Foreman Homes Ltd

Land to the South of Romsey Avenue, Fareham

FRAMEWORK LANDSCAPE & ECOLOGICAL SPECIFICATION & MANAGEMENT PLAN (LEMP)

June 2021

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Rev	Issue Status	Prepared / Date	Approved/Date
-	Draft 1	JRM / 22/06/2021	DJC / 22.06.21
A	Following client review	JRM / 24/06/2021	DJC / 24.06.21
B	Minor further revisions section 1	JRM / 24/06/2021	DJC / 24.06.21

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APPENDICES

1.0 INTRODUCTION

1.1 The following Framework Landscape & Ecological Specification & Management Plan (LEMP) has been prepared by FPCR Environment & Design Ltd. on behalf of Foreman Homes Ltd. This document sets out the principles of habitat protection, creation and management approaches for the landscape proposals at Land to the South of Romsey Avenue, Fareham (hereafter referred to as the "Site").

Background

1.2 This Framework LEMP has been prepared in order to demonstrate that the methods and specifications outlined below are achievable and can be secured by condition, requiring full details to be submitted as part of any subsequent Reserved Matters application. The precise wording of the LEMP condition can be discussed with Local Planning Authority in advance of the condition being written.

1.3 This Framework LEMP seeks to address the current BNG score of +5.95% by demonstrating that at Reserved Matters a net gain of 10% is possible. The Framework LEMP also demonstrates how the overall ecological objectives can be secured both at the outline and detailed design stages of the proposals.

1.4 This document should be read in conjunction with the previously submitted Environmental Statement (ES) for Ecology – Chapter 10 (FPCR, June 2021) and the Illustrative Landscape Masterplan (drwg. DD151L01 Rev B). For reference, the Illustrative Landscape Masterplan is shown in **Appendix A**.

Legislation & Policy

1.5 All relevant EU and UK nature conservation law will be adhered to in relation to the protection of ecological features and ecological enhancement. This includes the protection afforded to nesting birds under the Wildlife and Countryside Act 1981 (as amended) and with reference to the protection of great crested newts and bats and their roosts under the Conservation of Habitats and Species Regulations 2010 (as amended). Regard has also been given to the Local Biodiversity Action Plan (LBAP) and Habitats of Principle Importance (HPI) as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Health & Safety

1.6 Care will be undertaken throughout the design process and during construction at all stages to consider the health and safety aspects of the proposals.

1.7 The site may contain some potentially hazardous features such as footpaths across roads, overhanging trees and bodies of water and also potentially hazardous operations, including tree works, maintenance works near or on highways, works near, on or in water, works involving the use of cutting machinery and potentially hazardous chemical agents, works to steep slopes, works near buried services and overhead services and frequently a combination of these.

1.8 The Landscape Management Company will check for below and above ground services, including land drainage, in the vicinity, and give notice if they may be affected and obtain instructions before proceeding. The Landscape Management Company will comply with Arboriculture and Forestry Advisory Group Safety leaflets.

1.9 The scheme should be implemented by competent landscape managers and operatives, who are responsible for the application of best practice standards and all relevant health and safety procedures, protection of the environment, avoidance of pollution and protection of protected species and habitats. The management items set out in this document in no way remove their responsibilities to current, or any future, statutory and best practice procedures or obligations.

1.10 Care must be taken during the management and the design of that management to assess, and where practicable reduce or eliminate risks. To this end the Management Company will periodically carry out a Health and Safety Audit of the whole of the Common Areas. This audit will review health and safety considerations and make recommendations on works necessary to maintain the Park in a safe condition. These will be worked into the landscape management as it evolves.

2.0 AIM & OBJECTIVES

2.1 Section 2 outlines the Aim of the Framework LEMP and the Objectives that will be actioned on order to achieve the aim.

Aim: Maintain and enhance the biodiversity value of the site

Objective 1: Ensure the matrix of new and existing habitats establish and are suitably maintained to ensure long-term biodiversity net gain (**Minimum target** – 10% gain calculated using Defra 2.0 metric).

Objective 2: **Protect** and **maintain** retained habitats and protected species within the site.

Objective 3: Ensure ecological **connectivity** both of onsite habitat and connectivity to habitat offsite through the creation of a matrix of complimentary new habitats.

Objective 4: Provide a framework of **management**, **monitoring** and **review** periods.

3.0 BIODIVERISTY NET GAIN

Objective 1: Ensure the matrix of new and existing habitats establish and are suitably maintained to ensure long-term biodiversity net gain (Minimum target – 10% gain calculated using Defra 2.0 metric).

3.1 Calculations as provided as part of ES Chapter 10 valued the post-intervention gain for habitats at +1.72 habitat units, which equates to a net gain of +5.95% above the baseline value. This fell below the nationally accepted target of 10%. Solutions to this shortfall are outlined below.

3.2 It was noted in the Environmental Statement that the majority of this shortfall could be attributed to the provision of c.3.2ha of modified grassland (see F6: Biodiversity Net Gain Assessment Plan of ES Chapter 10) as mitigation for brent geese. This area of grassland formed the south east extent of the site. The brent goose mitigation area will be primarily low diversity "improved" grassland, which in accordance with the Defra 2.0 metric provides a relatively low number of habitat units.

3.3 To rectify this, a 7m wide verge of meadow grassland can be provided on the north and western boundaries of the brent goose mitigation area, south and east respectively of the proposed field ditch which delineates this area. This verge can then be managed in line with management prescriptions for other areas of meadow grassland to be created.

3.4 The previous net gain calculations assumed that small areas of grassland on the bunds of the proposed SuDS would also be of poor condition compared to the grassland surrounding the SuDS. This will not be the case. The grassland created as part of the SuDS will be specified to the same habitat value, i.e., moderate condition, as the proposed wet grassland instated surrounding the SuDS.

3.5 By incorporating the proposed meadow grassland verge within the brent goose mitigation area, and by adjusting the specification of grassland forming the SuDS bunds, a 10% net gain in biodiversity units can be achieved.

3.6 These two small adjustments will increase the gain from the previously stated +5.95% to **+10.04%**, and demonstrates that there is flexibility within the proposals due to the large area of mitigation land to achieve a 10% net gain which can be fleshed out during the detailed landscape design.

4.0 HABITATS & PROTECTED SPECIES TO BE RETAINED & PROTECTED

Objective 2: Protect and maintain retained habitats and protected species within the site.

4.1 Existing habitats will be retained where feasible within the development, and will be protected through the enabling and construction phases.

Pre-construction Mitigation Measures

4.2 The following table outlines the ecological mitigation measures to be undertaken ahead of commencing on site in order to minimise impact from construction works.

Existing Hedgerows and Trees

4.3 The vast majority of the existing hedgerows and trees are to be retained within the proposed scheme. Retained trees will be left unmanaged unless otherwise dictated for reasons of public safety or to benefit the woodland structure or other adjacent or associated habitats or species.

4.4 During construction, retained hedgerows will be protected in accordance with BS5837:2012 by high visibility fencing as set out in the Arboricultural Method Statement, or where this is not available; fencing will be erected approximately 3m from the outside edge of the hedgerow. Trees will be protected by fencing erected according to their calculated root protection area (RPA) in the Arboricultural Method Statement. No removal of woody vegetation will take place during the bird nesting season (**March** to **September** inclusive) unless a thorough survey by an appropriately experienced ecologist first confirms that no active nests are present. Any work will accord with the Wildlife and Countryside Act 1981 (as amended).

4.5 Trees will be inspected for signs of stress, disease or damage and appropriate remedial action taken. Arisings from any tree management activity will, where appropriate, be retained on site in piles to create wood habitat to maximise invertebrate and bryophyte biodiversity. Where it accords with health and safety inspection, standing dead wood will be left in-situ to provide additional dead wood habitats.

Mitigation Measures during Construction

Existing Hedgerows and Trees

4.6 Protective fencing will be maintained around the retained trees and hedgerows throughout the site, as set out in the Arboricultural Method Statement. Regular checks will be undertaken throughout the enabling and construction phase to ensure these are maintained.

4.7 Any trees that require felling will be in accordance with the Arboricultural Method Statement and shall be assessed for bat roosts by a suitably qualified Ecologist.

4.8 Any hedgerow removal should be checked and overseen by a suitably qualified Ecologist, and will be undertaken with care in stages using hand tools.

Existing Grassland

4.9 Existing retained grassland will be kept short through mowing or grazing to prevent it becoming colonised by reptiles.

Lighting

4.10 No construction lighting will be permitted on retained hedgerows to protect nocturnal animals such as bats. Alternatively, construction will be restricted to daylight hours, finishing at least 30 minutes before sunset and commencing at least 30 minutes after sunrise during the main bat activity season (**April** to **October** inclusive).

Excavations

4.11 Trenches or large excavations will be covered overnight to prevent wildlife falling in and failing to escape, or a strategically placed plank will provide a means of escape. Any large bore pipes will be capped at the end of the day to reduce the potential for wildlife to enter and become trapped.

5.0 LANDSCAPE & ECOLOGICAL SPECIFICATION

Objective 3: Ensure ecological connectivity both of onsite habitat and connectivity to habitat offsite through the creation of a matrix of complimentary new habitats.

5.1 The proposals will create a matrix of new and existing habitats and corridors through the site to encourage the establishment and movement of wildlife.

5.2 **Appendix A** provides an outline planting specification for the Site. A Landscape Specification outlining the proposed implementation methods tree and shrub planting and wildflower meadow creation is also included within Appendix A.

5.3 Section 5 expands, where appropriate, on the content within **Appendix A** providing additional detail as to the implementation and specification of habitats included within the Biodiversity Net Gain calculations, specifically:

- Improved Grassland – Brent Geese
- Marginal Plug Planting - Ponds
- Wet Grassland
- Reedbeds

5.4 Further, specifications for species specific features, i.e. hibernacula and nest boxes are also provided.

5.5 The following section outlines the specification and implementation, with **Section 5** outlining the works programme and management regime.

Improved grassland – Brent Geese

5.6 New short-sward grassland areas will be established using a suitable species-rich native flowering grassland mix such as Emorsgate Lolium perenne Perennial ryegrass Amenity/Agricultural seed mix, sown as per the manufacturer's instructions.

5.7 Areas to be sown will be first rotovated and raked or harrowed to produce a medium fine, firm tilth. Seed will be sown in the autumn or spring, selecting a time when the soil is moist and can be worked.

5.8 The above seed mix includes many perennial species that can be slow to germinate and grow. Ground cover will therefore likely take longer to develop than conventional lawn sowings and may take 12-18 months to knit together as turf. Newly seeded areas will therefore be protected to prevent seedling destruction by pedestrians.

Marginal Plug Planting

5.9 Ponds are identified as a Habitat of Principle Importance (HPI) as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

5.10 The attenuation pond will also be planted with areas of aquatic/marginal planting to create further biodiversity habitats such as providing food and shelter to wildlife such as newts and water voles.

5.11 From a wildlife point of view, ponds do not need to have large areas of open water; ponds which appear to be choked with vegetation often support the greatest diversity of plant and animal species. The habitat value is, however, enhanced if there are a variety of vegetation structures from dense tussock stands to bare and recently colonised mud. Management of these wetland areas will therefore aim to create variation with minimum disturbance to animal populations.

5.12 Appropriate species are to be specified at the detailed design stage.

5.13 Plants to be planted at a density of 4no. plants per m^2 and firmly heeled in to prevent plants being dislodged/floating away.

Wet Grassland

5.14 New areas of wet grassland will be seeded using an appropriate species-rich mix such as **Germinal Mix WFG9 – Wetland and Pond Areas** as below, or similar native species mix.

5.15 Areas to be seeded are located around the edge of the proposed attenuation pond with species selected to accommodate the periodically wet conditions.

5.16 Wet grassland seed will be sown at a density as per the general manufacturer's recommendation to allow space for each species to establish, and to produce good ground cover. Areas to be sown will be first rotovated and raked or harrowed to produce a medium fine, firm tilth. Fertiliser will not be applied at any point as this will lead to dominance of nutrient loving species such as broad-leaved grasses, nettles and docks. The Contractor will protect newly seeded areas to prevent seedling destruction by pedestrians.

5.17 Seed will be sown at a time when the soil is moist and can be worked, in the autumn (September/October) or spring (March/April), and not during the summer months. Seeding will be sown by hand broadcasting, seed fiddle, spinner or grass seed drill on the surface and will not be raked or harrowed in. A Cambridge (ribbed) roll is recommended to be used for one or two passes to firm and level the surface and create good seed soil contact. During initial establishment the grassland should be mown when it reaches 100mm in length for the first year.

Reed Bed Planting

5.18 Ponds are identified as a Habitat of Principle Importance (HPI) as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

5.19 The attenuation pond will also be planted with areas of aquatic/marginal planting to create further biodiversity habitats such as providing food and shelter to wildlife such as newts and water voles.

5.20 From a wildlife point of view, ponds do not need to have large areas of open water; ponds which appear to be choked with vegetation often support the greatest diversity of plant and animal species. The habitat value is, however, enhanced if there are a variety of vegetation structures from dense tussock stands to bare and recently colonised mud. Management of these wetland areas will therefore aim to create variation with minimum disturbance to animal populations.

5.21 Species to comprise of ***Phragmites australis*** (common reed), in 9cm container grown plants to be planted at a density of 6no. plants per m^2 and firmly heeled in to prevent plants being dislodged/floating away.

5.22 Reed beds should last at least 15 years before renewal is required, if not longer, due to low level of particulates expected.

Bird nesting and Bat Boxes

5.23 A single integrated bat box will be provided for each dwelling (total 225).

5.24 The bat boxes will be installed in accordance with standard best practice, such that the boxes are positioned at least 4m above the ground, with the entrances to the boxes facing south-west to south-east. The entrances to the boxes are to be free of obstacles such that there is a clean and clear flight path to the new potential roost sites. This measure will provide increased roosting opportunities across the site over the existing situation.

5.25 Bird box provision will incorporate the following:

- One swift brick per dwelling (total 225);
- 50 house sparrow terraces;

5.26 Using a variety of nest box types will provide new suitable nesting opportunities for a range of birds and potentially encourage new bird species into the site. The bird boxes will be installed in accordance with standard best practice, such that the boxes are positioned generally around 1-3m above the ground, with the entrances to the boxes facing between north and east. The entrances to the boxes are to be free of obstacles such that there is a clean and clear flight path to the new potential nesting sites.

5.27 Additionally, a kingfisher and sand martin bank will be provided in the reserve area as part of the western SuDS pond. The design of this bank will be provided at Reserved Matters, however the following principles will be applied to its design:

- A minimum of ten nesting holes with a diameter of 55mm;
- To be located on the western pond bank, facing east; and
- Bank to be formed of a vertical face abutting the newly created water's edge.

Hedgehog Highway

5.28 Hedgehog highways will be created throughout the development to maintain habitat connectivity. Holes and / or channels measuring 13cm by 13cm will be incorporated into garden fences / walls / field boundaries which are sufficient for a hedgehog to pass through but too small for most pets.

Hibernacula / Refugia

5.29 Three artificial hibernacula will be created in the development. These can occur along hedgerow boundaries, along stream corridors, or within tussock grassland, and ideally away from public footpaths.

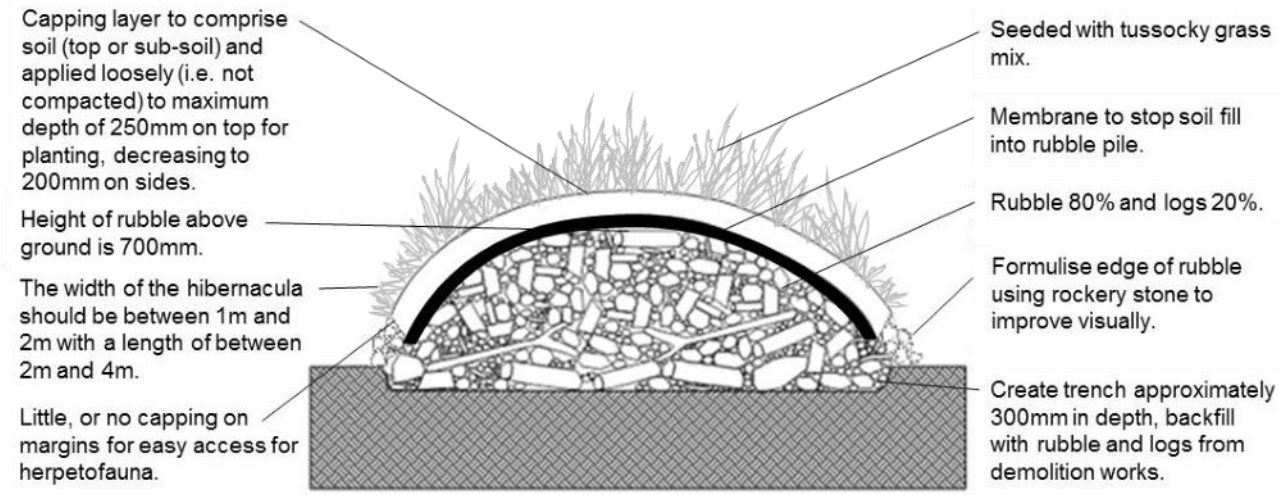
<u>Reptile / Amphibian Hibernacula</u>

5.30 Hibernacula can provide a mix of refuge and wintering habitat for amphibians and reptiles. The hibernacula will be constructed out of loosely piled rubble and logs, so that small crevices will be created between material that will allow refuge for amphibians, invertebrates and small mammals. Ideally, on sites with free-draining soils, the hibernacula should be constructed and built up within a pit, whereas sites with impermeable soils or high flood risk, hibernacula should be constructed as a pile on a gentle slope for drainage.

5.31 For reptiles, the hibernacula must be positioned in a well-drained, sunny area, surrounded by tussocky grassland or scrub (particularly to the north), where there is minimal public disturbance. The length of the banked hibernacula will also be orientated so that it is south facing with vegetation managed for basking.

5.32 For amphibians, the hibernacula must be positioned within 200m of a pond in marginal habitat surrounded by tussocky grassland or scrub (particularly to the north) that receives both sun and shade. Mulch, consisting of composted bark, should be incorporated into the construction of the hibernacula to provide a deep litter layer of at least 100mm that holds moisture. Additional habitat features could be added around the hibernacula, such as log piles which supply a source of food and shelter.

Figure 2: Reptile / Amphibian Hibernacula Detail



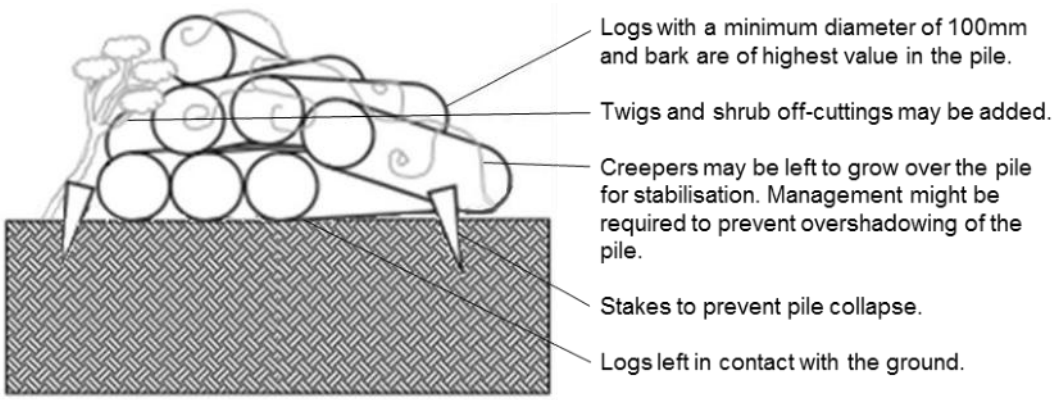
Log Pile

5.33 Informal log piles created from material produced from routine tree and hedgerow management as part of the ongoing landscape management may be created.

5.34 Log piles will ideally be created from tree work arisings from site and placed at the interface between woodland and grassland habitats, avoiding north facing areas. The logs should be left in contact with the ground in dappled shade and built into a compact pile to maintain humidity. Stakes should be driven into the ground either side of the log pile to prevent the pile from collapsing.

5.35 Larger diameter logs (at least 100mm thick) with bark are of most value, particularly hard wood like ash, oak and beech, whereas freshly cut willow and poplar may re-sprout. Twigs, stems and shrub off-cuttings may also be added. Climbers may be allowed to grow thinly over the dead wood pile for stabilisation and moisture. Full sun will dry and heat the wood, supporting little life, whereas dense shade will promote the growth of fungi but may be too cool for insects.

Figure 3: Log Pile Detail



Bee Bricks

5.36 An integrated bee brick will be installed into each dwelling (total 225).

5.37 Bee Bricks will be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. Where possible, pollinator friendly plants will be incorporated into the on plot planting scheme and positioned close to the bricks.

6.0 LANDSCAPE & ECOLOGICAL MANAGEMENT

Objective 4: Provide a framework of management, monitoring and review periods.

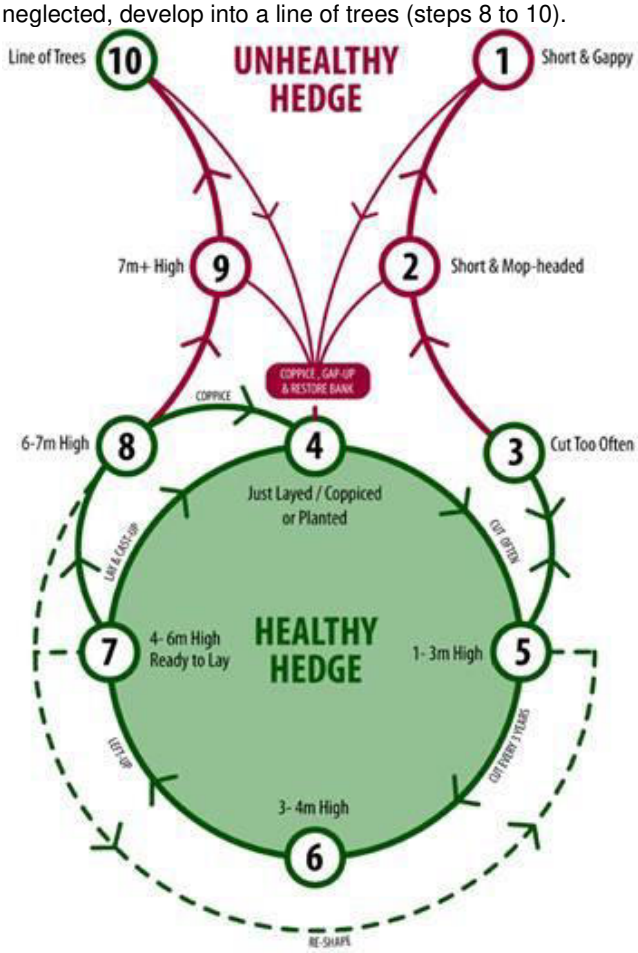
6.1 The following section outlines the works programme and management regime, with **Section 5** outlining the specification and implementation.

Table 1: Ten Year Management Works Programme

Prescriptions	Years with Priority									
	1	2	3	4	5	6	7	8	9	10+
Existing Retained Trees and Hedgerows										
Trees will be assessed by an experienced arboriculturalist or tree surgeon prior to works including tree removal necessary to permit creation of access paths and structures / bridges. Tree works will follow best practice procedures as set out in BS 3998:2010. No removal of woody vegetation will take place during the bird nesting season unless checked by a qualified Ecologist. Existing retained trees will be left unmanaged unless otherwise dictated for reasons of public safety.	✓									
Retained trees will be protected from damage and from soil compaction during construction using fenced Root Protection Areas (RPAs) where construction works are to be undertaken in the vicinity, in accordance with guidance in British Standard 5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations.	✓									
Arisings from any woodland management activity will, where possible will be used to provide opportunities for invertebrates and bryophytes by forming micro-habitats from piles of dead wood or recumbent dead logs away from publicly accessible areas. Woodpiles will be created at the woodland edge and within the woodland interior. Where practical, piles will be situated in partial sunlight with some shade.	As required									
Side trimming of hedgerows in an 'A' profile to promote healthy hedgerow base. Hedgerows will be cut along one side annually, alternating between the two sides of the hedgerow each year.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
In the long term, hedgerows will be taken through a Hedgerow Management Cycle (HMC)[1]. The ten steps of the HMC are shown below. The cycle shows a healthy green core and two unhealthy red offshoots. The aim should be to keep the hedge in the green part (steps 3 to 8), periodically laying or coppicing it, with trimming at appropriate intervals in between. If the hedge is not	As required									

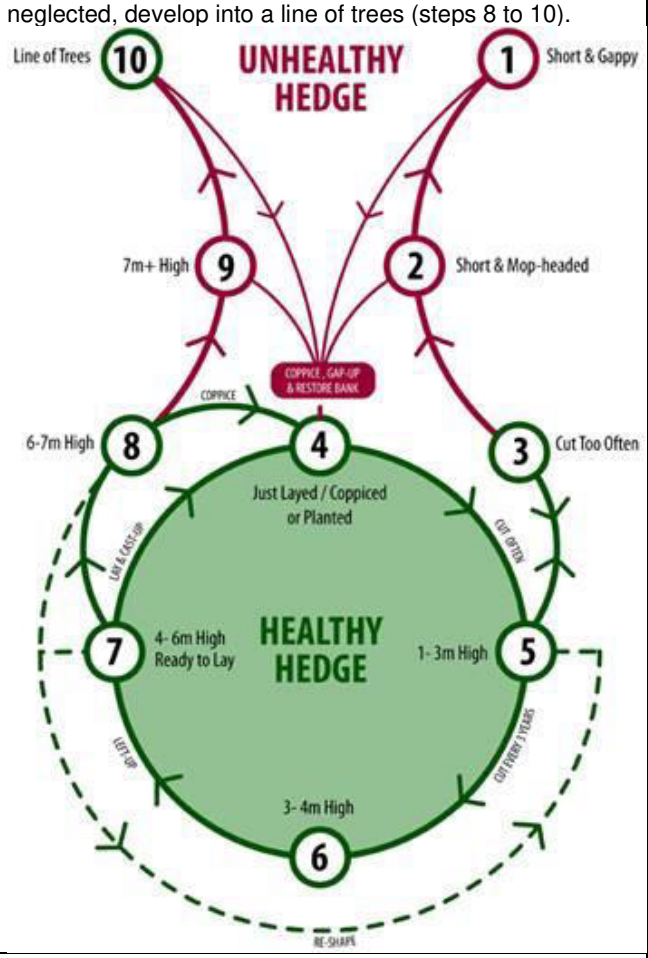
[1] The Hedge Management Cycle (HMC). Art work by Will Field. Management Cycle concept developed by Nigel Adams. Hedgelink UK

permitted to go through this cycle, it will either, if cut too often, become short and gappy (steps 1 – 3) or, if neglected, develop into a line of trees (steps 8 to 10).



Native Woodland Planting										
Replace failed specimens on a like-for-like basis. Top up mulch to a depth of 75mm where necessary.	✓	✓	✓	✓	✓					
Spraying or strimming of weeds to reduce competition and aid establishment. Not required if weed suppression matting used. Spray and hand weed around tree boles.	✓	✓	✓	✓	✓					
Examine all tree stakes and ties, replace or adjust as appropriate. If the tree has yet to establish, replace or adjust ties, spacers and tree tubes as appropriate. If the tree has established well, then remove all stakes, ties, spacers, tubes etc. and make good surfaces disturbed – filling any holes with suitable topsoil.	✓	✓	✓	✓	✓					
Where periods of extreme drought occur, trees that have not yet established (not healthy, not in full leaf, suppressed growth) need to be watered where their tolerance to drought is deemed to be insufficient.	✓	✓	✓	✓	✓					
Native Wet Woodland Planting										
Replace failed specimens on a like-for-like basis. Top up mulch to a depth of 75mm where necessary.	✓	✓	✓	✓	✓					

Spraying or strimming of weeds to reduce competition and aid establishment. Not required if weed suppression matting used. Spray and hand weed around tree boles.	✓	✓	✓	✓	✓					
Examine all tree stakes and ties, replace or adjust as appropriate. If the tree has yet to establish, replace or adjust ties, spacers and tree tubes as appropriate. If the tree has established well, then remove all stakes, ties, spacers, tubes etc. and make good surfaces disturbed – filling any holes with suitable topsoil.	✓	✓	✓	✓	✓					
Where periods of extreme drought occur, trees that have not yet established (not healthy, not in full leaf, suppressed growth) need to be watered where their tolerance to drought is deemed to be insufficient.	✓	✓	✓	✓	✓					
Tree Planting										
A weed-free mulched 1m diameter circle around the tree stem to a minimum depth of 75mm. When trees have reached independence, the sward can be allowed to grow up to the trunk, although tall weeds, bramble and ivy will be removed from around the trees. Care will be taken when using strimmers or mowers to avoid damaging trees. Weeds and grass within 100mm of the trunks will be removed by hand.	✓	✓	✓	✓	✓					
Examine all tree stakes and ties, replace or adjust as appropriate. If the tree has yet to establish, replace or adjust ties, spacers and tree tubes as appropriate. If the tree has established well, then remove all stakes, ties, spacers, tubes etc. and make good surfaces disturbed – filling any holes with suitable topsoil.	✓	✓	✓	✓	✓					
Replace failed specimens on a like-for-like basis. Top up mulch to a depth of 75mm where necessary.	✓	✓	✓	✓	✓					
Where periods of extreme drought occur, trees that have not yet established (not healthy, not in full leaf, suppressed growth) need to be watered where their tolerance to drought is deemed to be insufficient.	✓	✓	✓	✓	✓					
Native Hedgerow Planting										
Following planting, water hedgerows in periods of extreme drought (2 or more weeks without substantial rainfall) (new and translocated hedgerow planting).	✓	✓	✓	✓	✓					
Replace failed specimens on a like-for-like basis.	✓	✓	✓	✓	✓					
Examine all guards and replace or adjust as appropriate. Remove guards once hedgerows established	✓	✓	✓	✓	✓					
Spraying or strimming of weeds to reduce competition and aid establishment. Not required if weed suppression matting used.	✓	✓	✓	✓	✓					
Side trimming of hedgerows in an 'A' profile to promote healthy hedgerow base. Starting in year 4 after planting new hedgerows will be cut along one side annually, alternating between the two sides of the hedgerow each year. Top up mulch as required.				✓	✓	✓	✓	✓	✓	✓

Prune any diseased or rotten wood back to sound wood. Remove all cut material from site.				As required						
In the long term, hedgerows will be taken through a Hedgerow Management Cycle (HMC)[2]. The ten steps of the HMC are shown below. The cycle shows a healthy green core and two unhealthy red offshoots. The aim should be to keep the hedge in the green part (steps 3 to 8), periodically laying or coppicing it, with trimming at appropriate intervals in between. If the hedge is not permitted to go through this cycle, it will either, if cut too often, become short and gappy (steps 1 – 3) or, if neglected, develop into a line of trees (steps 8 to 10). 				As required						
Meadow Grassland										
Following establishment grassland will be mown on a rotational basis with areas either being mown once during early spring (March) and autumn (October). A later cut will benefit moth species by providing a food source for longer, and subsequently provide increases foraging opportunities for bats in their active season of April to October.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Grassland adjacent to hedgerows and woodland habitat will be cut once on alternate years with some ruderal species being allowed to colonise for further species and habitat diversity. Arisings will be left for 48 hours to allow	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

[2] The Hedge Management Cycle (HMC). Art work by Will Field. Management Cycle concept developed by Nigel Adams. Hedgelink UK

dispersal of seeds and invertebrates prior to removal, to encourage grassland establishment and prevent soil enrichment and thatching.										
Spot treat persistent pernicious weeds using herbicide following the first season's growth and/or manual hand strimming of target areas either in late summer when adjacent grassland is mown or in early spring. Care will be taken when using herbicide adjacent to riparian and aquatic habitats to prevent pollution of such habitats.	As required									
Wet Grassland										
Following establishment the Wet Grassland in the basins will be cut on a rotational basis with no more than one third cut in any one year. The Wet Grassland will be cut during March or August/September, to create a varied structure of grassland habitat that will be of benefit to invertebrates, amphibians, reptiles and other species. Strimming should not occur with 100mm of tree stems.		✓	✓	✓	✓	✓	✓	✓	✓	✓
Spot treat persistent pernicious weeds using herbicide following the first season's growth and/or manual hand strimming of target areas either in late summer when adjacent grassland is mown or in early spring. Care will be taken when using herbicide adjacent to riparian and aquatic habitats to prevent pollution.	As required									
Improved "short sward" Grassland										
During initial establishment of new grassland, it will be mown to a height of 50mm 6-8 weeks after germination and subsequently to a height of 35-40mm as required, but not more regularly than once every 6 weeks between March and October.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mowing will be reduced during prolonged dry periods and the mowing height increased to 50mm at such times. Similarly in very wet conditions all grass cutting operations will cease until conditions allow for grass cutting to take place.	As required									
Spot treat persistent pernicious weeds using herbicide following the first season's growth and/or manual hand strimming of target areas either in late summer when adjacent grassland is mown or in early spring. Care will be taken when using herbicide adjacent to riparian and aquatic habitats to prevent pollution of such habitats.	As required									
Marginal Plug Planting										
The vegetation in each of the water bodies will be cleared on a rotational basis, starting at year 3. The basin will be cleared, between September and November, to create a varied structure of habitat that will be of benefit to invertebrates, amphibians and other species. The vegetation will be removed by hand. Machines and heavy equipment should not be used to avoid damage to soil and vegetation.			✓	✓	✓	✓	✓	✓	✓	✓

Dense stands of single species (e.g. yellow iris) may benefit from selective thinning as required. Vegetation removal causes the least disruption to wildlife when carried out between September and November.				As required						
Spot treat persistent pernicious weeds using herbicide following the first season's growth and/or manual hand strimming of target areas either in late summer when adjacent grassland is mown or in early spring. Care will be taken when using herbicide adjacent to riparian and aquatic habitats to prevent pollution of such habitats.	As required									
Reed Bed Planting										
Vegetation in each drainage basin will be cut and removed on a three year rotational basis, starting at year three. One basin per year will be cleared, between **September** and **November**, which will create a varied structure of habitat that will be of benefit to invertebrates, amphibians and other species. The vegetation will be removed by hand. Heavy equipment should not be used to avoid damage to soil and vegetation.			✓	✓	✓	✓	✓	✓	✓	✓
Hibernacula										
Following establishment, the grassed cap will be strimmed once annually in late summer (late **August** to **September**).	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
The margins of the hibernacula will be inspected once annually to be kept clear from vegetation, leaving the fill exposed to allow access by wildlife.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
The bank must be managed to maintain sparse vegetation so that bare ground is always visible. Sections of the bank should be cleared annually of weeds in rotation, ideally in **February**, to minimise disturbance.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
The grass sward atop the bank will be managed during its first summer with typically three cuttings which commence when the sward reaches 10cm in height to encourage grasses to tiller and help control invasive annual weeds. Cutting should not occur within months **May** to **August** inclusive to avoid disturbing nests. Once established, the sward will typically only need cutting once annually to remove dead tussocks and promote tussock regeneration	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
General										
Litter will be removed from the site as part of the general management and maintenance visits. All litter, stones or other debris will be collected and removed by the Contractor immediately prior to grass cutting operations.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ecological visual inspection by a qualified ecologist for the first year to provide baseline data for future surveys to be monitored against.					✓					✓
Arboricultural visual inspection, as part of the tree safety risk assessment for the development.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Work programme review by those members of staff involved in site management.					✓					✓

Monitoring

6.2 In order to ensure that the habitats created within the site reach and maintain their maximum value to nature conservation, all habitats will be monitored.

6.3 Results of this monitoring will be used to inform changes to the management plan and ten- year work programme. The prescriptions provided here will not be set in stone and will be altered if required in agreement with the Local Planning Authority (LPA). The management plan will run for a period of ten years, with the work programme fully reviewed at the end of the initial five year period by those members of staff involved in site management, and the LEMP updated accordingly, to be updated for the life of the development.

- Ecological inspection by a qualified ecologist in years 5 and 10 to provide baseline data for future surveys to be monitored against.
- Annual arboricultural visual inspection, as part of the tree safety risk assessment for the development.

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APPENDIX A

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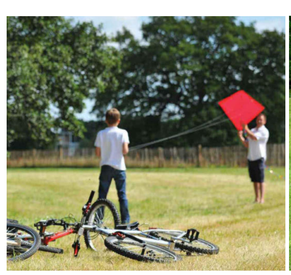
01 Landscape Character Images
L01 NTS


1. Native hedge to provide natural physical separation between proposed development and ecological mitigation area


2. Landscape buffer / informal walks


3. Public Open Space provision to accord with Fareham Borough Council's open space and equipped play criteria


4. Sustainable drainage to complement green infrastructure proposals


5. Geese mitigation area in accordance with ecologist recommendations


6. Residential Landscape to complement reinforce positive features of local settlement pattern

02 Outline Planting Schedule
L01 NTS

Botanical Name	Common Name
Tree Planting – Not less than 10 metre from any dwelling	
Betula pendula	Silver Birch
Betula pubescens	Downy Birch
Fagus sylvatica	Common Beech
Pinus sylvestris	Scots Pine
Prunus avium	Wild Cherry / Gean
Quercus robur	Pendunculate Oak
Quercus ilex	Holm Oak
Tilia tomentosa 'Brabant'	Silver Lime
Tilia europaea Pallida	Common Lime
Medium Tree Planting – Not less than 7 metre from any dwelling	
Amelanchier lamarckii	Snowy mespilus
Acer campestre	Field Maple
Corylus colurna	Turkish Hazel
Malus sylvestris	Crab apple
Sorbus aria	Whitebeam
Sorbus aucuparia var	Rowan
Taxus baccata 'fastigiata'	Irish Yew
Small Tree Planting – Not less than 3 metre from any dwelling	
Amelanchier laevis 'Ballerina'	-
Carpinus betulus ' Franz fontaine'	Hornbeam
Crataegus laevigata	Midland Hawthorn
Corylus avellana	Hazel (coppice)
Malus 'John Downie'	Ornamental crab
Malus var	Apple / Fruit tree
Pyrus calleryana 'Chanticleer'	Ornamental Pear
Pyrus var	Pear / Fruit Tree
Sorbus aucuparia var	Rowan
Arbutus unedo	Strawberry Tree
Ornamental Coastal Planting to residential areas	
Shrubs	
Cistus x purpureus	Rock Rose
Phormium 'Yellow Wave'	-
Phormium 'Dazzler'	-
Callistemon citrinus 'Splendens'	Bottlebrush
Pinus mugo 'Mops'	Dwarf Mountain Pine
Potentilla var	
Perenniais	
Kniphofia Var	Red Hot Poker
Perovskia 'Blue Spire'	Russian Sage
Phlomis fruticosa	-
Verbena boniarensis	-
Crocosmia Var	Tiger lily
Ornamental Grasses	
Festuca glauca	Blue Fescue Glass
Stipa tenuissima	Mexican Feather Grass
Hedgerow Planting (Formal)	
Carpinus betulus	Hornbeam (to define rear garden boundaries)
Hedgerow Planting (Native)	
Acer campestre	Field Maple
Corylus avelana	Hazel
Crataegus monogyna	Hawthorn
Ilex aquifolium	Holly
Prunus spinosa	Blackthorn
Rosa cannina	Dog-rose
Vinurnum lantana	Wayfaring Tree
Viburnum opulus	Guelder Rose
Coastal Planting to Public Open Space (Native)	
Cytisus scoparius	Broom
Euonymus europaeus	-
Ilex aquifolium	Holly
Pinus sylvestris	Scots Pine
Prunus spinosa	Blackthorn
Quercus ilex	Holm Oak
Ulex europaeus	Gorse
Meadow Mix	
Wildflowers	
Achillea millefolium	Yarrow
Anthyllis vulneraria	Kidney Vetch
Centaurea nigra	Common Knapweed
Centaurea scabiosa	Greater Knapweed
Clinopodium vulgare	Wild Basil
Daucus carota	Wild Carrot
Galium verum	Lady's Bedstraw
Knautia arvensis	Field Scabious
Leontodon hispidus	Rough Hawkbit
Leucanthemum vulgare	Oxeye Daisy
Lotus corniculatus	Birdsfoot Trefoil
Onobrychis viciifolia	Sainfoin
Origanum vulgare	Wild Marjoram
Poterium sanguisorba	Hoary Plantain
Salad Burnet	Plantago media
Primula veris	Cowslip
Prunella vulgaris	Selfheal
Ranunculus acris	Meadow Buttercup
Reseda lutea	Wild Mignonette
Scabiosa columbaria	Small Scabious
Grasses	
Briza media	Quaking Grass

NOTES:
1. This drawing is to be read in conjunction with all relevant contract drawings and specifications with any conflicting information to be brought to the attention of Deacon Design before works commence on site.

2. Do not scale from this drawing, always work to noted dimensions.

3. All given dimensions in mm.

KEY

Outline Application Site boundary

Landscape Specification

Implementation
All planting to be carried out at appropriate time within the first planting season post completion and maintained for a period of up to 5 years to ensure successful establishment.
Recommended planting times:

- Wildflower / Lawn seed mix - First sow (April to June) / Secondary (August - September)
- Container Grown Planting - All year round (except during periods of frosts)
- Bareroot/Rootball Stock - November (After first frost) - March

It is the contractor's responsibility to check for services in this area before groundworks commence.

Growing Medium / Soil Depths
All topsoil and subsoil used in planting areas to be accordance with British Standard BS3882:2015 and BS8545:2014. Soil analysis of all imported / onsite material to be approved by the landscape architect in advance of works.

Tested and approved existing topsoil to be ripped to a depth of 300mm, the remaining specified depth replaced with BS 3882 Multipurpose Grade topsoil supplemented with suitable organic compost to PAS100 at a depth of 100mm to ameliorate soil. Planting beds should be suitably cultivated and ripped to allow aeration and avoid waterlogging. Topsoil should be friable and the depth should not exceed 300mm. Topsoil varies depending on the planting type: 300mm for tree planting, 300mm shrub planting, 150mm for amenity grass/turf and 50mm for wildflower seeding to aid germination.

Trees and shrubs to be grown in accordance with NPS.

Trees - Unless shown otherwise; tree pits to be 300mm larger than the rootball on all sides with the base of the pit broken up. Trees in soft landscape to be staked and biodegradable tree tie at 500mm and back filled with the above improved/imported topsoil to the field grown/nursery height. All trees to be planted with proprietary aeration/irrigation pipe installed to manufacturers recommendations. Trees planted in formal grass / lawn areas to include 1m diameter bare circle and bark mulched to a depth of 75mm to avoid strimmer damage to trunk / water demand.

Planting Shrubs - to be planted in prepared beds, back filled and firmed to nursery level.
After planting all trees and shrubs are to be well watered, lightly firmed, mulched with 75mm of FSC certified mulch ensuring no damage to the plants. Rabbit proof fencing maybe required to protect the establishment of the plants.

Wildflower Meadow
A native seed mix has been proposed for the woodland edge to encourage a species rich / woodland edge meadow to establish. In the first year, wildflower should be cut short to a minimum height of 100mm during July/August to reduce competition with annual weed growth and encourage the development of groundcover. Once established, providing the weed species have been controlled through regular cutting, the grassland should be allowed to flower and set seed naturally.

Management and Maintenance
Establishment - Trees and shrubs will be watered to ensure they thrive through dry weather and re-firmed after strong winds or frost heave.
Annual Maintenance - Trees and Shrubs - Tree ties to be adjusted, to be checked for damaged branches/stem and pruned in accordance with good horticultural practice, where they have died or failed to thrive they will be replaced, incorporate a slow release fertilizer as per manufacturers rates, topping up mulch to ensure 75mm depth.

FINAL

DATE	DRAWN	DESCRIPTION OF REVISION	REVISION LETTER	CHECKED BY
24.05.21	MM	Revised layout	B	PD
14.08.18	MM	Amendments following Architect's new layout	A	JH

DRAWING STATUS
FOR PLANNING

DEACON DESIGN
Landscape Architecture | Masterplanning | Urban Design
12a The Square, Wickham, Hampshire PO17 5JQ
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PROJECT TITLE :
Land to the south of Romsey Avenue, Portchester
Foreman Homes

PROJECT NUMBER : DD151
PLOT DATE : 17.05.18
DRAWING SCALE : 1:1000
APPROVED BY : PD
PAPER SIZE : A1
DRAWN BY : MM
DRAWING TITLE :
Illustrative Landscape Masterplan
-
-
DRAWING NUMBER : DD151L01
REVISION LETTER : B
DRAWING FILE LOCATION :
Z:\Dropbox (Deacon Design Ltd)\03 PROJECTS 100+\DD151 Romsey Avenue\04-Drawings\Autocad\L-Landscape Dwgs\DD151L01_Illustrative Landscape Masterplan.dwg