

BOORLEY GREEN GATEWAY, WINCHESTER ROAD BOTLEY

LANDSCAPE MANAGEMENT AND MAINTENANCE PLAN

Vistry Homes



Ecology
Archaeology
Arboriculture
Landscape Architecture

Written by:	RH
Checked by:	DKM
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1.0 Objectives

- 1.1. To ensure the successful planting operations, establishment, and continued healthy growth through to maturity of the trees, shrubs, and grass.
- 1.2. To achieve a clean, tidy condition and appearance of all external areas.
- 1.3. To ensure that the development provides biodiversity enhancements.

2.0 Background Information

- 2.1. ACD Environmental was commissioned in 2022 to prepare the following documentation:
 - Soft and Hard Landscape Proposals
 - Soft Landscape Specification
- 2.2. The controlling authority is Eastleigh Borough Council, which should be consulted on any matters relating to existing trees and the approved ACD detailed landscape proposals for the project.

Eastleigh Borough Council
Eastleigh House,
Upper Market St,
Eastleigh SO50 9YN

3.0 Preliminaries

- 3.1. Failures of Plants (Pre-practical Completion): The Contractor entirely at his own cost shall replace any trees, shrubs, or other plants other than those found to be missing or maliciously damaged.
- 3.2. Malicious Damage or Theft before Practical Completion: The Contractor at his own expense shall make all loss or damage arising from theft or malicious damage before practical completion of the entire project good.
- 3.3. Post Practical Completion: The Contractor will carry out the maintenance of trees, shrubs, and grasslands after the date of practical completion until the responsibility is transferred to the new owners or by the appointed Management Company.
- 3.4. Replacement of plants shall take place as many times as is necessary to maintain a complete cover of plants and to maintain the scheme as designed by the Landscape Architect, and within the correct season for the type of plant, tree, shrub, and grassland mix.

4.0 General Maintenance

- 4.1. Following installation and after transfer the landscape shall be the responsibility of and maintained in perpetuity by:
- Vistry Homes and their appointed Management Company (should these be contracted out),
 - Eastleigh Borough Council, or the Parish Council if onward transferred to them.
- 4.2. The agreement for which shall be set up by the Developer, who shall confirm in writing to the Principal Planning Officer of Eastleigh Borough Council when the maintenance agreement is completed and is operative.
- 4.3. The Developer shall ensure that any landscape contractor employed by the developer shall carry out the periodic maintenance of all planted areas, other than any areas for which the appointed Management Company and/or adopted body becomes responsible during the said Maintenance Period. Inspection checks shall be carried out at monthly intervals and the appropriate work carried out.
- 4.4. The Developer shall ensure that any landscape contractor employed by the developer shall carry out in all areas any shrub, tree, grass, and other plants replacements that may be necessary until the transfer of responsibility to the Management Company and/ or adopted body.

- 4.5. The Management Company and/ or adopted body shall be responsible for all periodic maintenance and replacement thereafter for all planted areas to which its management agreement relates, and shall ensure that any landscape contractor employed by it carries out periodic maintenance of all such areas following the general horticultural schedules below. Either inspection checks shall be carried out by a competent person, a member of the British Association of Landscape Industries (BALI) or the Landscape Institute (LI), acting for the Management Company, at minimum monthly intervals and the appropriate work carried out.
- 4.6. No existing trees, shrubs, or grass shall be removed or cut without specific instructions from the Contract Administrator and written agreement of the Local Planning Authority Tree Officer. Existing trees are to be retained, protected, and undisturbed throughout the contract.

5.0 Existing Trees and Vegetation

5.1. Management objectives will seek to:

- Ensure the continued healthy growth of existing trees through ongoing safety checks and pruning;
- Protect and enhance landscape and ecological features;
- Ensure the existing tree and hedge-lined stream corridor and existing trees are maintained for commuting and foraging bats;
- Provide a diverse structure and age composition of green infrastructure;
- Provide an attractive, green environment; and
- Prolong the remaining useful life span of retained trees and hedgerows.

5.2. All works should be undertaken following the British Standard BS3998:2010 Tree Work Recommendations, by recognised tree contracting companies from the Arboricultural Association's list of registered contractors. Proof of experience and insurance providers will be required. All work shall be undertaken at the appropriate time and with the consent of the Management Company and Local Planning Authority if necessary.

5.3. All operations should be carried out sensitively, taking care not to unnecessarily damage the trees that are being worked on or any other neighbouring vegetation. The practice of natural target pruning should be used to ensure that branches are not cut “flush” with the stem, and conversely, a “stub” is not left proud, as in both scenarios it is not possible for the tree to adequately react to the wounding and may lead to an area of decay developing.

5.4. All trees on site should be visually checked annually. These checks should be staggered so that the trees are inspected at different times in the year. If any tree displays signs of decline, distress or damage then a competent person should be instructed to carry out a tree inspection where necessary. A comprehensive

inspection of all the trees on site should be carried out by a competent person at a maximum interval of every three years.

- 5.5. All tree and vegetation removal operations shall be carefully carried out to avoid damage to the trees being retained. No trees to be retained shall be used for anchorage or winching purposes.
- 5.6. The Site shall be cleared of loose debris, rubbish and foreign matter of a kind that cannot be used as hibernacula or for wildlife potential and removed to an appropriate waste disposal facility.
- 5.7. All arisings from any work carried out, including leaf material, branches, wood chip, and timber should be removed from the site, unless otherwise specified. The work site should be left clean and tidy as instructed.
- 5.8. If large branches or entire trees need to be dismantled it is recommended that a rigging system be used where possible to reduce the risk of damage to surrounding structures and also to reduce ground compaction and deterioration during works. It is preferable if contactors are certificated with NPTC Unit CS41 Dismantling and Rigging.

Heavy Ivy infestation is not recommended in development situations, where wind risk may be a concern. The form of the tree can also be affected and it is therefore proposed to remove any dense infestation of Ivy if evident or to simply sever any ivy stems at the base of the tree during the maintenance period.

Maintenance of Understorey

- 5.9. The understorey should otherwise remain undisturbed with little pro-active management required other than the severing of ivy *Hedera Helix* stems where crown infestation of the larger trees is evident.
- 5.10. Understorey to be managed to provide buffers between adjoining footpaths and to provide bio-diverse habitat. The majority of the understorey is within the woodland area.

- 5.11. The understorey is to be maintained to provide 'scalloped edges' rather than a straight cut in order to provide habitat diversity.
- 5.12. Shrubs shall be allowed to grow in their natural shape, but can be annually pruned (outside of the main breeding bird season taken to be from March to August inclusive) to encourage dense, healthy growth if not naturally doing so. Any growth which will significantly obscure footpaths shall be cut back and piled up nearby.
- 5.13. If weeds appear to be out competing the native planting, they are to be removed from site. The density of planting will require that most weeding is carried out by hand, using the appropriate tools.

6.0 Mown Grass Footpaths

6.1. Management objectives will seek to:

- Ensure the successful establishment and continued healthy growth of mown grass footpaths;
- Provide a clear, safe and attractive environment;
- Provide amenity open space where local people can enjoy tranquillity and informal outdoor recreation; and
- Provide amenity value for residents and local people using access routes.

6.2. Mown paths are proposed through the area of existing grassland and meadow grassland. Clear routes are to be easily identified by neatly maintained routes that provide users the opportunity to follow the routes as shown on the detailed proposals.

6.3. Mown grass footpaths shall be cut during the growing season (generally April to October) using a sharp cutter to leave about 30-35mm of growth and remove arisings from site. Mown grass footpaths will be cut at intervals of not more than 10-14 days depending on growing conditions. Arisings shall be collected and removed to the compost heaps (on site).

6.4. Should bare patches within the mown grass footpaths develop, area is to be fenced off (with an alternative, temporary route provided) and cultivated to 150mm, then seeded with amenity grass seed. To be cross-sown in two directions at right angles to each other, (half the seed being used in each direction) using mix and rate originally outlined on detailed proposals. The ground lightly raked over on a still dry day when the top 25mm of soil is dry. Reinstatement works are to be undertaken in April- May and September- October.

6.5. Once the paths have been well-trodden management will involve five annual cuts between April and October.

- 6.6. If weeds appear to be out competing the existing and amenity grassland, they are to be removed from site. Weeding is carried out by hand, using the appropriate tools.

7.0 Wildflower Grassland

7.1. Management objectives will seek to:

- Provide a grassland that supports a diversity of herbaceous species, be free from 'weed' species and be structurally diverse following reinstatement works;
- Ensure the successful establishment and continued healthy growth of meadow/ wildflower grassland;
- Secure the long-term maintenance of the landscape infrastructure.

7.2. Fulfilment of the objectives above will ensure provision and long-term maintenance of the grassland.

General

7.3. All wildflower grassed areas shall be maintained by the appointed Management Company and the Local Planning Authority will be responsible for areas proposed for adoption.

7.4. Following the autumn sowing, the wildflower grassland is to be cut in March to 4-7cm if there is sufficient material. It is then to be cut to 4-7cm in early May and to 4cm in September (following flowering), all arisings are to be removed from the site.

7.5. During the following years, the wildflower grassland is to be cut to 4-7cm in March/April (to remove excess grass) and to 4cm in September/October (following flowering), all arisings are to be removed from the site.

7.6. After an initial 12-month period and if there is sufficient growth the meadow/ wildflower grassland will be cut on rotation whereby one section of the meadow/ wildflower grassland habitat is cut per year (i.e. section 1 in year 1, section 2 in year 2 and section 3 in year 3), all arisings are to be removed from the site. This should be done on a warm, dry day when temperatures are above 10oC to ensure any reptiles present within the grassland are able to disperse.

- 7.7. All arisings are to be removed from the site.
- 7.8. Any hollows which appear shall be filled in with topsoil and allowed to re-seed naturally.
- 7.9. If weeds appear to be out competing the existing and amenity grassland, they are to be removed from site. Weeding is carried out by hand, using the appropriate tools. A comprehensive inspection of all the wildflower areas on site should be carried out by a competent person following sward establishment during the first, second and subsequent years in line with supplier recommendations.

Wildflower Mixture Composition

- 7.10. Wildflower Mix EM1 (Basic General-Purpose Meadow Mixture), EM8 (Meadow Mixture for Wetlands) and EW1 (Woodland Mixture), composition are as follows and in accordance with the supplier (Emorsgate Seeds) specification.

7.11. EM1 Basic General-Purpose Meadow Mixture Composition:

Wildflowers 10%: 1.50% *Centaurea nigra* – Common Knapweed, 1.00% *Daucus carota* – Wild Carrot, 0.30% *Galium verum* – Lady's Bedstraw, 1.50% *Leucanthemum vulgare* – Oxeye Daisy, 0.60% *Malva moschata* – Musk Mallow, 1.60% *Plantago lanceolata* – Ribwort Plantain, 1.50% *Poterium sanguisorba* ssp *sanguisorba* – Salad Burnet, 1.00% *Ranunculus acris* – Meadow Buttercup, 0.50% *Rhinanthus minor* – Yellow Rattle, 0.50% *Silene dioica* – Red Champion.

Grasses 90%: 9.00% *Agrostis capillaris* – Common Bent, 31.50% *Cynosurus cristatus* – Crested Dogtail, 27.00% *Festuca rubra* – Red Fescue, 4.50% *Phleum bertolonii* – Smaller Cat's-tail, 18.00% *Poa pratensis* – Smooth-stalked Meadow-grass.

7.12. EM8 Meadow Mixture for Wetlands Composition:

Wildflowers 20%: 0.70% *Achillea Millefolium* – Yarrow, 0.60% *Agrimonia eupatoria* – Agrimony, 0.10% *Angelica sylvestris* – Wild Angelica, 0.20% *Betonica officinalis* – Betony, 3.20% *Centaurea nigra* – Common Knapweed, 1.40% *Filipendula ularia* –

Meadowsweet, 0.40% *Galium album* – *Hedge Bedstraw*, 2.00% *Galium verum* – *Lady's Bedstraw*, 0.80% *Lathyrus pratensis* – *Meadow Vetchling*, 0.60% *Leontodon hispidus* – *Rough Hawkbit*, 1.20% *Leucanthemum vulgare* – *Oxeye Daisy* (Moon Daisy), 0.60% *Lotus corniculatus* – *Birdsfoot Trefoil*, 0.10% *Lotus pedunculatus* – *Greater Birdsfoot Trefoil*, 1.00% *Medicago lupulina* – *Black Medick*, 2.00% *Plantago lanceolata* – *Ribwort Plantain*, 0.40% *Primula veris* – *Cowslip*, 0.80% *Prunella vulgaris* – *Selfheal*, 1.20% *Ranunculus acris* – *Meadow Buttercup*, 0.80% *Rhinanthus minor* – *Yellow Rattle*, 0.60% *Rumex acetosa* – *Common Sorrel*, 0.30% *Sanguisorba officinalis* – *Great Burnet*, 0.50% *Silene flos-cuculi* – *Ragged Robin*, 0.20% *Taraxacum officinale* – *Dandelion*, 0.30% *Vicia cracca* – *Tufted Vetch*.

Grasses 80%: 4.00% *Agrostis capillaris* – *Common Bent* (w), 4.00% *Anthoxanthum odoratum* – *Sweet Vernal-grass* (w), 0.80% *Carex divulsa* subsp. *divulsa* – *Grey Sedge* (w), 33.60% *Cynosurus cristatus* – *Crested Dogstail*, 1.60% *Deschampsia cespitosa* – *Tufted Hair-grass* (w), 20.00% *Festuca rubra* – *Red Fescue*, 3.20% *Hordeum secalinum* – *Meadow Barley* (w), 5.60% *Phleum bertolonii* – *Smaller Cat's-tail* (w), 5.60% *Poa trivialis* – *Rough-stalked Meadow-grass*, 1.60% *Schedonorus arundinaceus* – *Tall Fescue*.

7.13. EW1 Woodland Mixture Composition:

Wild Flowers 20%: 1.00% *Allium ursinum* – *Ramsons*, 2.00% *Alliaria petiolata* – *Garlic Mustard*, 0.50% *Angelica sylvestris* – *Wild Angelica*, 1.40% *Anthriscus sylvestris* – *Cow Parsley*, 0.20% *Arum maculatum* – *Lords-and-Ladies*, 4.00% *Digitalis purpurea* – *Foxglove*, 0.10% *Eupatorium cannabinum* – *Hemp-agrimony*, 0.90% *Filipendula ulmaria* – *Meadowsweet*, 1.50% *Galium album* – *Hedge Bedstraw*, 0.10% *Geum urbanum* – *Wood Avens*, 1.60% *Hyacinthoides non-scripta* – *Bluebell*, 0.10% *Primula vulgaris* – *Primrose*, 1.00% *Prunella vulgaris* – *Selfheal*, 0.40% *Ranunculus acris* – *Meadow Buttercup*, 3.00% *Silene dioica* – *Red Champion*, 0.20% *Teucrium scorodonia* – *Wood Sage*.

Grasses 80%: 2.40% *Agrostis capillaris* – *Common Bent* (w), 1.60% *Anthoxanthum odoratum* – *Sweet Vernal-grass* (w), 0.80% *Brachypodium sylvaticum* – *False Brome* (w), 48.00% *Cynosurus cristatus* – *Crested Dogstail*, 1.60% *Deschampsia*

cespitosa – Tufted Hair-grass (w), 19.20% *Festuca rubra* – Red Fescue, 6.40% *Poa nemoralis* – Wood Meadow-grass.

Method of Wildflower Assessment

- 7.14. To determine the successful long-term establishment of the wildflower grassland a once yearly survey will be undertaken, during the summer flowering period July-August when the wildflower is at peak.
- 7.15. Due to the varying percentage and establishment rates of seed species contained within the wildflower mix (as described above), the species density will vary over the first 1 – 5 years until full maturity of the wildflower mix is achieved.
- 7.16. The standard and effective 1mx1m quadrat sampling technique will be employed using a random sampling methodology of at least 10 sample windows across the wildflower area, to assess the composition and density of the wildflower mix. The sampling methodology should be in line with BSBI Recording the British and Irish flora 2010-2020.
- 7.17. Measuring abundance within each quadrat will follow the methodology of the DAFOR scale. The percentage of wildflower species will be recorded in line with National Vegetation Classification sample sheet, together with site location, date, prevailing weather conditions and photographic evidence of the survey.
- 7.18. The successful mature wildflower area should closely resemble the original species mix percentages as set out by the seed supplier specification (Emorsgate Seeds).
- 7.19. A suitably qualified individual such as a landscape professional or ecologist should be appointed to conduct the wildflower survey. The final survey methodology to be agreed between the instructing agent / managing body and LPA, and survey results reported together with any actions to rectify and reinstate any identified unsuccessful wildflower establishment.
- 7.20. Successful establishment of the sward should typically be representative of the following composition: EM1 Mix 10% wildflower and 90% grasses; EM8 Mix 20% wildflower and 80% grasses, and EW1 Mix 20% wildflower and 80% grasses.

Wildflower Aftercare

- 7.21. The successful establishment of each mix will be visually distinct for the receiving landscape location because of the unique site characteristics including light levels, soil composition, PH, roots from existing mature vegetation and drainages conditions.
- 7.22. EW1 Woodland Mixture in accordance with supplier guidance, best results are achieved from being under-sown within woodland which requires little management during establishment. In the long-term ground flora will benefit from good tree and coppice management to manage light levels. Results of sowing seed will be quite variable due to varying degrees of shading and other effects from tree roots. Establishment of ground cover can be slow and patchy and in deeper shade full ground cover may never reach 100%.
- 7.23. EM1 Basic General-Purpose Meadow Mixture in accordance with supplier guidance, best results are dependent upon the soil fertility, which will determine the character of the grassland. 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.
- 7.24. EM8 Meadow Mixture for Wetlands Wetland in accordance with supplier guidance, wetland wildflower habitats are characteristically quite variable in composition, reflecting local drainage and management. Conditions can vary, for instance, between the highs and lows in ridge and furrow grassland.
- 7.25. Reinstatement of Wildflower Areas: Any damaged or worn wildflower areas are to be removed to a depth of 40mm, and the substrate is to be cultivated to a fine tilth. All works are to match the quality and appearance of the existing sward. Reinstatement areas are to be protected as necessary to promote successful establishment.
- 7.26. No chemical or natural fertilisers are to be used on the meadow / wildflower areas.

- 7.27. Successful establishment of wildflower should ultimately be determined with the professional opinion of the surveyor when considered against the environmental context and receiving site conditions as set out above.

8.0 Native Woodland Planting

8.1. Management objectives will seek to:

- Ensure the successful planting operations, establishment and continued healthy growth through to maturity of the trees;
- Provide an attractive, green environment and integrate the site into the wider landscape setting;
- Thicken up site edges to create a shrubby woodland edge that will enhance the ecological value of the boundary;
- Reinforce the existing vegetation framework, and diversify its structure and age composition; and
- Protect and enhance landscape and ecological features.

8.2. All works should be undertaken in accordance with the British Standard Recommendations for Tree Work, BS3998:2010 by recognised Tree Contracting Companies from the Arboricultural Association's list of Registered Contractors. Proof of experience and insurance provision will be required. All work shall be undertaken at the appropriate time and with the consent of the Management Company.

8.3. A 9m x 9m matrix planting which includes a mix of standards, whips and native shrubs will be planted. This will provide a variety in age across tree clumps. Whip tree planting will provide potential replacements for larger standards if they were to fail after the first 5 years, during which time they must be replaced.

8.4. All operations shall be carefully carried out to avoid damage to the trees being treated, or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

- 8.5. The trees should be checked annually for signs of deterioration or distress and the appropriate actions taken, where a potential safety hazard is identified.
- 8.6. The understorey should remain undisturbed with little pro-active management required with naturally occurring species allowed to establish a woodland understorey herb layer.
- 8.7. All diseased wood, pruning's and rubbish should be removed from site and the site left clean and tidy.
- 8.8. Damaged heavy branches should be removed in sections and undercut to avoid tearing the bark, thereafter, to be lowered by slings. No branch stumps should be left, and no cuts should be sealed with fungicidal sealant. No cuts should be capable of holding water.
- 8.9. Inspection of mulch mats are to be undertaken annually and remedial works undertaken to prevent weed competition with newly planted trees and shrubs. Inspections and works are required until plants have successfully established. Mulch mats are biodegradable and will naturally decompose after approximately five years.
- 8.10. Plant supports and tubes are to be maintained, until the planting has established, typically after five years.
- 8.11. Plant replacement operations are to be undertaken in the next available planting season, as many times as required in order to establish the woodland.
- 8.12. Control of pests and diseases are to be humane.
- 8.13. Thinning operations are to be undertaken as required in order to establish a diversity in the woodland stock. This is to be undertaken in winter and are to be undertaken on a rotation basis with reference to maintenance schedule. Contractor to submit proposals and agree with client and LPA.
- 8.14. Coppicing: *Corylus* and *Salix* species are to be coppiced in line with good forestry practice. Stems are to be cut as low as possible, or to previous coppice level. Cuts are to be left sloping upwards towards the centre of the plant to promote rainwater

run-off. Brash is to be stacked around coppice stools to alleviate any mammalian damage and to encourage further biodiversity. Coppiced timber is to be removed.

- 8.15. Thinning by Removal of Surplus Plants: Should thinning of plant material be required this is to be undertaken in line with BS7370-4: 1991 Grounds maintenance- Recommendations for maintenance of amenity and functional turf (other than sports turf). The material should be thinned when the foliage of adjacent plants has begun to touch. Disturbance to roots is to be minimised, any holes within topsoil are to be refilled to leave an even-graded surface. Any minor damage to plants is to be made good immediately.
- 8.16. All trees within native scrub planting mix are to be maintained as standards with rotational coppicing to create structural diversity. No more than 10% of the trees should be coppiced in a single year. Trees planted as extra heavy standards are to be left to establish as principle trees.
- 8.17. All woodland management should be carried out between November to February to avoid impact on nesting birds. Work should be done using hand tools in a way that minimises impacts to the ground.
- 8.18. All other operations are to be undertaken in line with Section 5.0 Existing Trees and Vegetation once the woodland has established.
- 8.19. A woodland wildflower grass seed mix is to be seeded along the edges of the native woodland. Ideally this is not to be cut. Should remedial seeding operations be required this seed mix is to be applied on unimproved soil in line with the original specification.
- 8.20. To control scrub and bramble development these wildflower areas may need cutting every 2-3 years between October and February. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.
- 8.21. No Chemical or natural fertilisers are to be used on the woodland planting areas.

- 8.22. Native woodlands and woodland flower areas are to be kept free from litter and should be checked on a monthly basis.
- 8.23. If weeds appear to be out competing the existing and amenity grassland, they are to be removed from site. Weeding is carried out by hand, using the appropriate tools.
- 8.24. Watering: All plants are to be well watered immediately after planting operations. To be wet to the full depth of topsoil or wet to field capacity using either potable mains water, recycled or treated greywater. If there is any surface compaction the soil is to be loosened to direct water to the root zone, taking care not to damage or loosen plants. Watering operations are to be undertaken as many times as necessary to ensure the continued thriving of all planting materials. Any failures due to drought (drought can be seen as 15 consecutive days or more where there is less than 0.2mm rainfall) shall be replaced by the Management Company/ies at their own cost.
- 8.25. Water restrictions: If the water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding. During establishment period all plants shall be watered following 10 days without rain. Then weekly until natural rainfall during June – August.

9.0 Shrub and Tree Planting

- 9.1. The Management Company will maintain all shrubs and trees beyond the boundaries of domestic ownership in perpetuity.
- 9.2. Formative tree pruning is to be undertaken until a permanent structurally sound scaffold system of branches typical of the species and appropriate to the site circumstances is produced.
- 9.3. Post-planting management and maintenance of trees shall be following BS8545:2014 section 11 Trees: from nursery to independence in the landscape-recommendations.
- 9.4. A formal assessment of young tree health and development shall be undertaken annually. This assessment shall include foliar appearance, leaf size and leaf canopy density, extension growth, and incremental girth development. Trees shall also be assessed continually throughout the year on an ad hoc basis. Wherever practicable the performance of young trees shall be assessed by testing leaf fluorescence and leaf chlorophyll content.
- 9.5. The density of planting will require that all weeding is carried out by hand, using the appropriate tools. All resultant material should be removed from the site.
- 9.6. The Management Company is responsible for litter picking in those areas that it manages.
- 9.7. All plants shall be inspected monthly for wind firmness and firmed as necessary at the same time. Stakes shall likewise be checked for firmness and all tree and plant ties inspected and made good if required.
- 9.8. All stakes and ties shall be removed as soon as the developing root system is strong enough to support the tree, this is usually after two full growing seasons.
- 9.9. All grilles, grids, guards, and other protective furniture shall be inspected annually and removed as soon as it is no longer needed to protect the tree or where it is causing damage to the tree.

- 9.10. The soil around newly planted trees shall be regularly inspected for soil capping or compaction and remedial action is taken if needed.
- 9.11. All trees shall be checked regularly for mammal, human, or other external damage, and remedial action is taken where necessary.
- 9.12. Minor pruning of dead or damaged wood shall be carried out annually. All wounds must not be treated with a sealant as per BS3998:2010 Tree Works Recommendations. On substantial trees, the Local Planning Authorities Tree Officer must be consulted for any necessary approvals.
- 9.13. Watering: All plants are to be well watered immediately after planting operations. To be wet to the full depth of topsoil or wet to field capacity using either potable mains water, recycled or treated greywater. If there is any surface compaction the soil is to be loosened to direct water to the root zone, taking care not to damage or loosen plants. Watering operations are to be undertaken as many times as necessary to ensure the continued thriving of all planting materials. Any failures due to drought shall be replaced by the Management Company/ies at their own cost.
- 9.14. Water restrictions: If the water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.
- 9.15. All planted areas shall be given an application of an approved top dressing at the rate of 40g/m² in May. This should be in the slow-release form e.g. Enmag or similar. This should be worked lightly into the soil, without disturbing the roots, before the bark mulch is re-spread. Unless specific nutritional deficiencies are identified, no fertiliser shall be applied to newly planted trees in the first season. If visual inspection points to nutrient deficiency further investigation of causes will be necessary. Remedial action may include additional fertiliser application, pH testing, assessment of organic content, and levels of compaction.
- 9.16. Shrubs shall be maintained in a balanced shape and shall be annually pruned to allow for this. Any growth which will obscure windows, signs, or sight-lines shall be removed. Once established, any support canes shall be removed from the shrubs.

Trailing and climbing material shall be assisted in its growth by securing growing leaders where necessary.

- 9.17. Groundcover planting species have been specified so as not to exceed 600mm in height. However, should planting exceed expectations, this should be carefully cut down to below 600mm in height to avoid interference with visibility where planting is within road junction sightline.
- 9.18. The bark mulch should be maintained at an even spread, 75mm deep, of consistent thickness, to ensure that it is effective as a weed suppressant and moisture conserver. Following any maintenance operations and on a bi-annual basis, the mulch shall be supplemented to allow for any material which may have been lost.
- 9.19. No plant substitutions to be made without the prior written agreement of the Local Authority Landscape Section.
- 9.20. Watering of Trees: All trees are to be watered for the first three years after planting to aid establishment. Watering is to be undertaken as necessary during growing season, to ensure the establishment and continued thriving of all plants. If the water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering. Watering is to be undertaken in line with the following volumes.

Size of Tree	Volume of water per week
12-14cm girth	25 litres
14-16cm girth	35 litres
16-18cm girth	80 litres
18-20cm girth	80 litres
20-25cm girth	100 litres
25-40cm girth	120 litres
40-60cm girth	150 litres
60-80cm girth	200 litres
80-100cm	250 litres

10.0 Hedgerows

10.1. Management objectives will seek to:

- Ensure native hedgerows support a dense growth of native woody species, function as ecological corridors and provide suitable habitat for notable species including nesting birds;
- Ensure the successful planting operations, establishment and continued healthy growth of hedgerows;
- Enhance the value of hedges as commuter features and foraging lines for bats;
- Maintain habitat connectivity.
- Enhance the value of hedges for invertebrates and insects providing foraging and nesting opportunities; and
- Maximise ecological benefit.

10.2. Hedge maintenance operations are to be carried out in line with general principles as outlined in the previous section, including clauses detailing litter removal, weeding, trimming, removal of dead plants, and reinstatement of plant materials.

10.3. Around free-standing hedges a 3 strand galvanised wire and tanalised softwood timber post fence, to BS1722 Part 3:1986 Fences, specification for strained wire fences, is to be erected to run through the centre of the proposed hedgerow. This is to prevent access through the site by pedestrians until the hedges are fully established. After five years, the hedges have been fully established. The temporary fences are to be removed from the site.

10.4. Hedgerows are to be cut on a 3-year rotational basis to maintain a constant supply of flowers, fruits and seeds for the benefit of wildlife. Each side and the top can be cut in successive years or 1/3 of the hedgerow can be cut in successive years.

Hedgerow time of cutting should be January to February (to avoid the bird nesting season).

- 10.5. Any gaps which appear within the hedgerows are to be subject to replanting operation in the next available planting season. They are to be replanted using the same species mix as per the original plant specification.
- 10.6. Chemicals must not be used on the hedgerows. Weed emergence within the hedgerow is to be controlled through the maintenance of the weed suppressant hedgerow mulch mat, until the hedgerows have matured.
- 10.7. Inspection of mulch mats are to be undertaken annually and remedial works undertaken to prevent weed competition with newly planted trees and shrubs. Inspections and works are required until plants have successfully established. Mulch mats are biodegradable and will naturally decompose after approximately five years.
- 10.8. Trimming of field hedges: Hedges are to be trimmed to specified height and profile using suitable mechanical cutters.
- 10.9. Hedge Heights: Hedges to be maintained in a neatly clipped form to a maximum height of 1.5m/ as shown on original landscape proposals.
- 10.10. If weeds appear to be out competing the existing and amenity grassland, they are to be removed from site. Weeding is carried out by hand, using the appropriate tools.

11.0 Sustainable Urban Drainage Systems (SuDS)

- 11.1. SuDS features are to be maintained in line with C753 The SuDS Manual.
- 11.2. The ponds and their associated aquatic vegetation will be monitored and managed on a non-interventionist basis annually for four years post development, although plant growth and water levels will be monitored, and emergency treatment carried out if necessary. Monitoring visits and management will take place outside the breeding season (peak breeding activity of amphibians within ponds is from mid-March-May). Each monitoring visit will consist of an assessment of the water level; an assessment of the health of aquatic vegetation and the need for any further aquatic planting; and an assessment of the colonisation of the ponds by aquatic invertebrates that would provide a food source for amphibians along with additional colonising amphibians.
- 11.3. The need for additional planting will be assessed throughout the annual monitoring sessions and carried out as necessary. The requirement for management of vegetation within the ponds will, to some extent, be informed by the initial 12 months of monitoring.
- 11.4. Removal of vegetation from the ponds and their margins should be carried out between mid-November and mid-February when amphibians are least likely to be present within the ponds. Removal of vegetation should be carried out as sensitively as possible, with all operations carried out by hand or with the use of hand tools. Due care and attention should be given to avoid removing more than 50% of vegetation present in the pond in any given management year, and to avoiding carrying out vegetation removal in such a way that it might damage the pond or the nearby hibernacula.
- 11.5. It is recognised that ponds are dynamic functioning ecosystems, and that not all species planted are likely to perform equally well. As such it is to be expected that some species will die out between management intervals. This should not be seen as a cause for concern, provided that an overall diversity of plant species is maintained, providing suitable habitats for the associated fauna.

- 11.6. All vegetation removed from the ponds should be left on the side of the pond for 48 hours to allow any invertebrates and amphibians within the material to go back into the pond. It should then be removed as composted. If possible taken to the communal compost heaps within the allotment area.
- 11.7. Over time it is likely that some silt and leaf-fall will accumulate in the ponds. As the ponds have not been sited directly under any trees it is not considered likely that de-silting and leaf removal operations will be required on a regular basis, but that these should be carried out infrequently, as required. It is likely that this would need to take place on an approximately ten-year cycle.
- 11.8. All marginal and aquatic plants shall be watered as may be required to maintain healthy growth following planting, during the maintenance period and subsequently in cases of extreme drought. The Management Company is to provide a bowser for watering. Plants are to be watered to be given 5ltr's per plant at each watering visit.
- 11.9. Watering to commence following 10 consecutive days of no rainfall, during the months of June to August. Following Bowser watering a weekly visit should be carried out until the onset of natural rainfall.
- 11.10. Any failures due to drought shall be replaced by the Management Company at their own cost.

12.0 Hard Landscape

- 12.1. Mud, silt and debris is to be removed from all surface gutters and channels. Drainage gullies are to have traps emptied and flushed clean as required to prevent obstructions.
- 12.2. Hoggin footpaths will be inspected annually and maintained as required. Raised boardwalks, the bridge and dipping area will be similarly managed as necessary to ensure sustained accessibility and safe usage.
- 12.3. Footpaths are to be assessed annually for whether they are fit for purpose. Should areas become prone to flooding or become unsafe, then remedial action should be undertaken immediately to rectify the issue.
- 12.4. Gravel and hoggin areas are to be raked over, removing all weeds, litter and debris and is then to be levelled off.
- 12.5. Any repairs to the hard surfacing is to be in accordance with the original paving specification.
- 12.6. Fences and enclosures are to be maintained and inspected monthly and appropriate repairs undertaken as necessary.
- 12.7. Locks (where fitted) are to be inspected on a weekly basis to ensure that they are working correctly, and appropriate repairs undertaken as necessary.
- 12.8. Any vandalism (including graffiti) which occurs is to be reported to the Eastleigh Borough Council and remedied or replaced as appropriate by the appointed contractor as soon as possible.
- 12.9. Litter bins are to be emptied weekly.

13.0 Maintenance Schedule

Every week

- All plants shall be watered following 10 days without rain. Then weekly until natural rainfall during growing season.
- Routine visual inspection of play equipment, with operations, conducted to ensure that safe use of the facility is maintained.

Every two weeks

- Amenity Grass to be cut every 10-14 days
- There should be a minimum fortnightly litter pick over the entire site within areas covered by the Management Company/ies.

Every month

- Weed control shall be allowed at monthly intervals. All areas to be weeded by hand.
- All plants shall be inspected monthly for wind firmness and firmed as necessary at the same time. Stakes shall likewise be checked for firmness and tree ties checked.

Every three months

- Operational inspection of play equipment, with operations, conducted to ensure that safe use of the facility is maintained.

Every six months

- The bark mulch should be topped up bi-annually
- Grass cutting to Wildflower areas – cut in line with the guidance given in section 7.0
- Hedges to be managed – cut in line with the guidance given in section 10.0
- After two years tree stakes and ties are usually ready to be removed.

Annual

- Replacement of any failed trees or shrubs will be allowed annually to ensure that the planting areas are fully stocked at all times.
- Any hollows which appear due to the settlement shall be top dressed annually, early in the growing season.
- Minor pruning of dead or damaged wood shall be allowed annually.
- All planted areas and trees shall be given an application of an approved top dressing in May. Not in Wildflower areas.
- Shrubs shall be maintained in a balanced shape and prevented from obscuring signs, windows, and encroaching on paths.
- Check for invasive species as mentioned earlier and remove them from the site.
- Undertake a formal assessment of young tree health and development.
- Tree grilles, grids, and guards shall be inspected and if necessary removed.
- An annual inspection of play equipment with operations conducted to ensure that safe use of the facility is maintained.

Every 5 Years

- A suitably qualified person employed by the Management Company to undertake a review of the condition, success, and long-term maintenance of the planting.
- Woodland mix planting to be managed to ultimately achieve a tree canopy with understorey. Woodland Edge mix to achieve age diversity. A gradual development of a diverse age structure should be established over a period of time by the use of a regime of selective thinning, pruning and coppicing.

Any amendments to the landscape management plan required to ensure a good planting scheme should be submitted to the LPA for approval. The LPA may draw the managing company's attention to defects in the maintenance or failure to comply with the landscape management plan and require that the Management Company rectify these defects or apply for a variation to the landscape management plan.

14.0 Maintenance Schedule (Table)

Maintenance Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<u>General Maintenance Operations</u>												
Reinstatement Works, as necessary	X	X	X	X	X	X	X	X	X	X	X	X
Watering to all planted areas, as necessary				X	X	X	X	X	X			
Watering to all trees, as necessary				X	X	X	X	X	X			
Removal of litter from all areas	X	X	X	X	X	X	X	X	X	X	X	X
Removal of dead plant material										X	X	
Removal of diseased plant materials	X	X	X	X	X	X	X	X	X	X	X	X
Weed control, as necessary	X	X	X	X	X	X	X	X	X	X	X	X
Soil Aeration, as necessary	X	X	X							X	X	X
Leaf removal										X	X	X
Mulch maintenance			X			X			X			X
<u>Existing Trees</u>												
Works to existing trees	X	X	X							X	X	X
<u>Grass and Wildflower Areas</u>												
Amenity grass cutting				X	X	X	X	X	X			
Rolling of amenity grass areas			X									
Aeration of amenity grass areas		X	X									
Scarification of amenity grass areas										X	X	
Application of top dressing to amenity grass areas											X	
Form edges to amenity grass areas				X	X	X	X	X	X			
Levelling hollows and bumps in amenity grass areas	X	X	X	X	X	X	X	X	X	X	X	X
Application of fertiliser to amenity grass areas			X	X					X	X		
Wildflower cutting (perennial wildflowers)			X	X	X	X	X	X	X			
Wildflower cutting (annual wildflowers)			X	X					X	X		
Levelling hollows and bumps in wildflower areas	X	X	X	X	X	X	X	X	X	X	X	X

Maintenance Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<u>Planting Beds</u>												
Thinning by removal of surplus plants									X	X	X	
Application of fertiliser to planting beds			X	X								
Reinstatement of plants	X	X	X							X	X	X
Pruning of winter flowering shrubs			X	X	X							
Pruning of shrub flowering between March and July			X	X	X	X	X					
Pruning of shrubs flowering between July and October	X	X								X	X	X
Pruning of climbing plants			X	X	X	X	X	X	X			
<u>Trees</u>												
Formative pruning of young trees		X	X	X								
Inspection and make good of tree stakes and ties	X	X	X	X	X	X	X	X	X	X	X	X
Re-firming trees and shrubs	X	X	X	X	X	X	X	X	X	X	X	X
Formal annual assessment of young tree health									X			
<u>Hedgerows</u>												
Trimming of ornamental hedgerows						X			X			
Trimming of native/ field/ ecologically sensitive hedgerows	X	X								X	X	X
<u>Watercourses</u>												
Clearance of watercourses	X	X	X	X	X	X	X	X	X	X	X	X
<u>Woodland Planting</u>												
Re-firming trees and shrubs	X	X	X							X	X	X
Coppicing	X	X								X		
Woodland thinning	X	X	X							X	X	X

Any amendments to the landscape management plan required should be submitted to the Contract Administrator for approval. The Contract Administrator may draw the contractor's attention to defects in the maintenance or failure to comply with the landscape management plan and require that the contractor rectify these defects or apply for a variation to the landscape management plan.

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