive. If this is not possible then the vegetation to be removed should be inspected by a suitably qualified ecologist immediately prior to works commencing. Active nests will be left with an undisturbed 5-10 metre buffer until nesting ends naturally. If nests are identified, then there is the potential for the programme of the works to be affected.

The inclusion of new native tree, shrub and hedgerow planting (**Paragraph 5.2**) will enhance the site for breeding birds. As an additional enhancement measure, 20 bird boxes will be erected within newly constructed buildings on site, comprising 10 Vivara Pro WoodStone house sparrow nest boxes and 10 WoodStone swift boxes. The location of these boxes are shown on **Map 2**.

¹⁰ The UK's birds are split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Red List criteria include species which are: globally threatened; have been subject to historical population decline in UK during 1800–1995; are in severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period, or; subject to severe (at least 50%) contraction of UK breeding range over last 25 years, or longer-term period.

5.0 HABITAT-SPECIFIC MANAGEMENT

5.1 Introduction

This section provides an overview of the habitat-specific management objectives and prescriptions for the site.

5.2 Native Trees and Hedgerow

Native trees and hedgerows are present around the boundaries of the site, some of which are to be retained. Native tree and shrub planting is also to be undertaken across the site.

5.2.1 Objectives for Native Trees and Shrubs

The specific objectives for native trees and hedgerow habitats are to:

- Establish and maintain new tree/shrub planting and hedgerow.

5.2.2 Mitigation and Enhancement

A number of trees will be included within the development, these will comprise native species. Following previous comments from the Local Planning Authority it is recommended that a proportion of these specimens comprise whitebeam *Sorbus aria* as this is a characteristic native species associated with the area. Native species hedgerows will be planted across the site at irregular. Species will consist of:

- Field maple *Acer campestre*;
- Hawthorn *Crataegus monogyna*;
- Holly *Ilex aquifolium*;
- Rowan *Sorbus aucuparia*; and
- Small-leaved lime *Tilia cordata*.

5.2.3 Management Prescriptions

All landscape is to be maintained in accordance with BS 7370 Part 3:1991 and Part 4:1993, including weed control. Management works should be undertaken over winter (October to February) in order to avoid the nesting bird period.

Any plants dying within the first year will be replaced with matching species. Light, regular, trimming of the trees and shrubs in the first five years will encourage dense, bushy growth and is recommended. After five years, cutting will occur on a biennial basis (every two years) to provide a bushy habitat with suitability for a range of species including common breeding birds. This management will be undertaken outside of the main nesting bird season of March to August (inclusive), to ensure no damage occurs to nesting birds or their nests.

5.3 Seasonally Wet Grassland

At the time of the preparation of this management plan there were no areas of grassland present within the site.

5.3.1 Objectives

The specific objectives for seasonally wet grassland habitat are to:

- Increase ecological value of grassland habitats on site through creation of native species rich areas of planting; and
- Introduce a suitable management regime for grassland, in order to encourage herbaceous diversity and provide suitable habitat for a range of species.

5.3.2 Mitigation and Enhancement

Habitats adjacent to the proposed SuDS are proposed within the site and will provide connectivity between the Central Wetland in the south-west and the Water Meadows in the north. This habitat will comprise seasonally wet grassland.

Therefore, a seed mixture such as Emorsgate EM8 is recommended for this habitat. This mix is suitable for seasonally wet soils, especially those that may flood for short periods in winter but are usually well drained in the summer. Species contained within this mix are as follows, the percentage of seeds from each plant species is shown in brackets:

- Betony *Stachys officinalis* (1%);
- Common bent *Agrostis capillaris* (10%);
- Common knapweed *Centaurea nigra* (2.5%);
- Common sorrel *Rumex acetosa* (1.5%);
- Cowslip *Primula veris* (0.4%);
- Greater birds-foot trefoil *Lotus pedunculatus* (0.8%);
- Crested dogs-tail *Cynosurus cristatus* (36%);
- Lady's bedstraw *Galium verum* (1%);
- Meadow barley *Hordeum secalinum* (3%);
- Meadow buttercup *Ranunculus acris* (2.5%);
- Meadow foxtail *Alopecurus pratensis* (4%);
- Meadowsweet *Filipendula ulmaria* (1.5%);
- Oxeye daisy *Leucanthemum vulgare* (0.8%);
- Quaking grass *Briza media* (1%);
- Ragged robin *Lychnis flos-cuculi* (0.2%);
- Red fescue *Festuca rubra* (24%);
- Ribwort plantain *Plantago lanceolata* (2%);
- Selfheal *Prunella vulgaris* (2%);

- Sneezewort *Achillea ptarmica* (0.3%);
- Sweet vernal-grass *Anthoxanthum odoratum* (1%);
- Tufted hair-grass *Deschampsia cespitosa* (1%);
- Tufted vetch *Vicia cracca* (1.5%);
- Yarrow *Achillea millefolium* (0.5%); and
- Yellow rattle *Rhinanthus minor* (1.5%).

5.3.3 Management Prescriptions

EM8 should be sown in September / October, alternatively in spring once the land has drained sufficiently. The seed must be surface sown and can be applied by machine. The soil will then be rolled to give good soil/seed contact.

After cultivation, dormant weed seeds will germinate, these should be sprayed off with a general purpose herbicide (preferably Glyphosate) and harrowed. After a second germination of annual weeds, the site should be sprayed and harrowed again, now the ground should be ready for sowing. If annual weeds continue to germinate repeat the herbicide application and harrowing until the weeds diminish.

In the second and subsequent years EM8 sowings can be managed in a number of ways which, in association with soil fertility, will determine the character of the grassland. The best results are usually obtained by traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring mowing or grazing. No fertilizers are to be used on the grassland.

The vegetation will not be cut from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August a 'hay cut' will be taken with arisings removed.

5.4 Meadow Grassland

At the time of the preparation of this management plan there were no areas of grassland present within the site.

5.4.1 Objectives

The specific objectives for meadow grassland habitat are to:

- Increase ecological value of grassland habitats on site through creation of native species rich areas of planting; and
- Introduce a suitable management regime for grassland, in order to encourage herbaceous diversity and provide suitable habitat for a range of species.

5.4.2 Mitigation and Enhancement

Areas of grassland outside of the residential gardens and seasonally wet grassland will be sown with species rich meadow grassland. It is recommended that the meadow grassland habitat is sown with Emorsgate EM2 General Purpose Meadow Mixture or similar.

5.4.3 Management Prescriptions

The overall objective of the grassland will be to provide a continued nectar source for invertebrates throughout the spring and summer.

Within the first year of grassland sowing areas will be mown regularly to a height of 40-60 millimetres. It is important when managing an area of wildflower that the (arisings) cuttings will be removed to prevent the grassland from becoming enriched with nitrates from discarded arisings. This will deter vigorous weed species such as common nettle *Urtica dioica* and creeping thistle *Cirsium arvense* from colonising the flowering lawn. In the second and subsequent years post-grassland sowing mowing will not be undertaken from spring to late July/August to allow plants to flower.

6.0 MONITORING AND REVIEW

A review of the mitigation and enhancement measures implemented will be undertaken by a suitably qualified ecologist following the completion of the development. Following the implementation of the proposed mitigation and enhancement measures, any necessary revisions to the Ecological Mitigation and Management Plan will be made.

It is proposed that the party responsible for implementation of this mitigation and management plan carry out regular *ad hoc* monitoring at the site to establish any obvious deviations or faults. Where any issues are highlighted, a suitably qualified ecologist will be consulted for advice where necessary.

An integral part of the mitigation and management plan process will be a system of monitoring and a formal progress review. There will be a review meeting at the end of five years, post-completion, attended by the landowner and management contractor, to discuss the progress of the activities undertaken. This will enable issues to be identified and resolved where required. The meeting will take place to judge the effectiveness of the plan's aims, objectives and prescriptions.

The monitoring and review process will comprise a review report to include the following elements:

- Details of extent, timing and outcome of all works undertaken in the previous five years;
- Managing agent's assessment of effectiveness of works undertaken and the Ecological Mitigation and Management Plan as a whole; and
- Recommendations for next five year's management requirements.

7.0 TIMETABLE OF MANAGEMENT AND MONITORING WORKS

Management Prescription		Section Reference	Year ¹¹											
			0	1	2	3	4	5	6	7	8	9	10	
Construction Phase Mitigation and Enhancement	Protection of retained trees in accordance with BS 2012:5387	5.2.2	+											
	Vegetation clearance necessary to be undertaken outside of nesting bird season (March to August)	4.3	+											
	Erection of new bat and bird boxes within the site	4.2 & 4.3	+											
	New landscaping implemented at the site including new grassland seeding and tree and hedgerow planting	5.2.2, 5.3.2 & 5.4.2	+											
Habitat Management	Wildflower Meadow Management (spring/early summer and late summer), arisings removed	5.3.3 & 5.4.3	+	+	+	+	+	+	+	+	+	+	+	
	Management of tree and scrub habitat to be undertaken outside of nesting bird season (March to August)	5.2.3	+	+	+	+	+	+	+	+	+	+	+	
Monitoring and Progress Review	Ad hoc monitoring by management contractors	6.0		+	+	+	+	+	+	+	+	+	+	
	Five-year management review	6.0						+					+	

¹¹ The exact timescales for the construction of the development are unknown. For the purposes of this mitigation and management plan, construction works are referred to as “Year 0” with the mitigation and management plan covering subsequent years “Year 1 – 10”.

Map 1 Site Location Plan

NORTH LITTLEHAMPTON (PHASE 5), TODDINGTON, WEST SUSSEX

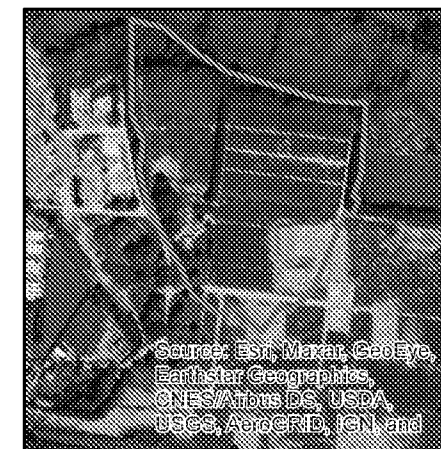
ECOLOGICAL MITIGATION AND MANAGEMENT PLAN

Map 1 - Site Location Plan

Client:	Persimmon Homes
Date:	October 2021
Status:	Final (Revision 1)

KEY

 Site Boundary



Scale at A4: 1:10,000

0 100 200 400 Metres



Prepared by: OW	Date: 250521
Last amended by: OW	Date: 271021

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Map 2 Location of Bat and Bird Boxes



KEY



Site Boundary

Vivara Pro Build-in WoodStone Bat Box

Vivara Pro WoodStone House Sparrow Nest Boxes

WoodStone Swift Boxes

Basemap reproduced by the 'site layout plan' by Persimmon Homes Limited (Drawing no. 546_PL_100a, Revision B) dated April 2021

NORTH LITTLEHAMPTON (PHASE 5), TODDINGTON LANE, WEST SUSSEX

ARUN DISTRICT COUNCIL LU/206/21/RES

ECOLOGICAL MITIGATION AND MANAGEMENT PLAN

Map 2 - Location of Bat and Bird Boxes

Client: Persimmon Homes

Date: October 2021

Status: Final

Prepared by: JR

Date: 1st April 2021

Last amended by: OW

Date: 27th Oct 2021



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Appendix 1 Site Proposals Plan



Demography					
Demographic Analysis					
Age Group	Gender	Marital Status	Household Type	Income Level	Education Level
18-24	M	Single	Single	Low	High School
25-34	F	Single	Single	Low	High School
35-44	M	Married	Family	Low	High School
45-54	F	Married	Family	Low	High School
55-64	M	Married	Family	Low	High School
65+	F	Married	Family	Low	High School
Availability (2025)					
18-24	M	Single	Single	Low	High School
25-34	F	Single	Single	Low	High School
35-44	M	Married	Family	Low	High School
45-54	F	Married	Family	Low	High School
55-64	M	Married	Family	Low	High School
65+	F	Married	Family	Low	High School

HA Allocation:

- Shared Ownership - 28 No. (45%)
- Rent - 29 No. (50%)
- Total - 57 units (28% of 200)
- Allocation of 2 No. + 1 Person Ground Floor (Ground Floor)

Change Location



PERSIMMON
Together, we make a home

Head Office: Persimmon Homes, 100, The Quadrant, London, E1 1AF
Contact: 020 7250 1234
Email: info@persimmon.co.uk

Phase 5
Littleshampton

1:500 @ A3

146_P_110a

Site Layout - Information
Parcels D1 & E1

020 7250 1234

AT NC

Appendix 2 Landscape Masterplan



North Littlehampton

Phase 5 Landscape Strategy

LA.PH5.1

The landscape and design objectives are to integrate the proposed development into the surrounding landscape, and provide defining characteristics throughout the development. Landscape character areas are proposed to help provide distinctiveness within and around the site, whilst respecting the landscape setting.

- 
The Avenue: The primary access road. The Avenue, runs across the site in a west-east direction, dividing it in two, creating a prominent linear feature before curving south-eastwards to form an edge to the development. Trees along the road edge would be planted, combined with a shrub/hedges, to create consistency along its length which would emphasise the role of the road and provide contrast to the less formal structure of the adjoining residential roads. The road verges allows for the selection of medium-sized trees to be positioned away from residents' properties. Proposed shrubs/hedges would provide continuity along the length of the road.
- 
SuDS: These would provide the backbone or both the green/blue infrastructure within the development and provide connectivity across the site between the Central Wetland to the south-west and the Water Meadows at the north. They would provide sustainable drainage features within the development. Soft landscaping will determine the character of these areas, with an emphasis on species that are tolerant of the unpredictable water conditions. Large trees will provide separation from the adjacent residential areas, while species rich meadows and wetland planting would deliver both a range of habitats and seasonal variation.
- 
Central Wetland Edge: Adjacent to the proposed development to the west is the proposed Central Wetland. It includes native species and aquatic plants, in addition to grasses that would be left to grow long over time and flower. The properties along the western edge of the development overlooks the Central Wetland. The proposed landscape would create a transitional zone from the residential area to the Central Wetland with medium-large sized specimen trees being positioned along the wetland edge, and smaller trees interspersed within shrub planting closer to the residential properties. To increase diversity and visual interest, the larger zones of soft landscape would include species rich grass/wildflowers as appropriate.
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Water Meadows Edge: Adjacent to the proposed development to the north is the existing water meadows relating to the Beech Clutch further north. Again, the properties here overlook the water meadows. The proposed landscape would mimic the proposals relating the Central Wetland, to achieve a transitional zone between the development edge and the water meadow edge.
- 
Streets: Leading off the Main Avenue are a series of roads, connecting to the residential buildings. The semi-formal connectivity role would be reflected in the landscape, with scattered small street trees and low shrub planting in the narrow front gardens. Due to the limited planting space, a strong colour palette would be encouraged to emphasise the planting areas.
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Shared Surface Areas: These are the most informal of the residential areas on the site, with pedestrian and vehicle traffic sharing the same space. To aid in creating an environment that is both pleasant and safe for all users, trees would be used where possible with an understory of ultra-low level planting. The soft landscape would provide a suitable setting to Local Areas or Play (LAP) and plant species would provide structure, texture and colour.
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Local Equipped Area for Play (LEAP): The LEAP is positioned towards the south-eastern edge of the site with overlooking properties. The LEAP would include robust materials, sympathetic to the site, such as timber structures, logs and boulders. These elements would provide a minimum number of five play experiences. Surface finish materials would include rubber mulch and other suitable surfaces. Logs would be positioned in bark mulch or in grass areas. Native planting and hazel coppice areas would provide interest and help increase biodiversity.

0 10 20 30 40 50 100 m

PRELIMINARY



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