

LEGAL AND GENERAL (STRATEGIC LAND NORTH HORSHAM) LIMITED

LAND NORTH OF HORSHAM

LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN – PHASE 2

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CLIENT Legal and General (Strategic Land North Horsham) Limited

PROJECT Land North of Horsham

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1. PRELIMINARIES

- 1.1 This Landscape and Ecological Management Plan shall be read in conjunction with all other Contract Documents, including all Drawings and Standard Forms of Tender. Any queries arising in respect of this document, are to be referred to the Ecologist and Landscape Architect.

References:

- a. All references to the "Management Company (MC)" within this document shall mean the organisation (private or otherwise) to which overall responsibility for the site is devolved upon satisfactory completion of the site works by the Housing Developer.
- b. All references to the "Housing Developer" within this document shall mean Legal and General (Strategic Land North Horsham) Limited.
- c. All references to the "Specialist subcontractor/sub consultant/maintenance contractor" within this document shall mean the organisation/s employed by the MC to undertake works within the development on their behalf.
- d. All references to the "Architect" within this document shall mean the leader of the professional team who is responsible to the Client under the terms of the contract.
- e. All references to the "Engineer" within this document shall mean the engineers employed by the client to take overall responsibility for engineering concerns, including the setting of site levels and drainage matters.
- f. All references to the "Landscape Architect" within this document shall mean David Jarvis Associates Ltd or their representatives.
- g. All references to the "Ecologist" within this document shall mean CSA or their representatives.
- h. All references to the "development/site/envelope" within this document shall mean the Land North of Horsham Phase 2 development scheme as set out in the approved planning documentation.
- i. All references to, "existing trees" or "existing tree stock" within this document shall mean those identified as being onsite prior to the commencement of site work which are to be retained as set out in the approved planning documentation.
- j. All references to the, "hardscape" within this document shall mean all hard surfaces, boundary treatments, walls and enclosures.
- k. All references to the, "RR" within this document shall mean the Risk Register which shall form part of the Health and Safety file and/or folders for the site within which the site and play area inspection and audit sheets shall be stored. This will detail all individual site items and elements, their general condition, together with [any] remedial action required. Items not requiring immediate attention, will be submitted 2 weeks prior to, but for, discussion at the AMMR.
- l. All references to the, "AMMR" within this document shall mean the Annual Management and Maintenance Review, which shall include as a format for discussion the Risk Register (RR), out of which will derive the AMP.
- m. All references to the, "AMP" within this document shall mean the Annual Maintenance Plan. This shall be informed by the RR, but decided at the AMMR, unless matters of an urgent nature require an immediately actionable response. For example, site items or elements man made or natural that put site users at an unacceptable level of risk arising from their use or presence on site require an immediately actionable response.
- n. All references to the "Public Realm" within this document shall mean those areas that are 'accessible to all' within this private development that do not constitute 'trespass' onto another proprietor's private property. Examples include, but may not be limited to, access corridors (roads and footpaths) into, and out of, the development, multiple-use car parking courts and amenity style planting for enjoyment by all.
- o. All references to the "Private Realm" within this document shall mean those areas where access is typically (but not always) restricted to use by the proprietor alone, and where uninvited access, may constitute, 'an Act of Trespass'. Examples may include a private garden space

and/or private parking at the front of a property whereby use is for the obvious and explicit use by the proprietor of the property, usually differentiated by some form of boundary demarcation and/or signage separating it from use by multiple users.

- p. All references to “multiple-use parking courts” within this document shall mean all parking courts accessible to all where access would not necessarily constitute an, ‘Act of Trespass’ and where, *‘car park facilities are made available for use by multiple users [of that particular unit/block of flats etc.] often differentiated by white lining alone’.*

- 1.2 The Main Contractor shall note that David Jarvis Associates Limited Landscape Management and Maintenance Plan, together with any associated drawings and specifications, are composite drawings based on information, drawings and correspondence from (but not necessarily limited to) the following here-in-after referred to as the Design Team:

- a. Legal and General (Strategic Land North Horsham) Limited (Client)
- b. Stantec (Planning Consultant)
- c. Broadway Malyan (Masterplanner)
- d. David Jarvis Associates (Landscape Architect)
- e. Glanville (Engineers and Transport Consultants)
- f. CSA (Ecologist)
- g. Duckworth Arboriculture Ltd. (Arboriculturalist)

Responsibilities

- 1.3 *Compliance:* all workmanship shall be strictly in accordance with the Clauses of this document. All specified works are to be in accordance with DJA drawings and compliant with what follows.
- 1.4 *Health and Safety;* the Contractor is deemed to be conversant with his obligations applicable under all relevant health and safety legislation at the time of the works on site and shall be fully compliant with them.
- 1.5 *British Standards:* all work is to be carried out in accordance with the latest edition of the following:
- a. BS 1722 - Fences. (All relevant parts).
 - b. BS 3882: 2015 - Specification for topsoil and requirements for use.
 - c. BS 3936-1: 1992 - Nursery stock. Specification for trees and shrubs.
 - d. BS 3936-7: 1989 - Nursery stock. Specification for bedding plants.
 - e. BS 3936-10: 1990 - Nursery stock. Specification for ground cover plants.
 - f. BS 3998: 2010 - Tree work. Recommendations.
 - g. BS 4043:1989 - Recommendations for transplanting root-balled trees.
 - h. BS 4428: 1989 - Code of practice for general landscape operations (excluding hard surfaces).
 - i. BS 5709: 2006 - Gaps, gates and stiles. Specification.
 - j. BS 5837: 2012 - Trees in relation to design, demolition and construction. Recommendations.
 - k. BS 7370-1: 1991 - Grounds maintenance. Recommendations for establishing and managing grounds maintenance organizations and for design considerations related to maintenance.
 - l. BS 7370-2: 1994 - Grounds maintenance. Recommendations for the maintenance of hard areas (excluding sports surfaces).

- m. BS 7370-4: 1993 - Grounds maintenance. Recommendations for maintenance of soft landscape (other than amenity turf).
- n. BS 7533 - Pavements constructed with clay, natural stone or concrete pavers. (All relevant parts).
- o. BS 8545: 2014 Trees: from nursery to independence in the landscape.

together with the latest amendments of all these and all other relevant British Standards.

- 1.6 *Guidance Notes:* all work requiring the use of herbicides in or near water bodies shall be carried out in accordance with the latest edition of the following:
 - a. “Guidelines for the use of herbicides on weeds in on weeds in or near watercourses and lakes” (PB2289).
- 1.7 The Contract Administrator (CA) reserves the right to condemn any work which appears unsatisfactory, due to poor workmanship or, non-compliance with this documentation. The sub-contractor shall, at his own expense, make good any defects or liabilities to the satisfaction of the CA, and shall be responsible for all the consequential costs resulting from his failure to comply with this documentation.”
- 1.8 *Responsibility:* Non-approval or non-acceptance shall not relieve the Contractor of his responsibilities under the contract for the quality of materials and standard of workmanship in the works.

2. INTRODUCTION

Planning Context

- 2.1 Pre-Occupation Condition 35 of Outline Planning Permission (OPP) DC/16/1677 requires a Landscape and Ecological Management Plan (LEMP) to be submitted for each Reserved Matters Application (RMA) submission. These would be jointly prepared between DJA and CSA.
- 2.2 This overarching landscape and ecological management plan (LEMP) is prepared in respect of Phase 2, with subsequent RMA submission to follow at the appropriate time.
- 2.3 This LEMP is to be included as an appendix in planning applications and in tender packages within Phase 2 with a compliance statement or addendum as necessary to suit the situation.
- 2.4 This LEMP details the landscape management intent and maintenance operations for the public open space and provides a prescription for the management operations within.

Scope and Purpose

- 2.5 The aim of the LEMP is to provide a set of aims and objectives for the management of the existing and proposed features on site. These determine the appropriate management prescriptions required, which is accompanied by a work schedule to provide an overall long-term management strategy. The maintenance works described here are for the duration of the development of Phase 2.
- 2.6 The purpose of the management strategy is to ensure the long-term viability of both existing and proposed habitats and planting and to achieve the overall design intent of the scheme. It should ensure planning conditions are met, as a minimum, and exceeded if at all possible, to create a balanced and well managed site, that enhances the existing biodiversity where possible, that is attractive, safe and secure; both for the people who live there and for visitors to the site.
- 2.7 The LEMP is divided into four main sections to consider the existing and proposed components separately and include:

Section 4 – Management of Existing Habitat Components

Section 5 – Management of Proposed Planting Components

Section 6 – General Landscape Maintenance Operations

Section 7 – Management of Proposed Hard Landscape Treatments

3. EXISTING SITE AND PROPOSED DEVELOPMENT

Site Background and Existing Features

- 3.1 The Land North of Horsham development in West Sussex lies to the north of the A264 Crawley Road dual carriageway which separates the development from Horsham itself.
- 3.2 Phase 2 lies to the east of Phase 1 and Phase 3, beyond the north-south aligned Rusper Road, adjacent the wooded Castle Copse.
- 3.3 Arable land-use field pattern predominates within the Phase 2 development cell, which comprises two interconnected zones: the Northern Zone, accessed via Bailey Road from Phase 1; and the Eastern Zone, accessed via the A264 transport corridor.
- 3.4 The site slopes gently down from approximately 75m AOD in the northernmost corner of the Northern Zone, to 56m AOD along the southern edge of the Eastern Zone.

Proposed Development

- 3.5 The site comprises a mixture of landscape elements; including existing tree and hedgerows, alongside proposed structural and ornamental planting, proposed tree planting, amenity greenspace and additional species-rich grassland together with hardscape material detailing. The proposed landscape areas and public open space are set out in Broadway Malyan drawings 2153A-100 Parameter Plan: Land Use, 2153A-105 Parameter Plan: Green Infrastructure, and 2153A-507 Parameter Plan: Phasing Plan. These plans are part of the approved outline application for the site wide proposals for phases 1 to 3 and are included at Appendix 2.
- 3.6 The design for the phase 2 development area includes residential parcels, mixed use development, educational sites and plays areas. These development parcels are brought together with strategic landscape areas and areas of public open space. The landscape proposals sensitively incorporate existing habitats as much as possible within the requirements of a publicly accessible recreational open space. This includes areas of existing hedgerow, woodland and roadside planting, and landscape along Channells Brook which runs through the centre of the Eastern Zone of the Phase 2 development area, just north of Owlscastle Farm.
- 3.7 Proposed landscape areas include public open space and play areas, street planting and ornamental planting, woodland, hedgerows and roadside planting, amenity grassland and natural areas, attenuations basins, ponds and waterways, landscape buffers and screen planting.

Overall Management Aims and Objectives

- 3.8 Overall Management Aims & Objectives:
 - a. To provide and maintain an attractive/visually appealing and robust landscape setting to the development, particularly along the main access roads and frontages.
 - b. To maintain a secure and decorative physical enclosure to the site and parts thereof.
 - c. To help partially screen the new development, provide privacy and define plot boundaries in order to create a visually interesting development cell.
 - d. Provide recreational opportunities for the nearby residents within the framework of the existing and proposed habitats.
 - e. To maintain and enhance existing biodiversity and green ecological corridors throughout the site. Manage and enhance the habitat types and ensure their future longevity.

- f. To maintain health and safety requirements to all publicly accessible areas of public open space for all residents and visitors.
- g. Any replacement planting shall be native and include seeds and plants from local sources of provenance. All plant stock to be sourced from a supplier certified to be pest and disease free and in accordance with Plant Passport / Animal and Plant Health Agency (APHA) and current DEFRA requirements. Supplier information / certification to be retained for a period of not less than 12 years and must be made available upon request.

4. MANAGEMENT OF EXISTING HABITAT COMPONENTS

General Management Aims and Objectives

4.1 Aims and Objectives:

- a. To maintain and enhance existing biodiversity and green ecological corridors throughout the site.
- b. Manage and enhance a mosaic of habitat types that will ensure future longevity.
- c. To maintain health and safety requirements to all publicly accessible existing habitats.
- d. Any replacement planting shall be native and include seeds and plants from local sources of provenance.
- e. Prevent the spread of invasive species.

Existing Woodland

Management Prescriptions

- 4.2 The management of the woodlands is to have a 'light touch' approach in order that the woodlands retain their ecological value for wildlife, whilst preventing the spread of invasive species.
- 4.3 Monitoring and inspections to identify structural defects, including dead or broken branches, cracks, decay, and root decay should be held annually and after major storms. Remedial works and overall management aims and prescriptions shall be determined by a suitably qualified Arboriculturalist and Ecologist (taking into account the possible presence of *inter alia* roosting bats, hazel dormice and great crested newts).
- 4.4 The grassland buffers adjacent to the areas of woodland not identified as ancient, and the retained grassland within the 15m buffers from the ancient woodland, shall be cut once annually on rotation each autumn. Strimming of the buffer will be carried out to maintain a mosaic of long (semi rank) and short (>15cm) grassland areas as well as scrub where appropriate. One third of the grassland area will be strimmed each year, so that the entire grassland buffer will receive a cut once in a three year period. Strimming and scrub removal will be completed during winter (mid-September to February) to avoid the active season for birds, reptiles and hedgehogs, and allow plants to fruit, thereby providing foraging opportunities for many species [REDACTED]. Cut arisings will be left on the ground for 5-7 days to allow seed heads to dry and fall to ground for re-establishment, then removed from site or taken to a composting area or used to create wildlife piles/hibernacula on the site, so as not to increase the nutrients in the soil and encourage weed growth.
- 4.5 Deadwood within woodlands shall be retained on site to provide possible habitats for invertebrates and small mammals. Arisings shall be cut into 1m lengths and stored laid flat in piles up to 0.5m high within the planted areas for ecological benefit. Brash will be removed from site to prevent excessive piling up of cut material. The value of retained deadwood should be monitored and reduced if it adversely affects the value of the field layer.
- 4.6 Any young saplings or regenerated plants to be retained shall be fitted with a mulch mat and guard and be managed as per Sections 5 and 6 below.

Existing Trees and Field Hedgerows

Management Prescriptions

- 4.7 Undertake preliminary remedial work for each specific retained tree as detailed in the DJA Phase 2 BS 5837 Arboricultural Survey, dated 10th February 2023. This includes, but may not be limited to, the following:
- a. Removing deadwood
 - b. Crown cleaning
 - c. Cut and remove ivy
 - d. Pruning basal tree growth
 - e. Target pruning
- 4.8 Further remedial work such as pruning / tree surgery, removal of dead, dying or diseased wood shall be carried out following the annual review.
- 4.9 The management of trees will generally be non-intervention unless there are reasons to cut trees for health and safety considerations, in which case Arboricultural advice will be sought and followed. Prior to any felling or tree work, the tree/s will be assessed for their suitability to support roosting bats by a suitability qualified ecologist. If suitable roost features are noted, then the trees will be subject to the requisite number of bat surveys¹ to determine their use by bats. Should evidence of roosting bats be found within the trees identified for removal/works then derogation licence applications will be submitted to Natural England.
- 4.10 Protect retained trees and hedgerows and their root protection areas from disturbance during construction and aftercare works in accordance with the site Arboricultural Statement and BS 5837.
- 4.11 The future management of the hedgerows shall encourage thickening, planting up gaps and generating an uneven and broad min 2m margin in order to create a range of microhabitats for various species.
- 4.12 The existing hedgerows shall be trimmed on a 3-5 year rotation following DEFRA guidelines², which will always leave areas to fruit and flower thereby providing a foraging source. Avoid trimming all hedges in the same year, cutting no more than a third of the hedgerow height in any year. The hedgerow should be allowed to grow up to and maintained at 2.4-3.6m tall. Where appropriate, occasional young trees shall be left uncut to provide eventual replacement standards once the existing mature trees have died to add diversity to the hedgerow. Hedgerow junctions shall only be trimmed very occasionally in order to provide an alternative habitat. The hedgerow cutting will be undertaken outside of the bird and dormouse nesting season. February is the preferred month for this operation as it allows fruit to remain on the trees for the longest period to allow birds and mammals to feed over the winter.
- 4.13 Pruning of hedgerows should encourage the development of tall “A” shaped, full hedgerows with a dense base cover.

¹ Based on Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

² DEFRA (unpublished) Hedgerow Management and Wildlife. A review of research on the effects of hedgerow management and adjacent land on biodiversity

- 4.14 A strip of uncut vegetation shall be left at the base of the hedge as rough grassland to further enhance the hedgerow. This shall be cut twice a year in early spring and autumn to a minimum 150mm high and arisings removed.
- 4.15 A review of the hedgerows shall take place to determine if there are any sections that are deteriorating with gaps (of 1m or more), hollow bottoms and die back. Plant gaps 1m or wider within existing hedgerows to improve their function as a corridor feature, using 60-90cm whips to match those existing species. They will be planted in a double staggered row with 0.40m distance between plants and 0.25m between rows. Each plant will be supplied with a 0.5 x 0.5m biodegradable mulch mat pegged into place. The whips shall be from local native provenance. The soil should be improved with well-rotted manure prior to planting. The existing plants on either side of the gap shall be coppiced to provide room and light for the new plant.
- 4.16 If the hedgerow requires regenerating or to prevent the hedgerows turning into a line of trees, then hedge laying/ trimming/ coppicing followed by further gapping up could be undertaken following consultation with the Arboriculturalist / Ecologist.
- 4.17 Hedge laying should be carried out on a rotation to avoid the loss of large lengths of mature hedgerow habitat. The occasional standard trees shall continue to be left to add diversity to the hedgerow. Hedgerow laying shall take place in the winter months November – March avoiding any hard frosts.
- 4.18 The laid hedge should then be left to grow for a further 2 years before any further trimming takes place on a 2-3 year rotation. Successive cutting should maintain some additional width and height each time. If the hedgerow becomes gappy at the base it can be side trimmed for 2-3 years to allow leading shoots to grow on before being laid again. Hedgerow junctions shall continue to be trimmed very occasionally in order to provide an alternative habitat.
- 4.19 The hedge shall be re-laid after a further 10-25 years in light of the monitoring programme.

Existing Ditches

Management Prescriptions

- 4.20 Provide regular maintenance such as litter removal.
- 4.21 Undertake remedial actions such as repair erosion or other damage by re-seeding or re-turfing, removing the build-up of sediment etc as required.
- 4.22 Ongoing management to the bankside should be 'light touch' to maximise any vegetation present.
- 4.23 Bank vegetation should be managed through cutting back vegetation on a 3 year rotation with arisings removed to control any vigorous plants present. Cutting should be undertaken at a time to avoid disturbance to wildlife, with an optimal time period between September-November.
- 4.24 The presence of invasive alien species (such as Himalayan balsam) should also be monitored and managed with the aim of eradication if found to be present.
- 4.25 No fertilisers or herbicides should be used within this area, with the exception of the treatment of invasive species where appropriate.

Existing WaterbodiesManagement Prescriptions

- 4.26 The presence of invasive alien species should be monitored and managed with the aim of eradication if found to be present.
- 4.27 Provide regular maintenance such as removal of litter and unwanted objects.
- 4.28 Undertake monitoring e.g. on a monthly basis of inlets, outlets and overflows for blockages. Clear where possible.
- 4.29 Ongoing management to the bankside should be 'light touch' to maximise any vegetation present.
- 4.30 Bank vegetation should be managed through cutting back vegetation on a 3 year rotation with arisings removed to control any vigorous plants present. Cutting should be undertaken at a time to avoid disturbance to wildlife, with an optimal time period between September-November.
- 4.31 Any algae present such as blanket weed will be thinned to leave a ⅓ coverage as required. Care should be taken when clearing out algae that this does not disturb wildlife inhabiting or breeding within the plant mass. Algae can be removed by hand or using a pitchfork and should be left on the bank edge for 48 hours to allow any animals to re-colonise the water, before it is taken away for disposal.
- 4.32 Following consultation with an Ecologist and Engineer, every three years or when otherwise required excessive silt debris should be removed on a rotational basis either by mechanical or manual means prior to new annual growth. Consideration to the presence of great crested newts in and around the waterbody should be taken (along with the lead-in times if a derogation licence needs to be sought for the works). All debris should be removed and used to create habitat piles close to the water body. Where this is not possible, arisings should be removed in accordance with licensing regulations.
- 4.33 Undertake remedial actions such as repair erosion or other damage by re-seeding or re-turfing, removing the build-up of sediment etc as required.
- 4.34 No fertilisers or herbicides should be used within this area, with the exception of the treatment of invasive species.

Existing Ecological GrasslandManagement Prescriptions

- 4.35 Existing meadow grassland shall be mown once a year with no maximum allowable height of growth. This should be carried out following flowering in September / October to 75mm-100mm during conditions where reptiles are likely to be active - i.e. daytime, in dry or at worst showery conditions with temperatures >10-12°C. Working outside these conditions could result in torpid animals being encountered, increasing the risk of fatality. Cut arisings to be left on the ground for 5-7 days to allow seed heads to dry and fall to ground for re-establishment, then removed from site or taken to a composting area or used to create wildlife piles/hibernacula on the site, so as not to increase the nutrients in the soil and encourage weed growth. Control invasive weed species by further cutting/topping.

Existing Scrub Planting

Management Prescriptions

- 4.36 The scrub shall be managed with a program of selective coppicing of small groups of tree / shrub plants on a 7 year cycle.
- 4.37 Large areas of bramble growth shall be managed to prevent encroachment into the areas of mixed scrub growth and smothering of scrub regeneration. The bramble area shall be divided into small coupes and cut on a shorter rotation on a 2-3 year cycle with no more than half the area cut in one year, with the arisings removed. If required, the brambles can be cut regularly in the summer to prevent further encroachment. Any unwanted seedlings or re-growth shall be treated with herbicide by weed wiping if cutting is not sufficient control.
- 4.38 The scrub edge buffer will be cut or strimmed annually each autumn in order to create and maintain a mosaic of long (semi-rank) and short (>15cm) grassland areas and scrub. One third of the area will be strimmed each year, so that the entire buffer will receive a cut once in a three year period.
- 4.39 Strimming and scrub removal will be completed during winter (mid-September to February) to avoid the active season for birds, reptiles and hedgehogs and allow plants to fruit, thereby providing foraging opportunities for many species [REDACTED].
- 4.40 Generally, remove any tree seedlings from the scrub areas to prevent succession to woodland and maintain a small number of native specimens to be able to mature to provide some diversity.

Existing Habitat Monitoring

- 4.41 General monitoring of the existing habitats and management actions will fall under the Annual Management and Maintenance Review (AMMR) with the findings informing any changes to the management strategy. The management plan shall be adjusted accordingly with any subsequent remedial works to be defined by the Arboriculturalist / Ecologist and agreed with the LPA and adjacent building occupiers/owners before works commence on site.
- 4.42 Monitoring shall also incorporate an annual tree safety survey on existing trees close to public paths and woodland boundaries, trees fronting public roads and paths to identify any structural defects, including dead or broken branches, cracks, decay, and root decay that may require remedial works for safety reasons. Additional surveys may be required after major storms.

All Tree and Hedgerow Work and Surveys

- 4.43 All tree work (including work to dead, dying and diseased trees) shall be carried out by an Arboricultural Association approved contractor (arboricultural contractor or arborist) to latest version of BS 3998: Recommendations for Tree Work, whom, unless by agreement to the contrary, shall be responsible for obtaining all necessary felling licenses pertaining to the work.
- 4.44 Contractors should be aware of the legal protection afforded to breeding birds/nests, amphibians and bats/bat roosts. The bird nesting season is generally (although not restricted to) March - August inclusive. Under no circumstances shall trees be removed and or disturbed during this time if there are bird's nests present. Should works be required within this period the vegetation must first be inspected by an ecologist who will advise on any restrictions necessary to protect nesting birds. Cutting in February allows the fruit to remain on the trees for the longest period to feed the birds. Overtime, changes to the tree such as ivy on trees or the development of splits or holes may make them more suitable as a bat roost. Prior to any works taking place at any time of year the trees shall be assessed for the suitability for roosting bats by an Ecologist and appropriate mitigation and/or protected species licencing will be undertaken as required.

5. MANAGEMENT OF PROPOSED PLANTING COMPONENTS

- 5.1 This incorporates all ‘publicly accessible’ soft landscape and boundary treatments (where applicable) including tree planting, shrub and herbaceous beds, scrub planting, screen planting, hedge planting and grassland.
- 5.2 The management requirements for new planting will need to change as the planting establishes and begins to mature. Three phases are identified as below. However, as these definitions are not mutually exclusive (of one another) a programme of monitoring will be necessary to ensure the LEMP aims and objectives are effectively realised.

Proposed Planting Management Phases

- 5.3 *Short Term (1-3yrs)*; the initial establishment period will require more frequent maintenance operations to ensure planting thrives without competition and planting sundries are maintained. Cosmetic and/or functional pruning operations may be carried out during this timeframe to ensure the overall aims and objectives are met and to ease the maintenance burden over medium to long term timeframe. Management examples may include removal of crossing/rubbing branches to maintain general tree health, removal of tree supports once wind firm, crown reduction to maintain appearance, or removal of branches to manage conflicts both ‘on’ and ‘off’ site.
- 5.4 *Medium Term (3-10yrs)*; as the development establishes and matures, the management regime will shift to ensure longevity. Pruning and/or other operations may be required. Precise timing will be dependent on a programme of monitoring to ensure effective maintenance is carried out at the appropriate time.
- 5.5 *Long Term (10-25+yrs)*; as the development moves towards maturity, continual periodic monitoring will ensure that effective maintenance is carried out at the appropriate time in order to maintain site health and safety.

Proposed Woodland, Tree and Shrub Mix and Coppice Mix Planting

Management Aims and Objectives

- 5.6 Management shall:
- a. Ensure the establishment and continuing health of the new woodland planting.
 - b. Promote a diverse woodland mix and structure through managing the woodland and woodland edge respectively, including a rough grass woodland margin and scrub edge (which includes the 15m buffer around the areas of woodland identified as ancient).
 - c. To maintain health and safety requirements to all publicly accessible areas of woodland for all visitors.
 - d. Retain the wildlife value of the trees with any remedial works taken under advice from a suitably qualified ecologist.

Management Prescriptions

Short Term Management

- 5.7 Refer to Section 6 for general soft landscape maintenance operations.
- 5.8 In late autumn of each year the site will be inspected and a programme of work for the next twelve months agreed. Actions required might include practices such as formative pruning and replacement of stock.

- 5.9 Plants shall also be monitored for damage from grazing deer. If significant damage occurs a review by a suitably qualified Ecologist will be required to determine an appropriate deer management scheme which gives consideration to the need for continued public access to the woodland area.

Medium Term Management

- 5.10 Protection – Remove (remnants of) tree guards before they start to restrict growth. Stakes will be removed following a test on sample trees. To test whether trees are root-firm, sample trees within a group (say 10%) shall be untied in spring and monitored over the next growing season. When firmness is proven, remove all remaining stakes and ties, fill in resulting post holes and remove surplus materials. Where stakes and ties are still necessary, further inspections will be required to adjust and maintain them in good order, ensuring that stems are not being damaged.
- 5.11 Once good establishment of the planting areas has been achieved, the density of the planting can be reduced by selective thinning. Thinning should aim to promote the growth of a good field layer and prevent the growth of tall and spindly trees or where adjacent branches are touching or overshadowing each other. The felled timber or cuttings will be left within the woodland areas as per Section 4.5.
- 5.12 For coppice planting areas, 25% of the planting shall be coppiced on a two to three year rotation. Avoid coppicing in large groups, instead select individual plants to coppice to avoid large gaps in the planting.
- 5.13 Continue to weed seasonally.

Long Term Management – Small Planting Areas

- 5.14 The woodland shall be managed by felling and replanting in order to gradually generate a mixed age woodland. This includes a program of selective felling and replanting with locally native species, of small groups of mature or over-mature trees on a 10-year cycle. Where possible, the management of naturally regenerated seedlings should be used to provide replacement trees rather than replanting. Replanting should aim to give a varied structure including some dense and open areas.
- 5.15 Some trees with splitting bark, fallen limbs and cavities developing shall be retained as potential habitats and bat roosts unless the tree becomes dangerous when in proximity to areas available to public access. Such trees would not be removed unless hazardous.
- 5.16 Selective thinning within the graded edges will be required on a 5 yearly cycle to open up and diversify the age and structure. The scrub margin can be cut every 2-5 years.
- 5.17 Continue to coppice the planting as per the medium term management above.
- 5.18 Seasonal weeding around new planting growth will be required to prevent smothering as above. Dense stands of bracken or bramble may be treated with herbicides as per the general maintenance operation guidelines.

Long Term Management – Large Woodland Areas

- 5.19 A coppice with standards management program is proposed. Operating a mixed short (6-10 years) and long rotation (20 years) of coppicing will be appropriate for mixed woodland species and offer wider wildlife benefits. A younger coppice will provide some open structure whilst an older coppice can allow trees to grow on for pulpwood and firewood. The specific rotation lengths will be dependent on the species e.g. 8-10 years for hazel, 20 years for oak and ash.
- 5.20 A number of trees should be left to mature into standards including oak, ash, and hornbeam. They should occupy no more than 30% of the overall canopy in an uneven distribution to prevent

overshadowing the coppice below. The standards can be felled on maturity. Where possible, the management of naturally regenerated seedlings or the singling out of a shoot from a coppice stool should be used to provide replacement standard trees rather than replanting.

- 5.21 Coppicing should be carried out on a rotational basis in small coupes of 0.3 to 0.7ha with no more than one third of works carried out each year. An irregular elongated coupe shape is most beneficial. Coppice the plants to approx. 30cm above ground level in order to encourage a greater number of stems to develop.
- 5.22 New planting should be generated from coppice growth and natural regeneration. If natural regrowth is not sufficient or is reducing the diversity of the species, then planting can be introduced to provide the desired woodland mix, in accordance with 5.17.
- 5.23 Selective thinning within the graded edges will be required on a 6-8 yearly cycle to open up and diversify the age and structure. The scrub rough grass margin can be cut every 3-5 years.
- 5.24 Seasonal weeding around new planting growth will be required to prevent smothering. Dense stands of bracken or bramble may be treated with herbicides as per the general maintenance operation guidelines.

Proposed Native Scrub Planting

Management Aims and Objectives

- 5.25 Management shall:
 - a. Prevent the spread of invasive growth into surrounding habitats.
 - b. Maintain a mosaic of scrub and open spaces for greater wildlife value.
 - c. Promote natural regeneration of scrub where habitat expansion is required.

Management Prescriptions

Short Term Management

- 5.26 Refer to Section 6 for general soft landscape maintenance operations.

Medium Term Management

- 5.27 Protection – Remove (remnants of) guards before they start to restrict growth. Stakes will be removed following a test on sample plants. To test whether plants are root-firm, sample plants within a group (say 10%) shall be untied in spring and monitored over the next growing season. When firmness is proven, remove all remaining stakes and ties, fill in resulting post holes and remove surplus materials. Where stakes and ties are still necessary, further inspections will be required to adjust and maintain them in good order, ensuring that stems are not being damaged.
- 5.28 Continue to weed seasonally.
- 5.29 Once good establishment of the scrub planting areas has been achieved, initiate a program of selective coppicing of small groups of plants on a 7 year cycle. This should include plants around the edge of the scrub areas.
- 5.30 Generally, remove any tree seedlings from the scrub areas to prevent succession to woodland and maintain a small number to be able to mature to provide some diversity.
- 5.31 Regularly cut or mow scrub plants at edges to prevent unwanted spread of scrub area.

Long Term Management

- 5.32 Seasonal weeding around new planting growth will be required to prevent smothering. Dense stands of bracken or bramble may be treated with herbicide as per the general maintenance operation guidelines.
- 5.33 Continue the program, of selective coppicing on a 7 yearly cycle, removal of tree seedlings and unwanted edge scrub plants.

Proposed Native Field Hedgerow PlantingManagement Aims and Objectives

- 5.34 Management shall:
- a. Maintain the hedgerow to encourage healthy establishment and a good shape.
 - b. Prevent the spread of undesirable species.
 - c. Avoid ingress onto public paths.
 - d. Native planting will be used to promote and enhance the existing site biodiversity. Seeds and plants should be from local sources of provenance.
 - e. Keep hedgerow base and canopy litter free.

Management Prescriptions*Short Term Management*

- 5.35 Refer to Section 6 for general soft landscape maintenance operations.
- 5.36 Pruning - Pruning of native hedges shall have the following objectives:
- a. To remove any dead, dying or diseased wood.
 - b. Pruning of hedgerows should encourage the development of tall “A” shaped, full hedgerows (at least 2.4m in height and at least 1.5 metres in width), with a dense base cover.
 - c. To remove suckers or other unwanted growth.
- 5.37 Prune in accordance with good horticultural and arboricultural practice, and following DEFRA guidelines³.
- 5.38 Heavy pruning shall be carried out in the first year to encourage bushy side growth, thereafter; pruning will be carried out on a 3 year cycle. Avoid trimming all hedgerows in the same year, cutting no more than a third of the hedgerow in any year. Leave a minimum of 1m strip of uncultivated land between the hedgerow and cut grass. Pruning shall be carried out at the correct time having regard to the species and maintenance objectives above.
- 5.39 A strip of long grass shall be left at the base of the hedge as rough grassland with arisings removed to further enhance the hedgerow. This shall be cut twice a year in early spring and autumn to a minimum 150mm high.

Medium to Long Term Management

³ DEFRA (unpublished) Hedgerow Management and Wildlife. A review of research on the effects of hedgerow management and adjacent land on biodiversity

- 5.40 Protection – Remove (remnants of) tree and shrub guards before they start to restrict growth.
- 5.41 Once good establishment of the hedgerow planting areas has been achieved, the density of the planting can be reduced by selective thinning if required.
- 5.42 Continue to weed seasonally.
- 5.43 A review of the hedgerows shall take place to determine if there are any sections that are deteriorating with gaps (of 1m or more), hollow bottoms and die back. Plant any gaps 1m or wider within the hedgerow using 60-90cm whips to match those existing species. Short term maintenance of the gapping up planting shall focus on establishment as per 5.46-5.50 above.
- 5.44 Hedgerow trimming shall take place every 3 years on a rotational basis. Trimming of all the hedgerows in one year should be avoided, cutting no more than a third of the hedgerow in any year. The hedgerow should be allowed to grow up to and maintained at 2.4-3.6m tall. Hedgerow junctions shall only be trimmed very occasionally in order to provide an alternative habitat.
- 5.45 Sections of new planting should only be lightly trimmed allowing the hedge to increase in size each time. If the hedge is to be laid then side trimming new planting should encourage strong leading shoots up to a suitable height of 2.4-3.6m tall.
- 5.46 The hedgerow cutting will be undertaken outside of the bird and dormouse nesting season. February is the preferred month for this cutting operation as it allows fruit to remain on the trees for the longest period to allow birds and mammals to feed over the winter.
- 5.47 Occasional standard trees shall be left to add diversity to the hedgerow. However, they shall be maintained to a maximum height of 18m to minimise the potential for bird roosting sites. Trees shall be pruned to remove diseased wood or dead/ dying wood to maintain clearances above roads. Pruning shall be in accordance with good horticultural and Arboricultural practices and 5.10 to 5.12 above.
- 5.48 If the hedgerow requires regenerating or to prevent the hedgerows turning into a line of trees then hedge laying followed by further gapping up could be undertaken following consultation with the Ecologist / Arboriculturalist.
- 5.49 Hedge laying should be carried out on a rotation to avoid the loss of large lengths of mature hedgerow habitat. Occasional standard trees shall continue to be left to add diversity to the hedgerow and managed in accordance with the appropriate lifecycle stage. Hedgerow laying shall take place in the winter months November – March avoiding any hard frosts.
- 5.50 The laid hedge should then be left to grow for a further 2 years before any further trimming takes place on a 2-3 year rotation. Successive cutting should maintain some additional width and height each time. If the hedgerow becomes gappy at the base it can be side trimmed for 2-3 years to allow leading shoots to grow on before being laid again. Hedgerow junctions shall continue to be trimmed very occasionally in order to provide an alternative habitat.
- 5.51 The hedge shall be re-laid after a further 10-25 years in light of the monitoring programme.
- 5.52 Follow the tree and hedge work guidelines given in Section 4.
- 5.53 Continue to leave a strip of long grass at the base of the hedgerow and cut twice a year with arisings removed.

Proposed Street Trees and Specimen TreesManagement Aims and Objectives

5.54 Management shall:

- a. Be tailored to their size requirements and ensure a safe and healthy development whilst promoting their wildlife value.
- b. Maintain health and safety requirements to all publicly accessible areas of public open space for all residents and visitors.
- c. Maintain bark mulch and weed control.
- d. Control the spread of pests and diseases.

Management Prescriptions*Short Term Management*

5.55 Refer to Section 6 for general soft landscape maintenance operations.

5.56 In late autumn of each year the site will be inspected and a programme of work for the next twelve months agreed. Actions required might include practices such as formative pruning and replacement of stock.

5.57 Box headed trees – Clip to maintain the box shape with shears / secateurs twice during the growing season. Firstly, at the beginning of the season in mid-May to mid-June and secondly in late August before the flush of new bud growth. Take care not to clip any new bud growth which will form next year's first leaf growth.

Medium to Long Term Management

5.58 Continue to monitor and act upon findings to ensure the aims and objectives continue to be met. Follow the tree work guidelines given in Section 4.

5.59 Box headed trees – Continue to clip twice a year as above to maintain the box shape.

Proposed Fruit Trees (Orchards)Management Aims and Objectives

5.60 Management shall:

- a. Be tailored to the individual tree and species growth habit and ultimate shape.
- b. Ensure a safe and healthy development whilst promoting their wildlife value.
- c. Maintain health and safety requirements to all publicly accessible areas of public open space for all residents and visitors.
- d. Maintain bark mulch and weed control.
- e. Control the spread of pests and diseases.

Management Prescriptions

General

- 5.61 For apple and pear species carry out pruning during the winter months November – March. Late winter is preferable before new growth appears. Avoid heavy frosts and unseasonably warm weather.
- 5.62 For stone fruit species (Plum, Damson, Cherry and Gage) carry out pruning during the summer months April – early September in order to avoid Silver Leaf disease risk.

Short Term Management

- 5.63 Refer to Section 6 for general soft landscape maintenance operations.
- 5.64 The first 8-10 years the tree management should focus on formative pruning with the following objectives:
- a. To develop a clear stem/ trunk as a standard or half-standard tree.
 - b. The aim is to generally create an open centred tree (goblet-shaped) for most trees or an open tree with a central leader for plums and damson species.
 - c. To develop an evenly spaced and strong open branch framework above the height of maintenance machinery.
 - d. To create a framework that allows air flow and light into the tree crown.
 - e. To remove crossing, badly placed, inward growing branches and damaged wood.
 - f. To remove any dead, dying or diseased wood.
 - g. To remove suckers or other unwanted growth.
 - h. Prune to just above an outward facing bud.
- 5.65 Carry out formative pruning as below:

To create a clear stem height

- a. Leave the central leader unpruned until the desired stem height has been reached.
- b. 1st Year - Cut back any side shoots to leave snags with 2-3 buds (50-75mm long).
- c. 2nd Year and beyond – Cut back new side shoots to leave snags with 2-3 buds (50-75mm long). Remove previous year's cut side shoots. Progressively remove the side shoots from the ground up to the desired stem height.

To create the branch framework

- a. 2nd Year – Above the desired stem height select 3-6 evenly spaced secondary leaders to form the first framework of branches and cut back by half. Remove remaining secondary leaders. The aim is to create a framework of evenly spaced main branches radiating from the trunk.
- b. 3rd Year and beyond – Continue to prune the leader of each main branch between a third and a half of the season's growth in order to encourage new branches and spurs and to maintain a good shape. Leave young laterals (side shoots) unpruned unless they are crossing or overcrowded. To create an open centred tree (goblet shaped) remove any strong central leaders that grow higher than the first tier with several main branches below.

Stone Fruit Trees

- a. Follow formative pruning as per a-c above to create a clear stem height of 75cm.

- b. To avoid excessive growth cut off the leader shoot when the tree is 2m tall.
- c. Shorten the ends of spreading branches to keep the desired shape.

Medium to Long Term Management

5.66 Follow the tree work guidelines given in Section 4.

5.67 Maintenance pruning shall have the following objectives:

- a. Once the tree has reached its optimum height annual pruning shall be needed to control the size of the tree and maintain a balanced shape (Regulated Pruning).
- b. To maintain a balance between vegetation growth and fruit production.
- c. To create a strong framework of branches that allows air flow and light into the tree crown.
- d. To remove weak, crossing, badly placed and inward growing branches and damaged wood.
- e. To remove any dead, dying or diseased wood.
- f. To remove suckers or other unwanted growth.
- g. Prune to just above an outward facing bud.

5.68 Carry out maintenance pruning as below:

Regulated Pruning

- a. On young trees remove thin and weak shoots but leave most shoots unpruned.
- b. On older trees large sections in the centre can be removed to keep the crown open. Smaller branches with fruiting spurs can remain.
- c. Cut branches that are too long back to a lower wider angled outward facing branch.
- d. Any pruning should aim for space of approx. 45cm between the tips of the branch leaders.
- e. Thin out spurs that are weak or overcrowded.
- f. Prune no more than 20% of the crown in a year.

Mulberry Trees

- a. Keep pruning to a minimum only removing the leader on young trees and congested, crossing, damaged branches and over dominant side shoots on older trees.

Stone Fruit Trees

- a. Use the bush pruning method with the aim of creating an open-centred tree but with pruning kept to a minimum.
- b. Remove any buds developing on the lower trunk and any suckers arising from the rootstock.
- c. Limit pruning to removing crossing, weak, vertical and diseased branches / shoots.

5.69 Spur or renewal pruning are alternative maintenance pruning regimes which could be considered if regulated pruning is not deemed effective. This would need to be decided on an individual tree and species basis and would require more time input.

5.70 For further information on general orchard and fruit tree management and maintenance refer to Natural England Technical Information Notes TIN012-TIN021 and RHS advice.

- 5.71 Continue to monitor and act upon findings to ensure the aims and objectives continue to be met.

Proposed Ornamental and Formal Hedgerow Planting

Management Aims and Objectives

- 5.72 Management shall:

- a. Maintain the hedgerow to encourage healthy establishment and a good, neat shape.
- b. Prevent the spread of undesirable species.
- c. Avoid ingress onto public paths.
- d. Keep hedgerow base litter free.

Management Prescriptions

Short Term Management

- 5.73 Refer to Section 6 for general soft landscape maintenance operations.

- 5.74 Pruning - Pruning the hedgerow shall have the following objectives:

- a. To remove any dead, dying or diseased wood.
- b. To remove suckers or other unwanted growth.
- c. To achieve a regular height of 1.2m with trimmed edges and top.
- d. Formal hedgerow along site boundaries - to a maximum height of 200mm above the adjoining fence with trimmed edges and top.
- e. Formal Buxus hedgerow - to a 400 x 400mm box with trimmed edges and top.

- 5.75 Carry out formative pruning in the first two years to promote dense hedge growth as below:

- a. Deciduous hedgerows with dominant leader (apical dominance) e.g. *Carpinus* spp., *Fagus sylvatica* etc.: usually exhibit two growth spurts during the year - one main flush during spring and a second, smaller flush in late summer. The leader should therefore be left to achieve desired height (1.2m or as described within the RMA submission) before 'topping' the hedge. In order to keep the hedge tidy, side branches can be trimmed to achieve desired shape (box) after first (Spring) and second flush (during September) but before the leaves change colour and fall. This process is then repeated until the desired shape, form and size (1.2m tall x 0.5m wide) is achieved.
- b. Deciduous /semi-evergreen hedgerows with bushy habit (decurrent, weak apical dominance) e.g. *Ligustrum* spp.: trim top and sides at regular periods throughout the spring and summer growth period to maintain a neat tidy appearance.
- c. Small evergreen hedgerows (e.g. *Buxus* spp.): lightly prune to achieve desired shape, form and size (e.g. 0.4m tall x 0.4m wide).
- d. Evergreen hedgerows (e.g. *Prunus*, *Cotoneaster*, *Pyracantha* spp.) Lightly prune to achieve desired shape, form and size (1.2m tall x 0.5m wide), preferably at the end of winter but before the first buds appear; alternatively, prune after flowering to avoid compromising the spring flowers.

Medium to Long Term Management

- 5.76 Continue to weed seasonally.

5.77 Maintenance pruning shall include:

- a. Deciduous hedgerows (stocky, bushy at the base of plant e.g. *Carpinus*, *Corylus*, *Fagus*) – Trim annually in June and again in August to a shape that tapers at the top.
- b. Deciduous and Evergreen hedgerows (upright plants e.g. *Crataegus*, *Ligustrum*, *Buxus*, *Lonicera*, *Escallonia*) – trim the top and sides to maintain the desired shape and height between May- September.
- c. Evergreen hedgerows (conifers and other evergreens e.g. *Prunus*, *Cotoneaster*, *Pyracantha*) – trim the hedge and leading shoot to the desired shape and height in summer until late August. Avoid hard pruning to expose old wood.

5.78 Protection – Remove (remnants of) tree and shrub guards before they start to restrict growth.

5.79 Once good establishment of the hedgerow planting areas has been achieved, the density of the planting can be reduced if required by selective thinning to prevent encroachment onto adjacent pathways.

5.80 Contractors should be aware of the legal protection afforded to breeding birds/nests, amphibians and bats/bat roosts. Some formal hedgerow maintenance pruning will be required during the bird nesting season (March-August inclusive). If completed regularly these operations should not be invasive or directly affect nesting birds or wildlife. However, the hedgerows should be inspected prior to any works being carried out to ensure that nesting birds are not present or will not be disturbed. If birds are present the pruning should be left until the young have fledged the nest.

Proposed Ornamental Shrubs, Groundcover, Herbaceous, Grasses and Ferns

Management Aims and Objectives

5.81 Management shall:

- a. Promote healthy growth and development of decorative features such as flowers, foliage and stems.
- b. Allow plants to flower and fruit / set seed
- c. Prevent the spread of undesirable species.
- d. Avoid encroachment onto public paths and play areas.
- e. Keep shrub beds litter free.

Management Prescriptions

Short Term Management

5.82 Refer to Section 6 for general soft landscape maintenance operations.

5.83 In late autumn of each year the site will be inspected and a programme of work for the next twelve months agreed. Actions required might include practices such as thinning, coppicing, and/or replacement.

5.84 Any losses or damage to shrubs are to be noted and replaced for five years from scheme completion for planning compliance. Thereafter plant and replace to ensure continuity of cover. Continual failure of a species at a particular locality may suggest general unsuitability for the location.

5.85 Carry out formative pruning in the first two years to promote bushy growth as below:

- a. Specimen shrubs - only requires light trimming and shaping in the first few years.

- b. Young shrub planting - only requires light trimming and shaping in the first few years.
- c. Evergreen planting - in mid-spring before growth starts.
- d. Deciduous early flowering shrub planting – trim after flowering.
- e. Deciduous mid-summer flowering shrub planting – trim in early to mid-spring.
- f. Winter flowering shrubs – trim in spring.
- g. Species with coloured stems/large foliage (e.g. Cornus) - In the second or third spring coppice plant in Feb-March to 7.5cm from the ground and thin outside shoots.
- h. Lavandula - prune annually to keep a compact shape after flowering in late summer.
- i. Herbaceous – Dead head to prolong flowering (e.g. Monarda, Rudbeckia, Salvia, Stachys). Annually cut down after flowering ceases.
- j. Herb planting – Cut back Allium sp. down to ground after flowering. Lightly trim Thymus after flowering.
- k. Ornamental Grasses (Deciduous) – Trim to ground level before growth starts in early spring (except Pennisetum which grows later and therefore needs cutting in April).
- l. Ornamental Grasses and Sedges (Evergreen and Semi Evergreen) – Annually trim and comb through spent flower stalks, unsightly scorched foliage or diseased leaves individually in Spring, taking care not to cut any new season's growth.
- m. Ferns – Remove any dead or unsightly fronds before the new unrolling leaf tips appear.

Medium to Long Term Management

- 5.86 Continue to monitor and act upon findings to ensure the aims and objectives continue to be met. The annual review will determine future management operations; this may include selective thinning, additional planting/replacements and further dividing.
- 5.87 Carry out maintenance pruning as below:
- a. Specimen shrubs – only require light trimming to maintain shape and prevent leggy growth. Remove branches that overhang adjacent paths / drives. Prune as per deciduous early flowering shrubs below.
 - b. Evergreen shrubs – large and slow growing shrubs will require little pruning except the removal of unhealthy, dead, diseased or damaged shoots and unsightly/badly positioned shoots. Formal clipped evergreen planting (e.g. Lonicera nitida) shall require shaping and trimming to maintain the desired form and size. Prune in mid-spring just before new growth begins, or until flowering has finished (winter/early spring flowering).
 - c. Deciduous early flowering shrub planting – Prune after flowering and remove some stems to ground level to avoid becoming too bushy. Remove spindly and twiggy growth right back. Remove at least 20% of old stems to the base.
 - d. Deciduous mid-summer flowering shrub planting – Prune in early to mid-spring the previous year's flowering stems to within 1-2 buds.
 - e. Winter flowering shrubs – prune in spring.
 - f. Species with coloured stems/large foliage (e.g. Cornus) - cut back every 2-3 years in Feb - March to the previous coppice stubs. Fertilise each spring to support new growth.
 - g. Lavandula planting – prune established plants after flowering in late summer to remove flower stalks and 2.5cm of the current year's growth maintaining some green growth. If plants become old and woody they should be replaced.

- h. Herbaceous - Continue to deadhead flowers and annually cut after flowering ceases. Divide perennials to control their spread. If space in the bed they can be replanted.
 - i. Herb planting – Cut back or trim as required. Regularly divide or thin the *Mentha* sp. to prevent the plant becoming invasive.
 - j. Ornamental Grasses and Sedges (Deciduous and Evergreen) – Cut back or trim as per formative pruning above. Divide plants to control their spread and outgrown their space. Replant if an alternative space is available in the bed.
 - k. Ferns – Continue to remove any dead or unsightly fronds before the new unrolling leaf tips appear. Divide plants in early spring when they become too large.
- 5.88 Advise client when thinning of groundcover planting may be necessary and await instruction before carrying out this work to maintain ornamental shrub areas.
- 5.89 Continue to weed seasonally.
- 5.90 Contractors should be aware of the legal protection afforded to breeding birds/nests, amphibians and bats/bat roosts. Some larger shrub maintenance pruning will be required during the bird nesting season (March-August inclusive). If completed regularly these operations should not be invasive or directly affect nesting birds or wildlife. However, larger shrubs should be inspected prior to any works being carried out to ensure that nesting birds are not present or will not be disturbed. If birds are present the pruning should be left until the young have fledged the nest.

Proposed Rose Planting

Management Aims and Objectives

- 5.91 Management shall:
- a. Promote the healthy growth and development of flowers.
 - b. Prevent the spread of undesirable species.
 - c. Avoid encroachment onto public paths and play areas.
 - d. Keep rose beds litter free.

Management Prescriptions

Short Term Management

- 5.92 Refer to Section 6 for general soft landscape maintenance operations.
- 5.93 Fertilise rose planting every spring with a general purpose or rose fertiliser.
- 5.94 Dead head in summer to encourage further flowering
- 5.95 Formative pruning in the first year:
- a. Prune back in the first winter after planting in late winter or early spring and firstly remove dead, damaged or weak growth.
 - b. Hybrid Tea Roses (large flowering) – Prune remaining strong stems hard back to 10-15cm from ground.
 - c. Floribunda Roses (cluster flowering) – Prune remaining strong stems to 15cm from ground.
 - d. Shrub Roses – leave strong stems unpruned.

- e. Keep plants free of dead, diseased and damaged wood, crossing or rubbing branches or spindly growth.

Medium to Long Term Management

5.96 Continue to maintain the roses as above.

5.97 Maintenance Pruning

- a. When pruning firstly remove dead, damaged, weak growth, crossing or rubbing branches or spindly growth.
- b. Hybrid Tea Roses (large repeat flowering) – In Feb–March cut back strongest shoots to 15cm from base of the plant where last year’s growth began (4-6buds). Cut back less vigorous shoots to 10cm from base (2-4buds).
- c. Floribunda Roses (cluster repeat flowering) – In Feb–March cut back strongest shoots to 30cm from soil level. Cut back less vigorous shoots more severely.
- d. Shrub Roses (repeat flowering) – Prune back in Feb-March by one third. Shorten strong side shoots to 2-3 buds. Only carry out light renewal pruning on mature roses by cutting some of the older main stems back to the base.
- e. Shrub Roses (single flowering) – Prune in late summer after flowering. Cut back excessive build-up of older wood from the centre and if they become leggy and bare at the base remove 1-2 stems close to ground level to encourage new growth.
- f. Groundcover Shrub Roses – Prune in Feb-March. Only prune as necessary to keep desired size. Hard prune any wayward upright growths to within their allotted space. Reduce strong shoots by about a third and shorten side shoots back to two or three buds.

Proposed Climbers

Management Aims and Objectives

5.98 Management shall:

- a. Promote the healthy growth and development of decorative features such as flowers, and foliage.
- b. Promote an even coverage of growth across the supporting structure (wall, trellis, fence) and prevent a leggy base and flush of growth at the top of the plant only.
- c. Provide sufficient plant support depending on type of climber.
- d. Prevent the spread of undesirable species.

Management Prescriptions

Short Term Management

5.99 Refer to Section 6 for general soft landscape maintenance operations.

5.100 Dead head during the flowering season.

5.101 Formative Pruning

- a. Clematis ‘Jackmanii’ is categorised as RHS Pruning Group 3. It will need to be pruned back hard in the first spring after planting, to just above a strong pair of leaf buds approx. 30cm above ground level. This will encourage multiple stems.

- b. Climbing Rose – Tip prune the main stems to the first strong bud to encourage side shoots only if they are slow to branch.
- c. Training climbers –during the growing season twist the main shoots gently around the support and tie in. Tie inside shoots to fill up any gaps and prune any over long stems to maintain a neat appearance.

Medium to Long Term Management

5.102 Maintenance Pruning

- a. Pruning shall be carried out either after flowering (if flowers on last year's growth) or prune in late winter / spring if flowers on this year's growth.
- b. Vigorous climbers (RHS Pruning group 11) - No regular pruning is needed, but trimming may be required to keep the plant tidy and remove overlong stems.
- c. Moderate climbers (RHS Pruning group 12) – Prune annually and shorten side shoots to within three to four buds of the main plant structure.
- d. Trained wall shrubs (RHS Pruning group 13) - Prune annually and shorten side shoots to within two to four buds of the main plant structure and remove shoots growing toward the wall.
- e. Clematis 'Jackmanii' – To encourage the plant to grow over the trellis the Clematis should be left unpruned. Once established cut back old stems to the lowest pair of healthy buds in February / March.
- f. Climbing Rose - Prune after flowers have faded in late autumn or winter. Prune any flowered side shoots back by up to two thirds.
- g. Training climbers – Continue to tie in new shoots to the support.

Proposed Bulb Planting

Management Aims and Objectives

5.103 Management shall:

- a. Promote the healthy growth and development of flowers.
- b. Provide a foraging resource for invertebrates at various times of the year.
- c. Provide a visually interesting display for the local residents.

Management Prescriptions

Short to Long Term Management

- 5.104 Divide clumps of bulbs as necessary six weeks after flowering. Remove any faded flowers to extend the season and improve the vigour of the bulbs. Deadhead bulbs but allow leaves to die down before removing or cutting back to ground level.
- 5.105 Fertilizer - no feeding should be necessary during the first year. For subsequent years, one or two applications of high potash fertilizer annually will encourage large bulbs to form/promote flower production.
- 5.106 Overcrowded clumps - after the foliage and flowers have died down, lift the bulbs with their leaves on when the soil is moist, using a border or hand fork. Divide clumps of bulbs by hand, trying to avoid damaging the roots. Ideally replant singly, with adequate spacing. Water in thoroughly to settle the roots.

- 5.107 Check regularly for damage or infection and remove, as necessary.

Proposed Pond Aquatic and Marginal Planting

Management Aims and Objectives

- 5.108 Where the ground is only occasionally or seasonally wet refer to the pond edge meadow grassland maintenance requirements.
- 5.109 Otherwise the pond edge sowings or coir mat/ roll planting shall be managed to provide a variety of vegetation structures from dense tussock stands to bare and recently colonised mud. This shall be managed by cutting back on rotation.
- 5.110 Cleaning of water inlets and outlets should be undertaken as required to prevent blockages.

General Management Prescriptions

Short Term Management

- 5.111 Undertake an annual maintenance visit in July/August to monitor vegetation and remove undesirable weeds by hand.
- 5.112 Replacements - Any dead or dying plants will be replaced with equivalent stock and planted during the next planting season.

Medium – Long Term Management

- 5.113 During the third year of the management period the process of colonisation of the permanently wet areas by the proposed emergent planting shall be reviewed when a more predictable seasonal pattern of water levels will be known. If at this stage it was considered appropriate, suitable native plant material from existing thriving water bodies could be introduced to the area to aid colonisation.
- 5.114 Every third year sections of emergent/ marginal planting should be cleared between September and November, where necessary, and by hand (or mechanical means) and vegetation should be left to re-grow naturally to promote species diversity and a variation in structure.
- 5.115 Annually, during winter months, clear a third of the permanent open water area. This is to ensure the water body and its margins do not become choked with accumulating plant debris and emergent vegetation. No more than one third of the surface area of the permanent water area will be cleared during a single operation.
- 5.116 Following consultation with an Ecologist and Engineer, every three years or when otherwise required excessive silt debris should be removed on a rotational basis either by mechanical or manual means prior to new annual growth. Consideration to the presence of great crested newts in and around the waterbody should be taken (along with the lead-in times if a derogation licence needs to be sought for the works). All debris should be removed and used to create habitat piles close to the water body. Where this is not possible, arisings should be removed in accordance with licensing regulations.

Grassland Generally

Grass Maintenance Operations Generally

- 5.117 Maintenance of grass areas will be as described in BS 7370: Part 3, 1991 in suitable weather conditions and shall have the following objectives:

- a. Any shrinkage and/or depressions, bare patches and other failed areas will be rectified in accordance BS 7370-3; if returfing: Clause 12.2 if reseeding: Clause 12.6.
- b. Humps, bumps and hollows will be rectified in accordance with BS 7370-3, clauses 12.4 and 12.5, quality and appearance to match the existing.
- c. Prior to any grass cutting operations commencing, all litter and obstructive debris shall be removed.
- d. Fertiliser – Spring and autumn application granular fertiliser shall be applied only as required to help establish a healthy sward. (In March of each year apply a 9/7/7 fertiliser at 35g/m². In September of each year, apply a 3/12/12 fertiliser at 35g/m²). All fertilisers are to be stored and applied in accordance with the manufacturer's instructions. Depending on the vigour and health of the plant, fertiliser applications may be suspended as part of the regular inspection programme. Fertiliser should not be applied to areas of species rich grassland.
- e. No burning, shredding or chipping on site will be allowed.
- f. Generally, allow naturally colonizing species to emerge where appropriate e.g. in low maintenance grass / species rich grassland, but remove invasive 'weed' species.
- g. Within amenity and close mown grass areas prevent the encroachment of large herbaceous or scrub species, keeping amenity grassland areas free of flower stalks and weed species.
- h. Any damage caused during cutting such as trampling, rutting, abrasion or scalping should be repaired at the earliest opportunity to maintain an attractive sward.
- i. Litter and excessive fallen leaves should be removed regularly to maintain a neat appearance.
- j. Do not use mowing machinery or nylon filament rotary cutters closer than 100mm to tree stems. For operations close to stems, use hand tools. N.B. Use of hand tools will generally not be required if trees are mulched in accordance with the specification and this depth is maintained over and beyond the rectification period.
- k. Soft edges to seeded areas adjacent to shrub planting beds and HS+ trees are to be cut back to clean straight lines and/or smooth curves as directed by the planting plan geometry. Soil is to be drawn back and mulch topped up as required in compliance with the specification.
- l. Grass should be removed from all hard surfaced areas, paths, pavements and gravel/mowing strips to prevent the build-up of moss/lichen/slippery surfaces/nutrient enrichment.
- m. If standing water occurs, aeration with a spiked roller or other approved implement having tines which penetrate 50-100mm into the soil surface shall be carried out once per month between September and April inclusive on all areas.

5.118 Time of first cut - Mar/Apr after Autumn sowing or Jun/Jul after Spring sowing.

5.119 Monitor grass erosion annually and reinstate damaged or worn areas. Resow failed areas of grassland with original specification seed mix. Protect with temporary fencing until sufficiently established for intended use and water, as necessary.

5.120 For bulb planting swathes in grass the frequency of grass cutting is to be adjusted so that the grass can be left to grow longer around the bulbs and is cut a minimum of 6 weeks after the season flowering has finished. Therefore, after winter and spring flowering the grass shall be cut from June and after summer flowering from September.

Amenity GrasslandManagement Aims and Objectives

5.121 Management shall:

- a. Provide a more formal recreational space through more intensive mowing practices.
- b. Maintain a safe useable surface for public use.
- c. Standard grassland refers to the majority of the amenity grassland.
- d. Close Mown refers to the mown paths shown on the proposals plan.

Management Prescriptions – Standard*Short to Long Term Management*

- 5.122 Grass areas will be maintained in suitable weather conditions as Category E grass in accordance with the Tables 1, 2 and 6 of BS7370: Part 3 1991, but mown monthly to 50mm between April and November with a maximum allowable height of growth of 100mm, but with cuttings removed.
- 5.123 The standards to be achieved for short amenity grass shall be as follows, abstracted from Table 6 of BS7370: Part 3 1991:
- a. Total ground cover (by area) to be at least 75%.
 - b. No stones or hard litter at the surface with a diameter greater than 25mm.

Management Prescriptions – Close Mown*Short to Long Term Management*

- 5.124 Grass areas will be maintained in suitable weather conditions as Category D grass in accordance with the Tables 1, 2 and 6 of BS7370: Part 3 1991, i.e. mown weekly or fortnightly to 25mm between April and November with a maximum allowable height of growth of 50mm, but with cuttings removed.
- 5.125 The standards to be achieved for short amenity grass shall be as follows, abstracted from Table 6 of BS7370: Part 3 1991:
- a. Total ground cover (by area) to be at least 80%.
 - b. No stones or hard litter at the surface with a diameter greater than 25mm.

Turf grassland

- 5.126 Turf grass shall be cut to 25mm and watered immediately after installation. Continue to water the grass to ensure establishment during the first growing season.
- 5.127 Once established maintain the grassland as per amenity grass - standard grassland above.
- 5.128 Apply a spring lawn fertiliser in the second growing season.

Species Rich Grassland or Meadow Grassland and Wet GrasslandEstablishment Regime

- 5.129 Successful establishment of species rich grassland usually depends on having a low nutrient soil status and minimising the effects of undesirable weeds present from previously cultivated arable

land. Topsoil stripping removes the higher nutrient soil leaving the low nutrient subsoil suitable for sowing.

- 5.130 Once an area within the site has had the topsoil stripped, exposing the lower nutrient subsoil suitable for wildflower sowing below, it will require further cultivation to create a fine stale seed bed.
- 5.131 In respect of the ex-arable fields, once these have had their final crop harvested, further cultivation to create a fine stale seed bed school will be required as set out below:
- Firstly, the site should have an application of glyphosate. The site should now be left to fallow for as long as possible (min. two weeks) to dry out any weed rootstocks. After two weeks loosen, aerate and break up the soil.
 - Secondly, the seed bed will require repeat harrowing and rolling. This will create a fine tilth and encourage germination of seeds already in the soil prior to sowing.
 - Thirdly, once a fine tilth had been achieved the seed can be sown in autumn no deeper than 1cm. The seed mixture requires thorough mixing before and during sowing to avoid the separation of grasses and wildflowers.
 - The site will then require rolling to ensure good contact between the seeds and the soil.

Management Aims and Objectives

- 5.132 Management shall:
- Provide a more diverse sward with greater biodiversity value through more extensive management practices.
 - Prevent the spread of undesirable species
 - Prevent soil enrichment by removing mowing arisings.
 - Provide a visual distinction between the areas for recreation (amenity grassland) and areas for wildlife value.
 - Create and manage areas for the benefit of inter alia great crested newts, reptiles and invertebrates.

Management Prescriptions

Short Term Management

- 5.133 The wet grassland seed mix will be managed as a meadow, thereby allowing the grasses to grow tall, flower and set seed.
- 5.134 Once sown, the site will require good weed management. Regular mowing/ topping in the first year will generally control the annual weed growth and can be cut to a height of 50mm. However, treat residual perennial weeds with a selective herbicide or glyphosate by either spot spraying or by weed wiping with a wick applicator.
- 5.135 Following an autumn sowing the grass shall not be cut in spring or early summer in order to allow any sown annuals such as yellow rattle to flower. Instead the first cut shall take place in midsummer before the annual flowers can die back and set seed and the arisings removed. Mowing / topping regularly can then continue.
- 5.136 Grass areas will be maintained in suitable weather conditions as Category H grass in accordance with the tables 1, 2 and 6 of BS7370: Part 3 1991, i.e. mown twice a year with no maximum allowable height of growth once established (i.e. the first flowering season shall be sacrificed to prevent the more vigorous grasses outcompeting the less vigorous wildflowers). The cuts will be undertaken

during conditions when reptiles are likely to be active - i.e. daytime, in dry or at worst showery conditions with temperatures >10-12°C. Working outside these conditions could result in torpid animals being encountered, increasing the risk of fatality.

5.137 The standards to be achieved for the sward stated above shall be as follows, abstracted from Table 6 of BS7370: Part 3 1991:

- a. Total ground cover (by area) to be at least 40%.
- b. No stones or hard litter at the surface with a diameter greater than 75mm.

5.138 Oversow with the same seed mix, as necessary.

First growing season

- a. Time of first cut: Midsummer
- b. Height of first cut: to 50 mm.
- c. Frequency of subsequent cutting (minimum): Every 2 weeks or as required to cut to a height of 50mm, until September/October
- d. Mowing regularly will control the annual weed growth.
- e. Remove cuttings to avoid smothering the sward.

Second growing season and beyond

- a. Time of main cut: Summer hay cut in July after flowering. Flowering grassland should not be cut between spring and July to give the sown species an opportunity to flower.
- b. Height of cut: to 100 mm.
- c. Leave the 'hay' to dry and shed seed for 5-7 days and then remove from site.
- d. Time of second cut: Cut re-growth in late autumn.
- e. Height of cut: to 100 mm.
- f. Control invasive weed species by further cutting if required. Problem perennial weeds in established grassland can be controlled by carefully targeted applications of a suitable herbicide, this will take the form of either spot spraying or by weed wiping with a wick applicator. Carry out in winter or early spring when weeds are easier to identify.

Medium to Long Term Management

5.139 Continue the mowing regime as detailed above to develop vigorous wildflower grassland, and to retain suitable areas for great crested newts, reptiles and invertebrates. Oversow with the same seed mix, as necessary.

Low Maintenance GrasslandManagement Aims and Objectives

5.140 Management shall:

- a. Provide a visual distinction between the different types of grassland and their uses e.g. areas for recreation (amenity grassland) and areas for wildlife value (low maintenance).
- b. Prevent the spread of undesirable species

Management Prescriptions*Short Term Management*

5.141 Grass areas will be maintained in suitable weather conditions as Category F grass in accordance with the Tables 1, 2 and 6 of BS7370: Part 3 1991, i.e. mown every 3-4 weeks to 75mm between April and September with a maximum allowable height of growth of 150mm, but with cuttings removed.

5.142 The standards to be achieved for low maintenance grass shall be as follows, abstracted from Table 6 of BS7370: Part 3 1991:

- a. Total ground cover (by area) to be at least 70%.
- b. No stones or hard litter at the surface with a diameter greater than 25mm.

5.143 First Year – Take the first cut in March/April after Autumn sowing or June/July after Spring sowing. Then cut as necessary to maintain a grass height between 40-60mm, to prevent weeds smothering the slower growing grasses.

Medium to Long Term Management

5.144 Subsequent years – (Areas close to footpaths) Cut as category F grass to 75mm every 3-4 weeks as above.

5.145 Subsequent years – (All other areas) These areas can be left to grow tall, flower and seed from May to July / August, with mowing resumed in late summer. Therefore, mow these areas annually twice during March and September and remove cuttings if dense quantities.

5.146 Prevent the encroachment of herbaceous or scrub species, keeping grassland areas free of flower stalks and weed species.

5.147 Monitor grass erosion annually and reinstate damaged or worn areas. Resow failed areas of grassland with original specification seed mix and protect with temporary fencing until sufficiently established for intended use.

Rough Grass Margins

5.148 Adjacent to woodland edge planting there should be a 2m wide margin of rough grassland.

Management Aims and Objectives

5.149 Management shall:

- a. Benefit a range of species including long-lived invertebrates, small mammals and ground-nesting birds.

Management Prescriptions

- 5.150 The first year of maintenance of the rough grass margin shall follow the prescriptions of either the low maintenance or species rich grassland above, depending on its location.
- 5.151 Subsequent years shall be maintained with a rotational cut taken between late July and September every 3-5 years, or as required to control scrub encroachment. Approximately a third of the rough grass habitat should be cut during any one year to a height of around 8cm. Cuttings to be removed from site, unless instructed to a suitable on site location by the CA. The cuts will be undertaken during conditions when reptiles are likely to be active - i.e. daytime, in dry or at worst showery conditions with temperatures >10-12°C. Working outside these conditions could result in torpid animals being encountered, increasing the risk of fatality.

Tussock GrasslandManagement Aims and Objectives

- 5.152 Management shall:
- a. Provide suitable habitat for small mammals such as the field vole, shrews and wood mice, and overwintering insects.
 - b. Prevent the spread of undesirable weed species.
 - c. Keep area litter free and remove excessive fallen leaves regularly.

Management Prescriptions

- 5.153 Once sown, the site will require good weed management. Regular mowing/ topping in the first year will generally control the annual weed growth and can be cut to a height of 50mm. However, treat residual perennial weeds with a selective herbicide or glyphosate by either spot spraying or by weed wiping with a wick applicator.
- 5.154 In the first year take the first cut in March/April after Autumn sowing or June/July after Spring sowing. Then cut as necessary to maintain a grass height of 50mm, to prevent weeds smothering the slower growing grasses. Remove dense cuttings to avoid smothering the sward. Cut until the end of the growing season.
- 5.155 The second growing season and beyond shall be managed in the long term by cutting less frequently to develop a taller and rough grassland area. A cut every 3 years to 100mm shall control scrub and bramble development. If it is a large area of tussock grassland, cut on rotation to leave areas of undisturbed refuge for wildlife.
- 5.156 Unwanted perennial weeds may need control by occasional spot treatment to prevent their spread.
- 5.157 The management shall be reviewed and amended as necessary if the seeding is unsuccessful. This may require testing the soil fertility and nutrient status and the provision of remedial works as required.
- 5.158 The cuts will be undertaken during conditions when reptiles are likely to be active - i.e. daytime, in dry or at worst showery conditions with temperatures >10-12°C. Working outside these conditions could result in torpid animals being encountered, increasing the risk of fatality.

Proposed SUDs Basin / SwaleManagement Aims and Objectives

5.159 Management shall:

- a. Ensure that the basin grassland is managed less intensively in order to provide a more diverse sward with greater biodiversity value and habitat potential.
- b. The management shall be reviewed and amended as necessary if the conditions become variable generating areas that are either only seasonally wet or areas that are permanently waterlogged or boggy.
- c. Prevent the spread of undesirable species.
- d. Prevent soil enrichment by removing mowing arisings.
- e. Undertake an annual maintenance visit in July/August to monitor vegetation and remove undesirable weeds by hand.
- f. Keep area litter free and remove excessive fallen leaves regularly.
- g. Where installed, cleaning of water inlets and outlets should be undertaken as required to prevent blockages.
- h. Ensure conditions are not created that will encourage birdstrike species to this habitat.

General Management Prescriptions*Short to Long Term Management – Seasonally Wet*

- 5.160 Where the ground is only occasionally or seasonally wet the basin grassland shall follow the management of the species rich grassland with reference to 5.168 to 5.182 above.

Short to Long Term Management – Permanently Wet / Waterlogged Soils

- 5.161 During the first year the management of the basin grassland will be the same as for the seasonally wet areas above, as much as is practical depending on the conditions. The aim is to control and cut the annual weed growth by regular cutting.
- 5.162 In the following years the aim will be to create a varied structure of grassland planting to generate a wetland edge habitat. This will include clearing by hand (or mechanical means) and removing sections of planting on a 2-3 year rotation. Any dense stands of single species that colonise can also be selectively thinned as required.
- 5.163 Any vegetation removal shall take place between September and November to minimise disturbance to wildlife. Any aquatic vegetation removed will be left on the ground near to the pond for at least two days to enable any wildlife present to return to the water prior to its removal and disposal.
- 5.164 During the third year of the management period the process of colonisation of any permanently wet areas shall be reviewed when a more predictable seasonal pattern of water levels will be known. If at this stage it were considered appropriate, suitable native plant material could be introduced to the area to aid colonisation.

Additional Management – Permanent Open Water Areas

- 5.165 If the attenuation basin becomes permanently wet with open water the following additional management prescriptions will become necessary.

- 5.166 Annually, during winter months, clear a third of the permanent open water area. This is to ensure the water body and its margins do not become choked with accumulating plant debris and emergent vegetation. No more than one third of the surface area of the permanent water area will be cleared during a single operation. Any aquatic vegetation removed will be left on the ground near to the pond for at least two days to enable any wildlife present to return to the water prior to its removal and disposal.
- 5.167 Further, 15-20% of the marginal vegetation resource of each water body will be cut (on a rotational basis) in order to promote structural variety. This would be carried out between September and November to minimise disruption to wildlife.
- 5.168 Following consultation with an Ecologist and Engineer, every three years or when otherwise required excessive silt debris should be removed on a rotational basis either by mechanical or manual means prior to new annual growth. All debris should be removed and used to create habitat piles close to the water body. Where this is not possible, arisings should be removed in accordance with licensing regulations.

6. GENERAL SOFT LANDSCAPE MAINTENANCE OPERATIONS

- 6.1 The following describes (but may not be limited to) the type of operations the maintenance contractor may reasonably be expected to undertake during the course of his duties on site. Additional works may be as instructed by the MC at their specific request.

General Maintenance Operations

General Pruning Operations – Existing and Proposed Planting

- 6.2 Pruning operations for trees and shrubs shall have the following objectives:
- To remove any dead, dying or diseased wood, rubbing/crossing/broken branches and stems, and/or potentially weak or tight forks.
 - To maintain clearances above and within footpaths, seating/car parking/grassed areas and building lines to a height of 2.5m.
 - To achieve satisfactory shape and extent of growth: trees, well balanced head suitable to form of tree whether ex-current or de-current; shrubs, healthy bushy growth that promotes ornamental features such as flowers, fruit, autumn/stem colour, etc.
 - To remove suckers or other unwanted growth.
 - As the trees mature, lifting and thinning of crowns may become necessary.
- 6.3 Prune in accordance with good horticultural and Arboricultural practice at the appropriate time of year having regard to the species taking care to observe the following objectives:
- When removing branches do not damage or tear the stem or bark.
 - Keep wounds as small as possible and cut cleanly back to sound wood.
 - Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
 - Prune larger branches neither flush, nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide in accordance with BS 3998: 2010, Section 7, taking care to remove in small sections and lower to ground with ropes and slings.
 - Formatively prune by means of thinning, trimming and carefully shaping each specimen appropriately to species, location, season, and stage of growth, in order to leave a well-balanced natural appearance.
 - Use clean sharp secateurs, hand saws or other approved tools and trim off ragged edges of bark or wood with a sharp knife.
 - Do not prune: young trees during the late winter/early spring sap flow period; woodland whips or feathered trees, leave to attain full height; hedge plants possessing a leading shoot best left to obtain their planned height (e.g.) *Fagus sylvatica*, *Carpinus betulus*, *Taxus baccata*, *Thuja* spp., most columnar conifers and *Ilex* spp. However, lateral branches of these species should be cut back moderately to ensure a dense habit.

General Landscape Softworks Maintenance Operations – Proposed Planting

- 6.4 All newly planted landscapes and plant materials therein, shall be managed in accordance with the prescriptions identified below:
- Replacements* – At the end of the growing season, check all plants and remove all dead foliage, dead wood and broken or damaged branches and stems.

- b. *Any dead or dying plants* will be replaced with equivalent stock and planted during the next planting season replaced for five years from scheme completion for planning compliance. Continual failures of a particular species at a particular locality may suggest general unsuitability for the location. Thereafter plant and replace to ensure continuity of cover. All plant stock to be sourced from a supplier certified to be pest and disease free and in accordance with Plant Passport / Animal and Plant Health Agency (APHA) and current DEFRA requirements. Supplier information / certification to be retained for a period of not less than 12 years and must be made available upon request.
- c. *Plant Support Systems and Protection* – Stakes, ties and guards will be checked regularly and adjusted, repaired or replaced and removed upon successful establishment. Stakes will be removed following a test on sample trees. To test whether trees are root-firm, sample trees within a group (say 10%) shall be untied in spring and monitored over the next growing season. When firmness is proven, remove all remaining stakes and ties, and fill in resulting post holes and remove surplus materials. Where stakes and ties are still necessary, further inspections will be required to adjust and maintain them in good order, ensuring that stems are not damaged.
- d. *Pest and disease* - Treat as necessary/appropriate. Monitor and act up on findings. Where planting shows signs of stress (chlorosis, etc.), identify any underlying problems or signs of stress, disease or damage and take appropriate remedial action. In some instances it may be necessary to use alternative species better suited to the local conditions.
- e. *Watering* – The Contractor shall ensure that there is no delay in the execution of watering by obtaining all necessary licences and permissions from water companies for the efficient execution of watering. The Contractor shall water all planting undertaken under the Contract, at the frequency necessary to ensure establishment and survival, until all planting works are completed. Plant materials shall be watered immediately after planting. Watering of new trees/shrubs/planting to continue for first 2 years to ensure successful establishment. Carry out regular feeding and watering throughout the growing season to promote healthy growth, taking care not to over water or over feed using a fine hose or sprinkler until full depth of topsoil is saturated. Extra Heavy standard/semi mature trees are to be watered weekly from the beginning of the growing season (April/May) and throughout the summer, during the first year of establishment. This can be adjusted depending on the weather. During the establishment period all trees are to be monitored by the management team for signs of die back and dehydration. The CA shall be informed of any apparent signs of overdue stress.
- f. *Re-firming* – Ensure that the plant materials remain firmly bedded after strong winds, frost heave and other disturbances. Re-firm by treading around base.
- g. *Weeding* – General: Remove weeds entirely, including roots with minimum quantity of soil and disturbance to plants. Trees: Weed 1m diameter around each plant. Maintain as required to achieve an 80% weed free area to the base of each tree for a period of 5 years, to ensure the trees satisfactory establishment and development. Shrubs and hedges: Base of plant materials to be kept clear of all pernicious weeds and invasive species by hand weeding/spraying/cultivation on a monthly basis. Ensure mulch mats are replaced or repaired, as necessary. Remove weeds encroaching mulch mats or coming through planting split/hole. Remove weeds entirely, including roots with minimum quantity of soil and disturbance to plants.
- h. *Mulching* – remove all weeds and maintain mulch to 75mm, by topping up twice a year until superfluous: 1m diameter to tree planting with a collar of 10-12 cm around stem clear of mulch to prevent trunk from rotting; retained within planting bed for ornamental shrubs and hedging. Rake to a neat, clean condition.

- i. *Fertiliser* – Fertiliser shall not be used where there is pasture grazing. For all other planting areas apply late winter/spring granular fertiliser (a 20:10:10 spring fertiliser at 30g/m²) to ornamental plant stock [only as required] to help establish healthy plant stock. All fertilisers are to be stored and applied in accordance with the manufacturer's instructions. Depending on the vigour and health of the plant, fertiliser applications may be suspended as part of the regular inspection programme.
- j. *Weeds and Herbicide Application* - Herbicide shall not be used where grass is intended for pasture grazing. For all other grasslands, spot removal of perennial weeds or cutting of annual weeds and invasive species will be carried out by cutting, hoeing or hand pulling, with the use of chemicals kept to a bare minimum. If significant patches of persistent weed species (including coarse grasses such as couch or False Oat Grass) occur, an approved folia-acting systemic translocated herbicide or lawn herbicide as appropriate can be used. A selective herbicide (for general application) or non-selective herbicide (for spot treatment) shall be applied in accordance with the manufacturer's instructions taking care not to damage surrounding plants and grass from spray drift. A glyphosate based product approved by Natural England and the Environment Agency as suitable on weeds in or near water bodies can be used (Refer to "Guidelines for the use of herbicides on weeds in or near waterbodies" (PB2289) 1995; this document is available from the Health and Safety Executive (HSE) and prior to commencing contractors should check for updates on approved products). Comply with all current COSHH and Control of Pesticides Regulations guidelines and/or requirements.
- k. *Burning of arisings* - not permitted on site at any time.
- l. *Mammalian pest control* - to be completed by a specialist firm with suitable experience in dealing with the particular pest.
- m. *Removal of arisings* – any infected (diseased or pest) prunings or timber arisings shall be removed off site immediately after cutting and burned or buried at a depth of no less than 2.0m in a location to be approved in writing by the Overseeing Organisation, except diseased arisings affected by diseases described in Arboriculture Research Notes or Arboriculture Research and Information notes issued by the Arboricultural Advisory and Information Service, which shall be dealt with in accordance with the advice published in these notes. Healthy arisings shall be removed from site to a suitable composting facility or utilised as windrowed brash / creation of reptile hibernacula at the specific direction of the Project Ecologist.
- n. *Litter clearance* - The contractor shall maintain the site to a clean and litter free standard by removing all litter at intervals highlighted within the Schedule.
- o. *Cleanliness* - The site is to be maintained in a clean and tidy manner after any maintenance operations. All arisings are to be removed from hard surfaces to avoid any potential slip hazard. Collect accumulations of drifted leaves from the vicinity and from planting beds.

Health and Safety

- 6.5 All works shall be carried out in accordance with the Authority's and the Contractor's own Health and Safety Policy and in accordance with all current Statutory Obligations.
- 6.6 All landscape maintenance operations shall be subject to the preparation and approval of a project specific Risk Assessment and Method Statement prior to commencing any works on site. Copies of these shall be made readily available to each team vehicle attending the Premises. A full copy shall be forwarded [and approved by] the MC, prior to visiting the site.
- 6.7 The contractor shall exercise all reasonable care and consideration towards visiting members of the public in order to provide protection against hazards caused by the required maintenance operations. Examples include [but may not be limited to]:

- a. Appropriate signage used to warn members of the public of the operations taking place.
 - b. Appropriate barriers/method of cordoning off the work site to prevent access by the public may be required for certain maintenance operations.
 - c. Special care and attention shall be exercised by the contractor when working near parked cars.
- 6.8 COSHH assessments shall be completed for all substances hazardous to human health that are to be used on site. These may include [but not necessarily be limited to]: herbicides, pesticides, fertilisers and fuel. Copies shall again be forwarded to the MC for approval prior to commencing works on site.
- 6.9 The Contractor shall also note the following whilst on site:
- a. All personnel are to check in and out of the compound upon arrival/departure.
 - b. The correct PPE appropriate to the maintenance operation to be carried out is to be worn at all times when on site. High visibility waistcoats shall be worn at all times.
 - c. Vehicles and trailers shall be parked in locations so as not to cause parking issues for visiting members of the public.
 - d. No machinery shall be left unattended at any time. All machinery shall be in a serviceable condition and be fit for its purpose.
 - e. Smoking on site shall be allowed in designated areas only.
 - f. No audible music to be played whilst on site.
 - g. No alcohol to be consumed whilst on site.
 - h. All defective and vandalised areas shall be reported with photographic evidence supplied immediately. Areas that may cause harm shall be cordoned off and made safe.
 - i. All contractor's workwear and vehicles shall bear their employer's name upon them.
 - j. Contractors will be allowed access to on site comfort facilities.
 - k. Contractors are required to supply a periodic work schedule for the duration of the rectification period and landscape maintenance period to the Site Duty Manager.
 - l. Contractors must make contact with the MC (Site Duty Manager) in advance of pending visits/attendances.
 - m. Any incidents arising as a result of the contractor carrying out his duties under contract must be reported to the Site Duty Manager with immediate effect.

7. MANAGEMENT OF PROPOSED HARD LANDSCAPE TREATMENTS

- 7.1 This incorporates all ‘publicly accessible/accessible to all’ hard surfacing and boundary treatments (where applicable) including paving, street furniture and other publicly accessible structures and / or features.

General Management Aims and Objectives

- 7.2 Management shall:
- a. Provide and maintain an attractive/visually appealing and robust landscape setting to the development all year round.
 - b. Maintain furniture in a safe and good condition.
 - c. Maintain health and safety requirements to all publicly accessible areas of public open space for all residents and visitors. Maintaining surfaced paths in a safe condition.
 - d. Create a litter free environment.
 - e. Maintain the visual appearance and safety of play structures, play hard surfaces and play elements in accordance with original design intention.

Surfacing

General Management Prescriptions

- 7.3 Standards of maintenance and procedures shall be generally in accordance with BS 7370 Part 2: 1994 “Recommendations for the Maintenance of Hard Areas (excluding sports surfaces)” category C.
- a. Weekly inspections to determine the need for maintenance operations.
 - b. Sweeping and litter collection – every 7-14 days.
 - c. Stain removal – complete within 7-14 days.
 - d. Remove leaves from paths, hard surfaces and play areas upon leaf fall.
 - e. Weed and moss growth control – so that it does not exceed 3% of paved area and 10% of the length of joints within it. Spot spray weeds with non-residual herbicide to remove pernicious weeds. Use strictly in accordance with manufacturer’s instructions and comply with all current COSHH and Control of Pesticides Regulations guidelines or requirements.

Kerbs and Edge Restraints

- 7.4 Maintenance of all the hard surfaces shall include making good the kerb or edge restraint. If any such units are loose, broken or out of line or level by 6mm or more, the restraint shall be lifted and reset to the original alignment replacing units, as necessary.

Block, Cobble, Sett and Flag Paving

- 7.5 The block paving should be identified as ‘Setts and Cobbles’ and the flag paving as ‘Precast Concrete Slab Paving’ within Table A1 inspection and maintenance checklist.
- 7.6 If the paving becomes loose, fill gaps to original specification of either sharp sand or mortar and reset.
- 7.7 If any repair is required as a result of damage or settlement or units are loose, broken or no longer true to line, form and level by 6mm or more, the paving slabs/paviours/hard surfacing shall be made good by resetting to the original alignment in accordance with the original detail specification and,

where relevant, BS 6717: Part 3: 1989 – Precast concrete paving blocks: Code of Practice for Laying. Broken units to be replaced on a like-for-like basis.

- 7.8 For flexible paving - brush over annually with sharp sand until superfluous and joints become effectively sealed.

Asphalt Paving

- 7.9 The tarmacadam should be identified as 'bituminous surfacing' within Table A1 inspection and maintenance checklist.
- 7.10 The weeds should be removed by the application of an approved herbicide once a year and regrowth spot treated, as necessary.
- 7.11 Repair asphalt as required to the original specification.

Proprietary Sport Surfaces – Open Access Ball Court

- 7.12 Carry out specific maintenance requirements as directed by the surfacing supplier.
- 7.13 Keep surface clean by sweeping or vacuuming regularly and removing leaves, flowers and other detritus from the surface and surrounding fence line.
- 7.14 Deal with any moss or algae growth as it appears and apply moss killer annually.
- 7.15 Annually wash the surface with a mild cold water detergent taking care not to dislodge any of the surface.

Loose Gravel Infill

- 7.16 The gravel should be identified as 'Loose gravel' within table A1 inspection and maintenance checklist.
- 7.17 As required top up gravel to maintain minimum specified depth.

Resin Bound Gravel

- 7.18 Remove any loose areas and fill any cracks or splits with additional resin bound aggregate as in accordance with original detail specification.

Self-Binding Paths, Hoggin and Informal Gravel Footpaths

- 7.19 The pathway should be identified as 'Self binding / gravels / hoggin' within table A1 inspection and maintenance checklist.
- 7.20 A newly laid path will require regular maintenance by watering with a hose fitted with a rose sprayer, or similar method, plus rolling with a non-vibratory roller as necessary until the surface is entirely consolidated. Drag matting or brushing should also be carried out if necessary. Any depressions should be de-consolidated, additional material added, re-rolled and made good as per the original specification.
- 7.21 Any depressions should be made good with additional surfacing as necessary (to be topped up and rolled to fill all hollows to stop puddling).
- 7.22 Maintenance of the established surface will include spiking the surface to improve drainage if any puddling should occur.

- 7.23 If any repair or replacement is required as a result of damage or settlement, top up the gravel surface within the affected area in accordance with the original landscape specification.

Loose Safety Surfacing (Bark)

- 7.24 The Safety surfacing should be identified as 'Safety surfaces: loose materials including bark' within table A1 inspection and maintenance checklist.

- 7.25 Regular maintenance should be carried out to include:

- a. Visual inspection in compliance with ROSPA guidelines: daily.
- b. Regular raking: weekly (inspection to be carried out for any sharp objects or animal mess that should be removed and disposed of safely).
- c. Top up bark mulch to original depth: annually.
- d. Top up mulch underneath the structures as required.

Bound Safety Surfacing

- 7.26 This surfacing should be identified in BS7370 Part 2: 1994 as 'Safety, artificial and continuous surfaces' within table A1 'Checklist for Inspection and Maintenance'.

- a. Regularly brush the wet pour once a month to remove debris and litter.
- b. Repair any damage or seams/joints as required in accordance with the manufacturer's recommendations.

Play Sand

- 7.27 Regular maintenance should be carried out to include:

- a. Raking of sand weekly (inspection to be carried out for any sharp objects or animal mess that should be removed and disposed of safely).
- b. Periodic forking.
- c. Disinfectant treatment – a mild solution of child-safe household disinfectant should be sprinkled on using a watering can or similar and sprayed in with a hosepipe. Children should be kept out of the sand for a day. The frequency of disinfection treatment will depend on the rate of use of the sand and should be referred to the play manufacturer's specification.
- d. Top up sand level annually.
- e. Top up play sand underneath the structures as required.

Reinforced Grass Surfacing

- 7.28 For amenity grass maintenance refer to Amenity Grass in Section 5.

- 7.29 Repair any damaged cells by lifting as required in accordance with the manufacturer's recommendations.

Timber Boardwalk and Timber Steps

- 7.30 The tread shall be kept clear to ensure a slip free surface. All timber surfaces are to be re-treated as necessary and all fixings are to be checked regularly and re-tightened if necessary.

Drainage channels/gullies/conduits

- 7.31 Check for uneven/insecure/broken channels/gullies/conduits. If any such units are loose, broken or no longer true to line, form and level by 6mm or more, the restraint shall be lifted and reset to the original alignment replacing units as required.
- 7.32 Keep all gullies, drainage channels, conduits, or similar, free flowing by rodding or specialist cleaning operative. Frequency: Annually or as notified/required.

FurnitureGeneral Management Prescriptions

- 7.33 The contractor should maintain visual appearance and safety of all furniture and structures in accordance with original design intention. The Contractor shall:
- a. Inspect for sign of splits and splinters. Splits over 5mm to be filled. Splinters to be sanded out and re-stained/re-treated in accordance with the original specification or manufacturer's guidance where required.
 - b. All fixings to be checked regularly and re-tightened if necessary.
- 7.34 Cleaning of seats, standard bollards, cycle stands and other structures shall form part of the routine maintenance programme. Water and mild detergent should be used for washing down and the recommendations in Table 4 in BS 7370: Part 2 for specific stains and graffiti, etc.
- 7.35 Ensure all lighting units are operational and replace bulbs, as necessary.
- 7.36 Signage shall be inspected monthly for damage or vandalism and repaired as necessary in consultation with the original manufacturer.
- 7.37 Refer to the original manufacturer for specific guidance on repairs.
- 7.38 Waste from litter and dog bins to be removed off site on a weekly basis to a licensed location.
- 7.39 Allotment water troughs and fixtures provided on site shall be cleaned annually during the winter months whilst water supply is suspended. Empty and scrub the trough and fixtures to prevent build-up of algae and bacteria.

Hardwood Bridges

- 7.40 Tread to be kept clear to ensure slip free surface.
- 7.41 All timber surfaces to be re-treated, as necessary.

Signage

- 7.42 Approximately six wooden signs mounted on posts (A4 to A3 sized, depending on the content) will be provided at suitable locations within the green infrastructure. Each will briefly describe different aspects of the wildlife benefits of the adjoining features (e.g. green corridors, waterbodies). Together the signs will include reference to green corridors, dormice, [REDACTED] bats, birds, reptiles, amphibians, hedgehogs and small mammals.

Log piles

- 7.43 Small log piles (with approximate dimensions of 0.5m long x 0.5m wide x 0.3m high) will aim to be provided approximately every five to ten metres within the retained hedgerows. Wood from the hedgerow and tree cutting works will be employed for this purpose. The log piles are intended to provide suitable habitat for use by newts, hedgehogs (e.g. during hibernation), small mammals and invertebrates.

Bat and bird boxes

- 7.44 The state of the boxes and brackets will be checked and replaced if damaged or are showing signs of wear. A suitably qualified ecologist is required to check the bat boxes for evidence of bats should they need to be removed/replaced/re-hung.

Public Boundary Treatments (Walls, Fencing and Gates)General Management Prescriptions

- 7.45 Standards of maintenance and procedures shall be generally in accordance with BS7370 Part 2: 1994 “Recommendations for the Maintenance of Hard Areas (excluding sports surfaces)”, Section 5.2 to 5.9.
- 7.46 The contractor should maintain visual appearance and safety of all boundary treatments and structures in accordance with the original design intention. The Contractor shall:
- Carry out regular inspection of the post and wire fence, close board fence, lap fence, venetian fence, weld mesh trellis, railings and gates for corrosion or weathering and ensure that any mechanisms function properly. Re-tension any slack wires within the post and wire fence.
 - Apply clear wood preservative every 5 years to softwood fence and gates as necessary to ensure adequate protection.
 - Repair any corroded parts with a rust preventative ready for subsequent painting to match the specified finish.
 - Inspect stone walls, brickwork and rendering and repair as necessary in accordance with the original specification.
 - Refer to the original manufacturer for specific guidance on repairs, as necessary.

Play AreasGeneral Management Prescriptions

- 7.47 The contractor should maintain the visual appearance and safety of structures, hard surfaces and play elements in accordance with the original design intention.
- 7.48 All play areas should be maintained and inspected at a frequency to comply with current legislation and safety regulations. Where defective equipment cannot be repaired immediately it shall be cordoned off with high visibility hazard tape and a warning sign.
- 7.49 Cleaning of play equipment, related surfaces and other structures shall form part of the routine maintenance programme. Water and mild detergent should be used for washing down and the recommendations in Table 4 in BS 7370: Part 2 for specific stains and graffiti, etc.
- 7.50 General maintenance operations will include:
- Sweep up of loose debris and litter collection every 7-14 days.

- b. Remove excess lubricants (wax, grease) which may have been applied to slides within 7 days.
- c. Remove any cans or glass from the area within 7 days.

Water Feature

General Management Prescriptions

- 7.51 The contractor should maintain the visual appearance and safety of water features in accordance with the original design intention.
- 7.52 Carry out specific maintenance requirements as directed by the supplier.
- 7.53 Operations may include but not limited to the following:
 - a. Maintain the water feature pump in good working condition. Remove any dead leaves and other debris to prevent the pump from getting clogged.
 - b. If water is re-circulated, the water level shall be monitored particularly during dry summer months when water can evaporate more quickly. Top up the water level as required to maintain an optimum water level and prevent the water pump from overworking.
 - c. Drain and clean the water feature every 6 months to remove dirt, scale, rust and other debris build up. Use appropriate cleaning products as recommended by the manufacturer.
 - d. Regular monitoring and testing of the water quality will be required as part of a general health and safety check of the water feature.

8. GENERAL MAINTENANCE AND MANAGEMENT PROCEDURE AND MONITORING

Responsibilities

- 8.1 The management and maintenance of the public open space will be the responsibility of the Landscape Contractor in the first year following practical completion.
- 8.2 Beyond the first year the responsibility for management will fall to the Management Company.
- 8.3 All management contracts will be agreed and reviewed by the management company.

Procedure and Monitoring

- 8.4 The management company will control general landscape maintenance operations through an Annual Management and Maintenance Review (AMMR) undertaken at the end of October. It is suggested that this process can be used both prior to and post adoption.
- 8.5 Prior to the AMMR, an inspection of the development parcel will be carried out to inform the AMMR of potential future action required.
- 8.6 The purpose of the annual autumn review is to provide a singular point in time whereby precedents and priorities for management and maintenance requirements pertaining to the development can be decided, broadly, for the year ahead, at a time (should more immediate need for rectification of defects be required) when impacts upon vegetation and ecology can be minimised as they enter their dormant phase over the winter months.
- 8.7 The inspection shall determine the nature and extent of the following and be recorded on the Risk Register (RR) (timing as Management Review):
 - a. General appearance and condition of existing and proposed plant material and tree stock for planting disease, damage or health.
 - b. Vandalism.
 - c. General appearance and condition.
 - d. Any invasive species.
 - e. Any evidence of protected species.
 - f. Works required under the AMP.
- 8.8 Completion of the risk register (RR) by the Contractor should be undertaken by the contractor's onsite representatives.
- 8.9 Items brought to the MC's attention, through the process of monitoring and recording on the Risk Register or through third parties that identify and place members of the general public at medium to high risk, should be actioned immediately rather than waiting for the AMMR.
- 8.10 It is proposed that the timing of the RR be discussed at the AMMR to allow for adjustment as required by site conditions (including after major weather events such as storms, high winds, snowfall etc.) and the MC's Public Liability Insurance policies. If required, the frequency of items within the RR would be revised (not less than annually), to better manage the risk to the public. Forthcoming maintenance operations would therefore be adjusted accordingly.
- 8.11 AMMR's will continue to take place beyond and into the medium and long-term timeframes. An assessment of the prevailing situation and conditions on site will determine the need for any further changes to the management plan or operations.

- 8.12 Safety issues reported by the general public shall also be investigated as soon as practicably possible and remedial works undertaken, as necessary. Annual reviews of tree planting shall take place in October/November prior to tree work being carried out.

Report to the MC

- 8.13 A reporting, booking in and out procedure and pro-forma are to be agreed with the client/MC prior to the commencement of any maintenance contract and/or works in order to ensure proper compliance with procedures on site and Health and Safety legislation.

Management Review

- 8.14 Recognise, acknowledge and act upon any items arising from monitoring by amending the maintenance operations listed below or by instructing agreed and discreet works packages.

APPENDIX 1

LANDSCAPE MAINTENANCE SCHEDULE

ST=Short term MT=Med. term LT=Long term			DAILY	WEEKLY	FORTNIGHTLY	MONTHLY	SEASONALLY	ANNUALLY	X YEARLY	AS REQUIRED	SPRING			SUMMER			AUTUMN			WINTER		
											APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH
9.3	ST-LT	Remove deadwood, litter and any unwanted objects using rakes				*				*												
9.4	ST-LT	Monitor the spread of weed growth and cut / rake as necessary					*															
9.5	ST-LT	Clear sections of the bank vegetation by mechanical or manual means on rotation every 3 years. Remove cuttings						*														
9.6	ST-LT	Repair eroded areas by reseeding								*												
10. EXISTING WATERBODIES																						
10.1	ST-LT	Annual maintenance visit to monitor vegetation growth						*														
10.2	ST-LT	Monitor the spread of invasive / exotic species (e.g. Himalayan Balsam, seek advice from the EA)						*														
10.3	ST-LT	Wet Grassland - Cut to 75mm high after flowering						*														
10.4	ST-LT	Wet Grassland - Monitor the spread of weed growth and cut / rake as necessary					*															
10.5	ST-LT	Remove litter and any unwanted objects using rakes				*																
10.6	ST-LT	Monitor and clean water inlets and outlets as required to prevent blockages.				*				*												
10.7	ST-LT	Clear sections of the bank vegetation by mechanical or manual means on rotation every 3 years. Remove cuttings						*														
10.8	ST-LT	Remove accumulation of silt and debris on rotation every 3 years by mechanical or manual means.						*														
10.9	ST-LT	Clear open water area of algae growth and plant debris to leave a third coverage.						*		*												
10.10	ST-LT	Repair eroded areas by rotovating and reseeding								*												
10.11	ST-LT	Remove branches of trees that overhang and shade the ditch.								*												
11. EXISTING GRASSLAND																						
		ZONE 1 - Informal mown path																				
11.1	ST-LT	Cut grass to 50mm high		*																		
11.2	ST-LT	Remove litter and fallen leaves								*												
11.3	ST-LT	Inspect for weed growth and apply herbicide as necessary								*												
		ZONE 2 - Path verge																				
11.4	ST-LT	Cut grass to 75mm high		3x																		
11.5	ST-LT	Inspect for weed growth and apply herbicide as necessary								*												
		ZONE 3 - Flowering grassland																				
11.6	ST-LT	Summer hay cut - Cut grass to 100mm high						*														
11.7	ST-LT	2nd cut - Cut regrowth to 100mm high						*														
11.8	ST-LT	Inspect for weed growth and apply herbicide as necessary								*												
11.9	ST-LT	Strim or cut down unwanted spread of scrub and ruderal vegetation						*														
12. EXISTING SCRUB PLANTING																						
12.1	ST-LT	Apply summer herbicide if necessary						*		*												
12.2	ST-LT	Apply winter herbicide if necessary						*		*												
12.3	ST-LT	Cut down or mow scrub edge buffer to prevent unwanted spread of scrub and create long grassland edge						*														
12.4	ST-LT	Cut bramble growth on a 2-3 year rotation						*														
12.5	ST-LT	Cut bramble to prevent further encroachment as required				*				*												
12.6	ST-LT	Selectively coppice on a 7 year rotation						*														
12.7	ST-LT	3 Yearly review of selective thinning / coppicing programme							3 *													
13. PROPOSED WOODLAND AND TREE AND SHRUB MIX PLANTING																						
13.1	ST	Water plants as necessary for the first year		*						*												
13.2	ST-MT	Check and repair/ replace mulch mats as required				*																
13.3	ST-MT	Check and repair / replace ties, guards and canes. Remove as required (medium term)				*																
13.4	ST-MT	Inspect and refirm planting as required				*																
13.5	ST	Inspect for weed growth and hand weed as necessary				*																
13.6	MT-LT	Inspect for weed growth and hand weed as necessary					*															

ST=Short term MT=Med. term LT=Long term			DAILY	WEEKLY	FORTNIGHTLY	MONTHLY	SEASONALLY	ANNUALLY	X YEARLY	AS REQUIRED	SPRING			SUMMER			AUTUMN			WINTER														
											APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
13.7	ST-LT	Apply summer herbicide if necessary						*		*																								
13.8	ST-LT	Apply winter herbicide if necessary						*		*																								
13.9	ST-MT	Remove snow from light limbed trees to prevent limbs breaking and branches splaying																																
13.10	ST-LT	Replace dead or damaged plants - Evergreen																																
13.11	ST-LT	Replace dead or damaged plants - Deciduous																																
13.12	ST-MT	Prune trees and shrubs						*		*																								
13.13	MT	Reduce density of planting by selective thinning on rotation once good establishment of planting achieved						*																										
13.14	MT-LT	Plant additional bulbs and transplants to enhance the field layer in semi shaded areas																																
13.15	MT-LT	Annual review visit to determine any required tree work, particularly at edges and close to public areas						*																										
13.16	MT-LT	Coppice understorey scrub species and woodland edge planting on a short 6-8 year rotation						*																										
13.17	MT-LT	Coppice canopy species on a longer 20 year rotation						*																										
13.18	MT-LT	Cut down or mow rough grass margin edges to prevent unwanted spread of scrub on a 3-5 year rotation						*																										
13.19	LT	Selective felling and replanting on a 5 year rotation (edges) and 10 year rotation (centre)						*																										
13.20	LT	Bat Survey undertaken prior to any tree works or tree pruning																																
13.21	LT	Remedial tree work subject to bat survey - no bats present																																
13.22	LT	5 Yearly review of selective thinning programme								5x																								
14. PROPOSED COPPICE PLANTING																																		
14.1	ST	Water plants as necessary for the first year		*																														
14.2	ST	After spring planting, cut back to ground (first cut back)																																
14.3	ST-MT	Check and repair/ replace mulch mats as required				*																												
14.4	ST-MT	Check and repair / replace ties, guards and canes. Remove as required (medium term)				*																												
14.5	ST-MT	Inspect and refirm planting as required				*																												
14.6	ST	Inspect for weed growth and hand weed as necessary				*																												
14.7	MT-LT	Inspect for weed growth and hand weed as necessary					*																											
14.8	ST-LT	Apply summer herbicide if necessary						*		*																								
14.9	ST-LT	Apply winter herbicide if necessary						*		*																								
14.10	ST-LT	Replace dead or damaged plants - Deciduous								*																								
14.11	MT-LT	Remove tree seedlings						*		*																								
14.12	MT-LT	Cut down or mow scrub edges to prevent unwanted spread of scrub					*																											
14.13	MT-LT	Reduce density of planting by coppicing on a 3 year rotation (first cut to be 3 years after first cut back)						*																										
14.14	MT-LT	3 Yearly review of selective thinning / coppicing programme								3x																								
15. PROPOSED NATIVE SCRUB PLANTING																																		
15.1	ST	Water plants as necessary for the first year		*																														
15.2	ST-MT	Check and repair/ replace mulch mats as required				*																												
15.3	ST-MT	Check and repair / replace ties, guards and canes. Remove as required (medium term)				*																												
15.4	ST-MT	Inspect and refirm planting as required				*																												
15.5	ST	Inspect for weed growth and hand weed as necessary				*																												
15.6	MT-LT	Inspect for weed growth and hand weed as necessary					*																											
15.7	ST-LT	Apply summer herbicide if necessary						*		*																								
15.8	ST-LT	Apply winter herbicide if necessary						*		*																								
15.9	ST-LT	Replace dead or damaged plants - Evergreen								*																								
15.10	ST-LT	Replace dead or damaged plants - Deciduous								*																								
15.11	ST-MT	Scarify the grassland at the edges of the scrub planting to open up the sward to encourage seed regeneration						*																										
15.12	ST-MT	Prune scrub planting						*		*																								
15.13	MT-LT	Cut down or mow scrub edges to prevent unwanted spread of scrub					*																											
15.14	MT-LT	Reduce density of planting by coppicing on a 7 year rotation once good establishment of planting achieved						*																										
15.15	MT-LT	3 Yearly review of selective thinning / coppicing programme								3x																								
16. PROPOSED NATIVE FIELD HEDGEROW PLANTING																																		

ST=Short term MT=Med. term LT=Long term			DAILY	WEEKLY	FORTNIGHTLY	MONTHLY	SEASONALLY	ANNUALLY	X YEARLY	AS REQUIRED	SPRING		SUMMER			AUTUMN			WINTER							
											APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH				
16.1	ST	Water plants as necessary for the first year		*						*																
16.2	ST	Heavy prune hedge immediately after planting to encourage bushy side growth						*		*																
16.3	ST-MT	Check and replace mulch mats or top up loose mulch as required				*																				
16.4	ST-MT	Check and repair / replace ties, guards and canes. Remove as required (medium term)				*																				
16.5	ST-MT	Inspect and refirm planting as required				*																				
16.6	ST	Inspect for weed growth and hand weed as necessary (first 3 years)				*																				
16.7	ST-LT	Strim, cut down or mow hedgerow margin to create a rough grassland habitat					*																			
16.8	MT-LT	Inspect for weed growth and hand weed as necessary					*																			
16.9	ST-LT	Inspect and treat any pests and diseases																								
16.10	ST-LT	Replace dead or damaged plants																								
16.11	ST-LT	Inspect hedgerow after extreme weather to ensure it is safe																								
16.12	MT-LT	Cut hedge in subsequent seasons on a 3 year rotation and cut no more than a third of the hedgerow at one time. Allow to grow to 2.4-3.6m tall						*																		
16.13	MT-LT	Preserve height if necessary by thinning crown / pruning leaders to desired height						*		*																
16.14	MT	Reduce density of planting by selective thinning on rotation once good establishment of planting achieved						*		*																
16.15	LT	Lay hedgerow to reduce gaps and prevent turning into a line of trees																								
16.16	LT	Plant up gaps in the hedgerow using similar local species - Deciduous																								
17. PROPOSED STREET TREES AND SPECIMEN TREES																										
17.1	ST	During dry periods water trees twice a week as necessary		*twice						*																
17.2	ST	Individual trees - water once a week during the first year		*						*																
17.3	ST	Individual trees - outside of growing season water to establish healthy growth								*																
17.4	ST	Monitor tree growth when watering for signs of overdue stress and overwatering		*																						
17.5	ST	Inspect and top up mulch as required				*																				
17.6	ST	Inspect for weed growth and hand weed as necessary				*																				
17.7	ST-MT	Inspect and refirm planting as required				*																				
17.8	ST-MT	Check and repair / replace tree stakes, ties, guards and canes. Remove as required (medium term)				*																				
17.9	ST-MT	Remove snow from light limbed trees to prevent limbs breaking and branches splaying								*																
17.10	MT-LT	Inspect for weed growth and hand weed as necessary					*																			
17.11	ST-LT	Annual review visit to determine any required tree work, particularly close to public areas						*																		
17.12	ST-LT	Replace dead or damaged plants - Evergreen								*																
17.13	ST-LT	Replace dead or damaged plants - Deciduous								*																
17.14	MT-LT	Prune Acer and Betula species only								*																
17.15	LT	Bat Survey undertaken prior to any tree works or tree pruning on mature trees								*																
17.16	LT	Prune trees and other remedial tree work - bats present (to be carried out under a bat derogation licence)								*																
17.17	LT	Prune trees and other remedial tree work - no bats present								*																
17.18	ST-LT	Clip to maintain box shape twice a year						*																		
18. PROPOSED FRUIT TREES (ORCHARDS)																										
18.1	ST	During dry periods water trees twice a week as necessary		*twice						*																
18.2	ST	Individual trees - water once a week during the first year		*						*																
18.3	ST	Individual trees - outside of growing season only water to establish healthy growth								*																
18.4	ST	Monitor tree growth when watering for signs of overdue stress and overwatering		*																						
18.5	ST	Inspect and top up mulch as required				*																				
18.6	ST	Inspect for weed growth and hand weed as necessary				*																				
18.7	ST-MT	Inspect and refirm planting as required				*																				
18.8	ST-MT	Check and repair / replace tree stakes, ties, guards and canes. Remove as required (medium term)				*																				

ST=Short term MT=Med. term LT=Long term			DAILY	WEEKLY	FORTNIGHTLY	MONTHLY	SEASONALLY	ANNUALLY	X YEARLY	AS REQUIRED	SPRING			SUMMER			AUTUMN			WINTER														
											APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
18.9	ST-MT	Remove snow from light limbed trees to prevent limbs breaking and branches splaying								*																								
18.10	MT-LT	Inspect for weed growth and hand weed as necessary					*																											
18.11	ST-LT	Annual review visit to determine any required tree work, particularly close to public areas						*																										
18.12	ST-LT	Replace dead or damaged plants - Deciduous								*																								
18.13	ST	Formative pruning - apple and pear species						*																										
18.14	ST	Formative pruning - stone fruit species						*																										
18.15	MT-LT	Regulated pruning - apple and pear species						*																										
18.16	MT-LT	Regulated pruning - stone fruit species						*																										
19. PROPOSED ORNAMENTAL AND FORMAL HEDGEROW PLANTING																																		
		Whips/ transplants																																
19.1	ST	Water plants as necessary for the first year		*						*																								
		Container shrubs/ ready hedge																																
19.2	ST	Water plants once a week during the first year. Adjust as necessary to prevent overwatering.		*																														
		All hedgerows																																
19.3	ST-MT	Check and replace mulch mats or top up loose mulch as required				*																												
19.4	ST-MT	Check and repair / replace ties, guards and canes. Remove as required (medium term)				*																												
19.5	ST	Inspect for weed growth and hand weed as necessary				*																												
19.6	MT-LT	Inspect for weed growth and hand weed as necessary					*																											
19.7	ST-MT	Inspect and refirm planting as required				*																												
19.8	ST-LT	Replace dead or damaged plants - Evergreen								*																								
19.9	ST-LT	Replace dead or damaged plants - Deciduous								*																								
19.10	ST-LT	Apply spring fertiliser on an individual species basis						*		*																								
19.11	ST-LT	Apply summer herbicide if necessary						*		*																								
19.12	ST-LT	Apply winter herbicide if necessary						*		*																								
19.13	LT	Plant up gaps in the hedgerow using similar local species - Evergreen								*																								
19.14	LT	Plant up gaps in the hedgerow using similar local species - Deciduous								*																								
19.15	LT	Reduce density of planting by selective thinning on rotation once good establishment of planting achieved								*																								
		Pruning - Deciduous hedges (upright plants)																																
19.16	ST	1st summer -Trim side branches lightly after first and second flush of growth					*																											
19.17	ST	2nd season -Trim side branches and the leader shoot once reached desired height								*once																								
19.18	MT-LT	Maintenance -Trim top and side branches						*																										
		Pruning - Deciduous hedges (stocky / bushy plants)																																
19.19	ST	Prune leading and side shoots regularly					*																											
19.20	MT-LT	Maintenance -Trim top and side branches after flowering to required height that tapers at the top						*																										

ST=Short term MT=Med. term LT=Long term			DAILY	WEEKLY	FORTNIGHTLY	MONTHLY	SEASONALLY	ANNUALLY	X YEARLY	AS REQUIRED	SPRING			SUMMER			AUTUMN			WINTER		
											APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH
20.10	ST-MT	Remove snow from light limbed shrubs and conifers to prevent limbs breaking								*												
20.11	ST-LT	Remove frost damage from plants						*		*												
20.12	ST-MT	Replace dead or damaged plants - Evergreen								*												
20.13	ST-MT	Replace dead or damaged plants - Deciduous								*												
20.14	MT-LT	Reduce density of planting by selective thinning once good establishment of planting achieved								*												
		Shrub & Groundcover Planting																				
20.15	ST-LT	Apply spring fertiliser on an individual species basis						*														
		Deciduous early flowering																				
20.16	ST	Lightly trim and shape plant after flowering								*once												
20.17	ST	2nd season - Lightly trim and shape plant after flowering								*once												
20.18	MT-LT	Maintenance - Prune after flowering						*														
		Deciduous summer flowering																				
20.19	ST	Lightly trim and shape plant								*once												
20.20	ST	2nd season - Lightly trim and shape plant								*once												
20.21	MT-LT	Maintenance - Prune last years flowering stems						*														
		Evergreen shrubs																				
20.22	ST	Lightly trim and shape plant before new growth								*once												
20.23	ST	2nd season - Lightly trim and shape plant before new growth								*once												
20.24	MT-LT	Maintenance - Only clip formal planting to shape and remove dead/diseased/damaged shoots from all other planting						*														
		Winter flowering shrubs																				
20.25	ST	Lightly trim and shape plant								*once												
20.26	ST	2nd season - Lightly trim and shape plant								*once												
20.27	MT-LT	Maintenance - Prune						*														
		Coloured stem / large foliage plants																				
20.28	ST	2nd /3rd season - Coppice to 7.5cm high and thin								*once												
20.29	MT-LT	Maintenance - Coppice to previous stubs							2-3x													
		Lavandula																				
20.30	ST-LT	Prune to keep compact shape						*														
		Herbaceous planting & Ornamental grasses																				
20.31	ST-LT	Dead head plants to prolong flowering				*																
20.32	ST-LT	Check plants and remove dead foliage, dead wood, broken or damaged stems						*														
20.33	ST-LT	Cut back spreading / trailing plants after flowering						*														
20.34	ST-LT	Cut back perennials after flowering- spring flowering						*														
20.35	ST-LT	Cut back perennials after flowering- summer flowering						*														
20.36	ST-LT	Deciduous grasses - Cut back to ground level before growth starts						*														
20.37	ST-LT	Evergreen & semi-evergreen grasses - trim old flower stalks, unsightly and diseased foliage						*														
20.38	ST-LT	Remove dead fern foliage before new leaf tips appear.						*														
20.39	ST-LT	Apply spring fertiliser on an individual species basis						*		*												
20.40	ST-LT	Divide perennials, grasses and ferns on an individual species basis						*														
20.41	ST-LT	Divide bamboos						*														
20.42	ST-LT	Divide bearded iris						*														
20.43	ST-LT	Cut back plants left for winter interest						*														
21. PROPOSED ROSE PLANTING																						
		Refer to the general items under ornamental shrub planting																				
21.1	ST	Water plants once a week during the first two years. Adjust to prevent overwatering.		*																		
21.2	ST-LT	Apply spring fertiliser						*														
21.3	ST-LT	Dead head flowers						*														
		Rose Pruning																				
21.4	ST	Remove dead, damaged or weak growth								*once												
21.5	ST	Formative prune according to rose type (hybrid, floribunda, shrub)								*once												
21.6	MT-LT	Maintenance - Prune according to rose type (hybrid, floribunda, shrub (repeat flowering))						*														
21.7	MT-LT	Maintenance - Prune according to rose type (shrub (single flowering)) after flowering						*														
22. PROPOSED CLIMBERS																						

ST=Short term MT=Med. term LT=Long term			DAILY	WEEKLY	FORTNIGHTLY	MONTHLY	SEASONALLY	ANNUALLY	X YEARLY	AS REQUIRED	SPRING			SUMMER			AUTUMN			WINTER		
											APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH
		Refer to the general items under ornamental shrub planting																				
22.1	ST-LT	Dead head plants to prolong flowering				*																
22.2	ST-LT	Inspect and reattach to supports				*				*												
22.3	ST-LT	Prune climbers after flowering (if flowering on last years growth)						*														
22.4	ST-LT	Prune climbers (if flowering on this years growth)						*														
22.5	ST	Climbers - clematis - prune hard in the first spring						*														
22.6	ST	Climbers - rose - tip prune the main stems						*														
22.7	MT-LT	Climbers - clematis - once established cut back old stems						*		*												
22.8	MT-LT	Climbers - rose - prune after flowering						*														
23. PROPOSED BULB PLANTING																						
		Bulbs in a border-																				
23.1	ST-LT	Dead head the flowers and leave foliage to die down - depending on species		*																		
23.2	ST-LT	Water bulbs if a prolonged drought								*												
23.3	MT-LT	Apply a low nitrogen/ high potash fertiliser from the second year onwards - Apply in autmun or very early spring						*		*												
23.4	MT-LT	WINTER FLOWERING - Lift and divide established clumps when overcrowded 6 weeks after flowering						*		*												
23.5	MT-LT	SPRING FLOWERING - Lift and divide established clumps when overcrowded 6 weeks after flowering						*		*												
23.6	MT-LT	SUMMER FLOWERING - Lift and divide established clumps when overcrowded 6 weeks after flowering						*		*												
23.7	MT-LT	AUTUMN FLOWERING - Lift and divide established clumps when overcrowded 6 weeks after flowering						*		*												
23.8	ST-LT	ALL - Cut bulbs to ground level/ remove once leaves have died down and have lifted/divided as necessary (depending on flowering season)						*		*												
24. GRASSLAND - AMENITY																						
24.1	ST-LT	Pick litter, stones larger than 25mm dia prior to cutting								*												
24.2	ST	Water as necessary during the summer								*												
24.3	ST	Cut first time after sowing to 25-50mm high								*												
24.4	ST-LT	CLOSE MOWN - Cut subsequently to 25mm high (max allowed height 50mm)		*	*																	
24.5	ST-LT	STANDARD (WHEN USED WITH CLOSE MOWN) - Cut subsequently to 50mm high (max allowed height 100mm)				*																
24.6	ST-LT	STANDARD - Cut subsequently to 25mm high (max allowed height 50mm)			*																	
24.7	ST-LT	If bulbs in grass area cut grass as per BULBS section																				
24.8	ST-LT	Roll grassland						*														
24.9	ST-LT	Aerate grassland				*				*												
24.10	ST-LT	Inspect for weed growth and hand weed or cultivate as necessary					*															
24.11	ST-LT	Inspect for weed growth and apply herbicide as necessary								*												
24.12	ST-LT	Oversow grass as necessary following final cut and cuttings removed						*		*												
24.13	ST-LT	Repair eroded areas by rotovating, adding topsoil and reseeding								*												
24.14	ST-LT	Apply a spring fertiliser								*												
24.15	ST-LT	Apply a winter fertiliser								*												
		Turf grassland (Additional requirements for turf establishment only)																				
24.16	ST	Water turf on installation								*												
24.17	ST	Cut grass to 25mm high after installation								*once												
24.18	ST	Continue to water the turf as required during the first growing season								*												
24.19	ST-LT	Second growing season and beyond - Continue to water the turf as required								*												
24.20	ST-LT	Cut grass to 25mm high			*																	
24.21	ST-LT	Second growing season and beyond - Apply a lawn fertiliser in the spring								*												
25. SPECIES RICH GRASSLAND, WILDFLOWER MEADOW, WET MEADOW GRASSLAND AND PERENNIAL PRAIRIE MEADOW																						

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											APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
		WILDFLOWER AND WET MEADOW GRASSLAND																																
25.1	ST	First growing season - cut to 50mm high and then every 2 weeks (remove cuttings)			*																													
25.2	ST	First growing season - final cut - cut to 50mm high (after flowering) - remove cuttings						*																										
25.3	ST	Water as necessary during the summer								*																								
25.4	ST-LT	Second growing season onward - 1st cut - hay cut to 100mm high after flowering (leave arisings on ground for 1-7 days, then remove)						*																										
25.5	ST-LT	Second growing season onward - 2nd cut - cut regrowth to 100mm high						*																										
25.6	ST-LT	GENERAL Remove litter and fallen leaves			*																													
25.7	ST-LT	Aerate grassland				*				*																								
25.8	ST-LT	Inspect for weed growth and hand weed or cultivate as necessary					*																											
25.9	ST	Inspect for weed growth and apply herbicide after sowing								*once																								
25.10	MT-LT	Inspect for weed growth and apply herbicide as necessary								*																								
25.11	ST-LT	Scarify grassland						*		*																								
25.12	ST-LT	Oversow grass as necessary following final cut and cuttings removed						*		*																								
25.13	ST-LT	Repair eroded areas by rotovating and reseeding								*																								
26. GRASSLAND - LOW MAINTENANCE																																		
26.1	ST-LT	Pick litter, stones larger than 25mm dia prior to cutting								*																								
26.2	ST	Water as necessary during the summer								*																								
26.3	ST	Cut in first year to 50mm high								*																								
26.4	ST-LT	Areas close to footpaths - Cut subsequently to 75mm high (max allowed height 100mm)				*																												
26.5	ST-LT	All other areas - Cut subsequently to 50mm high (max allowed height 100mm)					*																											
26.6	ST-LT	If bulbs in grass area refer to BULB section						*																										
26.7	ST-LT	Roll grassland						*		*																								
26.8	ST-LT	Aerate grassland				*				*																								
26.9	ST-LT	Inspect for weed growth and hand weed or cultivate as necessary					*																											
26.10	ST-LT	Inspect for weed growth and apply herbicide as necessary								*																								
26.11	ST-LT	Oversow grass as necessary following final cut and cuttings removed						*		*																								
26.12	ST-LT	Repair eroded areas by rotovating, adding topsoil and reseeding								*																								
27. ROUGH GRASS MARGINS & TUSsock GRASSLAND																																		
27.1	ST-LT	Pick litter, stones larger than 25mm dia prior to cutting								*																								
27.2	ST	Water as necessary during the summer								*																								
27.3	ST	Cut in first year to 50mm high								*																								
27.4	ST-LT	Cut subsequently on a 3 year rotation to 100mm high						*																										
27.5	ST-LT	Inspect for weed growth and apply herbicide as necessary								*																								
27.6	ST-LT	Oversow grass as necessary following final cut and cuttings removed						*		*																								
28. PROPOSED ATTENUATION BASIN																																		
28.1	ST-LT	Annual review visit to monitor vegetation growth Seasonally Wet						*																										
28.2	ST	First growing season - cut to 50mm high and then every 2 weeks (remove cuttings)			*																													
28.3	ST	First growing season - final cut - cut to 50mm high (after flowering) - remove cuttings						*																										
28.4	ST	Water as necessary during the summer								*																								
28.5	ST-LT	Second growing season onward - 1st cut - hay cut to 100mm high after flowering (leave arisings on ground for 1-7 days, then remove)						*																										
28.6	ST-LT	Second growing season onward - 2nd cut - cut regrowth to 100mm high						*																										

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											APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	
		General			*																		
28.7	ST-LT	Remove litter and fallen leaves																					
28.8	ST-LT	Inspect for weed growth and hand weed or cultivate as necessary					*																
28.9	ST-LT	Oversow grass as necessary following final cut and cuttings removed						*		*													
28.10	ST-LT	Repair eroded areas by rotovating and reseeding								*													
		Permanently Wet / Waterlogged Soils																					
28.11	ST	First growing season - cut to 50mm high and then every 2 weeks (remove cuttings)			*																		
28.12	ST	First growing season - final cut - cut to 50mm high (after flowering) - remove cuttings						*															
28.13	ST-LT	Second growing season onward - Clear sections of vegetation by mechanical or manual means on a 2-3yr rotation. Remove cuttings						*															
28.14	ST-LT	Selectively thin any dense stands of single species								*													
		Permanent Open Water Areas																					
28.15	ST-LT	Clear open water area of algae growth and plant debris to leave a third coverage.						*		*													
28.16	ST-LT	Remove accumulation of silt and debris on rotation every 3 years by mechanical or manual means. Clear no more than 1/4 of pond.							3x														
29. POND AQUATIC AND MARGINAL PLANTING																							
29.1	ST-LT	Annual review visit to monitor vegetation growth						*															
29.2	ST-LT	Remove undesirable weeds by hand (maintenance visit)						*															
29.3	ST-LT	Monitor the spread of weed growth and cut / rake as necessary						*															
29.4	ST-LT	Replace dead or damaged plants						*		*													
29.5	ST-LT	Clear sections of the marginal vegetation by mechanical or manual means on rotation every 3 years. Remove cuttings							3x														
29.6	ST-LT	Control scrub establishment on banksides. Remove cuttings							3x														
30. SUBMERGED AQUATICS																							
30.1	ST-LT	Cut or rake on a rotational basis																					
31. FLOATING AQUATICS																							
31.1	ST-LT	Monitor waterbody for algal blooms. Seek specialist advise to determine appropriate remedial works					*																
32. LAKE / WATERBODIES																							
32.1	ST-LT	Annual review visit to monitor vegetation growth						*															
32.2	MT-LT	Remove branches of trees that overhang and shade the open water.								*													
32.3	ST-LT	Remove accumulation of silt and debris on rotation every 3 years by mechanical or manual means. Consult EA prior to silt removal or cutting. Ecologist to consider if GCN licence is to be sought.							3x														
		Large water body																					
32.4	ST-LT	Clear vegetation by mechanical cutting on rotation every 3 years, in order to retain a minimum of two thirds open water and two thirds bare earth or short marginal vegetation on banksides. Do not remove more than a third of the total vegetation in a single operation.							3x														
		Small water body																					
32.5	ST-LT	Clear vegetation by hand cutting, raking or netting on rotation every 3 years, in order to retain a minimum of two thirds open water and two thirds bare earth or short marginal vegetation on banksides. Do not remove more than a third of the total vegetation in a single operation.							3x														
		Shingle Islands																					
32.6	ST-LT	Remove large dense vegetation by hand						*		*													
32.7	ST-LT	Remove litter regularly without disturbing bird nests				*				*													
33. GENERAL WATER QUALITY																							

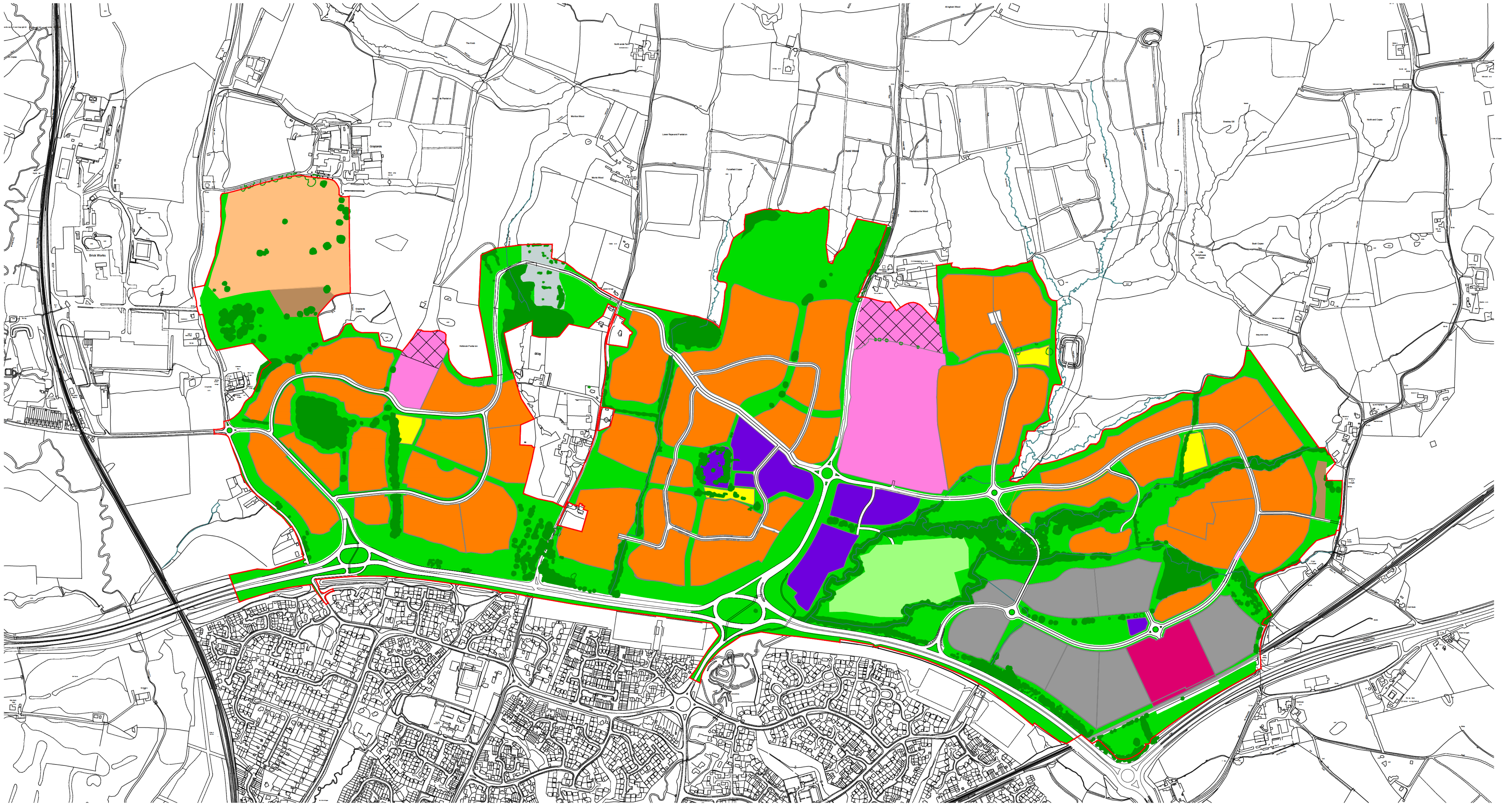
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											APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH
33.1	ST-LT	Review visit to monitor water quality and levels					*															
34. SMALL PONDS																						
34.1	ST-LT	Remove decaying material, dead and dying plants					*															
34.2	ST-LT	Thin / divide or remove rampant plants					*															
34.3	ST-LT	Divide / replant pond baskets, plant additional species					*															
34.4	ST-LT	Remove blanket weed with a rake				*																
34.5	ST-LT	Cut back plants hard and remove spent flowers and foliage						*														
34.6	ST-LT	Examine pond liner for cracks / rips and repair as necessary						*														
34.7	ST-LT	Clean filters and pump filters with pond or rain water						*														
34.8	ST-LT	Perform a partial water change if necessary using a dechlorinator as required								*												
34.9	ST-LT	Top up water levels as required									*											
34.10	ST-LT	Remove pond pump if possible over the winter period and clean / maintain						*							*							
34.11	ST-LT	Melt a small part of frozen water to allow oxygen into the water below														*						
35. FAUNA																						
35.1		Refer to ecologist for specific advice on the management of water borne species																				
36. EDGING AND ASSOCIATED STRUCTURES																						
36.1	ST-LT	Inspect and repair/ reinstate water edging structure and fixings						*		*												
REF	DURATION OF HARD LANDSCAPE																					
37. SURFACES - ALL																						
37.1	ST-LT	Inspect surfacing to determine need for maintenance operations		*																		
37.2	ST-LT	Litter Collection, remove graffiti / stains, sweeping etc.			*																	
37.3	ST-LT	Inspect and repair/ reinstate kerbs, edging and paved surfaces						*														
37.4	ST-LT	Inspect for weed growth and moss and hand weed as necessary					*															
37.5	ST-LT	Inspect for weed growth and moss and apply herbicide as necessary								*						*						
37.6	ST-LT	Remove arising following herbicide treatment						*														
37.7	ST-LT	Check surface for damage or settlement and repair as required									*											
38. SURFACES - PEDESTRIAN																						
		Block, Cobble, Sett and Flag Paving																				
38.1	ST-LT	Carry out regular cleaning of paving to prevent algae build up						*														
38.2	ST-LT	Brush over with sharp sand annually						*														
38.3	ST-LT	Pressure wash paving if particularly dirty						*		*												
38.4	ST-LT	Replace chipped, cracked and damaged units to the original specification								*												
38.5	ST-LT	Check surface for settlement, sinking, depressions, waterpooling and wheel ruts. Relevel, rebed and replace surface as required						*		*												
38.6	ST-LT	Repoint or replace jointing sand as required to the original specification								*												
38.7	ST-LT	Apply a paving sealant (urethane-based sealants) if continued joint displacement not due to movement occurs.								*												
		Asphalt Paving																				
38.8	ST-LT	Repair and recolour paving to the original specification								*												
		Loose Gravel Pathways																				
38.9	ST-LT	Top up surfacing to original depth						*		*												
		Resin Bound Gravel																				
39.10	ST-LT	Remove loose areas and refill to the original specification								*												
		Self Binding Paths, Hoggin and Informal Gravel Footpaths																				

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			DAILY	WEEKLY	FORTNIGHTLY	MONTHLY	SEASONALLY	ANNUALLY	X YEARLY	AS REQUIRED	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH
39.11	ST	Regularly water with a fine rose sprayer and roll until the surface is well consolidated				*																
39.12	MT-LT	Spike the surface to relieve puddling				*				*												
39.13	ST-LT	Check surface for damage or settlement and top up surface as required						*		*												
		Safety Surfacing																				
39.14	ST-LT	Rake over loose safety surface weekly and remove any unwanted objects or animal mess		*																		
39.15	ST-LT	Top up loose safety surfacing to original depth						*		*												
39.16	ST-LT	Brush bound safety surface to remove debris and litter				*																
39.17	ST-LT	Check bound safety surface for damage and repair as required						*		*												
		Reinforced Grass																				
39.18	ST-LT	Inspect the reinforcement grids and securing mechanism and repair as necessary				*				*												
		Timber Decking and Steps																				
39.19	ST-LT	Regularly sweep to prevent build up of debris and to ensure a slip free surface			*																	
39.20	ST-LT	Check fixings and re-tighten as necessary				*																
39.21	ST-LT	Wash deck area to restore slip resistance					*															
		Drainage																				
39.22	ST-LT	Remove mud, silt and debris from surface channels				*																
39. FURNITURE & BOUNDARY TREATMENTS																						
39.1	ST-LT	Wash seats, bins, furniture etc. with water and mild detergent			*					*												
39.2	ST-LT	Inspect signage for damage or vandalism and repair as necessary in consultation with the original manufacturer				*																
39.3	ST-LT	Empty bins and dispose of at a licensed location		*																		
		Boundary Treatments																				
39.4	ST-LT	Inspect fixtures and fixings, re-tension wire and schedule repairs						*														
39.5	ST-LT	Inspect fencing, railings and gates for corrosion and ensure mechanisms function properly						*														
39.6	ST-LT	Repair corroded parts with a rust preventative prior to painting								*												
39.7	ST-LT	Apply a wood preservative to timber components where not pressure treated							5x													
39.8	ST-LT	Inspect stone walls, brickwork and rendering and schedule repairs						*														
		Allotment Water Trough																				
39.9	ST-LT	Clean and scrub water troughs and fixtures						*														
40. PLAY AREAS																						
40.1	ST-LT	Remove cans or glass		*																		
40.2	ST-LT	Inspect for equipment's safety and repair accordingly if possible		*																		
40.3	ST-LT	Litter Collection, \remove graffiti, stains, sweeping etc.		*																		
40.4	ST-LT	Wash play equipment with water and mild detergent and remove excess lubricants from slides.			*					*												
40.5	ST-LT	Cordon off with high visibility hazard type and warning sign if immediate repair of equipment not possible								*												
41. FURNITURE - SHELTERS																						
41.1	ST-LT	Inspect shelter for damage or vandalism and repair as necessary in consultation with the original manufacturer				*																
42. FURNITURE - LIGHTING																						
42.1	ST-LT	Carry out a routine inspection to monitor and repair as necessary the following:				*																
42.2		Replace failed lamps								*												
42.3		Repair any other defects								*												
42.4		Check operation of locking devices and rectify				*																
42.5		Perform visual inspection of electrical connections and control gear				*																
42.6		Check and tighten bracket fixings and other fastenings				*																
42.7		Adjust alignment if necessary								*												

ST=Short term MT=Med. term LT=Long term			DAILY	WEEKLY	FORTNIGHTLY	MONTHLY	SEASONALLY	ANNUALLY	X YEARLY	AS REQUIRED	SPRING			SUMMER			AUTUMN			WINTER			
											APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	
43. WATER FEATURE																							
		Proprietary Water feature** TO MANUFACTURER'S REQUIREMENTS**																					
43.1	ST-LT	Monitor water feature for debris, water levels and water quality and clean/repair as appropriate				*																	
43.2	ST-LT	Remove any dead leaves and other debris from the water pump								*													
43.3	ST-LT	Top up water levels as required								*													
43.4	ST-LT	Drain and clean water feature thoroughly			6x																		
REF	DURATION OTHER																						
44. MAMMALS																							
44.1	ST-LT	Obtain advice for treatment of mammalian pests. To be carried out by suitably qualified specialists (and in consultation with ecologists).								*													

APPENDIX 2

PARAMETER PLANS



- | | | | |
|--|---|---|--|
|  Development Boundary |  Mixed Use (Includes Retail, Food Store, Leisure, Community, Residential and Other Uses) |  Parkway Station |  Neighbourhood Play Areas (including buffers) |
|  Residential |  Cemetery |  Existing Commercial |  Woodland |
|  Commercial |  Allotments (including parking) |  Sport Hub |  Water Course |
|  Education | |  Green Infrastructure |  Education Expansion |

Drawing based on
information by BDB Design

Project Land North of Horsham, Horsham, West Sussex		Drawing Parameter Plan: Land Use	
Scale 1:5000 @ A1	Drawn By AWW		
Date Nov 2020	Drawing No. 2153A - 1000		

0 100 200 300 400 500

Land North of Horsham

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- | | | | | | |
|--|------------------------------|--|---|--|--------------------------------|
| | Development Boundary | | Cemetery | | Acoustic Attenuation Buffer |
| | Proposed Development Parcels | | Sports Hub | | Allotments (including Parking) |
| | Woodland | | Neighbourhood Play Area (including buffers) | | Water Course |
| | Ancient Woodland | | Natural Greenspace | | Existing Ponds |
| | | | | | Attenuation Ponds |

0 100 200 300 400 500

Land North of Horsham

Drawing based on
information by BDB Design

Project Land North of Horsham, Horsham, West Sussex	Drawing Parameter Plan: Green Infrastructure	
	Scale 1:5000 @ A1	Drawn By AWW
	Date Nov 2020	Drawing No. 2153A - 105N

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