

**BARRATT DAVID WILSON HOMES**

**WHITE POST ROAD, BODICOTE**

**LANDSCAPE MANAGEMENT AND MAINTENANCE PLAN**

**PLANNING**

**20 December 2019**

**CLIENT** Barratt David Wilson Homes

**PROJECT** White Post Road, Bodicote

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## 1. PRELIMINARIES

1.1 This Landscape Management and Maintenance 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 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 Barratt David Wilson Homes.
- 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 "development/site/envelop" within this document shall mean the White Post Road development scheme as set out in the approved planning documentation.
- h. 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.
- i. All references to the, "hardscape" within this document shall mean all hard surfaces, boundary treatments, walls and enclosures.
- j. 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.
- k. 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.
- l. 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.
- m. 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.
- n. 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.

- o. 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:

- a. Barratt David Wilson
- b. Harris Lamb
- c. Infrastructure Design
- d. FPCR

here-in-after referred to as the Design Team.

### **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 & 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).

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 This landscape management and maintenance plan (LMMP) 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

- 2.2 The aim of the LMMP 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.
- 2.3 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.
- 2.4 The LMMP 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 site is located between Banbury and Bodicote and forms the eastern most area of a proposed new neighbourhood along the southern edge of Banbury.
- 3.2 The site is bounded by a series of field hedgerows, some with large specimen trees. The most significant trees are located at the entrance off of White Post Road.

#### **Proposed Development**

- 3.3 The site comprises a mixture of landscape elements; including existing tree and hedgerow planting, alongside the proposed structural and ornamental planting, proposed tree planting, amenity greenspace and additional species rich grassland together with hardscape material detailing.
- 3.4 Green corridors and SUDs have been integrated within residential areas to aid ecological connectivity.
- 3.5 The design has sensitively incorporated the existing habitats as much as possible within the requirements of a publicly accessible recreational open space.

#### **Overall Management Aims and Objectives**

- 3.6 Aims and 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.

## 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 Trees and Field Hedgerows**

#### Management Prescriptions

- 4.2 The management of trees will 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.
- 4.3 Details of tree protection fencing and the tree survey are provided in the Arboricultural Assessment.
- 4.4 The existing hedgerows shall be trimmed on a 2-3 year rotation, 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. Hedgerow junctions shall only be trimmed very occasionally in order to provide an alternative habitat.
- 4.5 Pruning of hedgerows should encourage the development of tall "A" shaped, full hedgerows with a dense base cover.
- 4.6 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.
- 4.7 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 plants shall be from seeds of local region of 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. If livestock are to be kept within the fields adjacent to the hedgerow then a stock fence should be provided a minimum of 1m from the hedgerow to prevent grazing damage.

- 4.8 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.

#### **Existing Habitat Monitoring**

- 4.9 General monitoring of the existing habitats and management actions will take place in years 1,3 and 5, with the findings informing any changes to the management strategy. Specifically, it shall include monitoring of the condition and sustainability of the existing woodland and naturally regenerating native species and mature trees and tree groups within the development. 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.
- 4.10 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**

- 4.11 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 (at the time of writing: 2010); whom, unless by agreement to the contrary, shall be responsible for obtaining all necessary felling licenses pertaining to the work.
- 4.12 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 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 LMMP 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**

#### Management Aims and Objectives

- 5.6 Ensure the establishment and continuing health of the new woodland planting.
- 5.7 Promote a diverse woodland mix and structure through managing the woodland and woodland edge respectively, including a rough grass woodland margin and scrub edge.
- 5.8 To maintain health and safety requirements to all publicly accessible areas of woodland for all visitors.
- 5.9 Retain the wildlife value of the trees with any remedial works taken under advice from a suitable qualified ecologist.

#### Management Prescriptions

##### *Short Term Management*

- 5.10 Refer to section 6 for general maintenance operations.
- 5.11 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.

- 5.12 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*

- 5.13 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.
- 5.14 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.
- 5.15 Continue to weed seasonally.

#### *Long Term Management – Small Planting Areas*

- 5.16 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.
- 5.17 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.
- 5.18 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.
- 5.19 Continue to coppice the planting as per the medium term management above.
- 5.20 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.

### **Proposed Native Shrub Planting**

#### Management Aims and Objectives

- 5.21 Limit the spread of invasive growth into surrounding habitats.
- 5.22 Maintain a mosaic of scrub and open spaces for greater wildlife value.
- 5.23 Promote natural regeneration of scrub where habitat expansion is required.

#### Management Prescriptions

#### *Short Term Management*

5.24 Refer to section 6 for general maintenance operations.

#### *Medium Term Management*

5.25 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.

5.26 Continue to weed seasonally.

5.27 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.

5.28 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.

5.29 Regularly cut or mow scrub plants at edges to prevent unwanted spread of scrub area.

#### *5.30 Long Term Management*

5.31 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.

5.32 Continue the program, of selective coppicing on a 7 yearly cycle, removal of tree seedlings and unwanted edge scrub plants.

### **Proposed Native Field Hedgerow Planting**

#### Management Aims and Objectives

5.33 Maintain the hedgerow to encourage healthy establishment and a good shape.

5.34 Prevent the spread of undesirable species.

5.35 Avoid ingress onto public paths.

5.36 Include native planting to promote and enhance the existing site biodiversity. Seeds and plants should be from local sources of provenance.

5.37 Keep hedgerow base litter free.

#### Management Prescriptions

#### *Short Term Management*

5.38 Refer to section 6 for general maintenance operations.

5.39 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.

- 5.40 Prune in accordance with good horticultural and arboricultural practice.
- 5.41 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.
- 5.42 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*

- 5.43 Protection – Remove (remnants of) tree and shrub guards before they start to restrict growth.
- 5.44 Once good establishment of the hedgerow planting areas has been achieved, the density of the planting can be reduced by selective thinning if required.
- 5.45 Continue to weed seasonally.
- 5.46 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 5.39-5.42 above.
- 5.47 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.
- 5.48 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.
- 5.49 As per 4.11, Contractors should be aware of the legal protection afforded to breeding birds/nests, amphibians and bats/bat roosts. Hedgerow trimming shall be carried out at the correct time of year having regard to the species and management objective, but shall exclude the months of March – August, hard frosts and the spring flush.
- 5.50 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.
- 5.51 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.
- 5.52 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 Local Wildlife Trust.

- 5.53 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.
- 5.54 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.
- 5.55 The hedge shall be re-laid after a further 10-25 years in light of the monitoring programme.
- 5.56 Follow the tree work guidelines given in section 4.
- 5.57 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 Trees**

#### Management Aims and Objectives

- 5.58 The aftercare of the trees should be tailored to their size requirements and ensure a safe and healthy development whilst promoting their wildlife value.
- 5.59 To maintain health and safety requirements to all publicly accessible areas of public open space for all residents and visitors.
- 5.60 Maintain bark mulch and weed control.
- 5.61 To control the spread of pests and diseases.

#### Management Prescriptions

##### *Short Term Management*

- 5.62 Refer to section 6 for general maintenance operations.
- 5.63 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.

##### *Medium to Long Term Management*

- 5.64 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.

### **Proposed Fruit Trees (Orchards)**

#### Management Aims and Objectives

- 5.65 The management of fruit trees should be tailored to the individual tree and species growth habit and ultimate shape.
- 5.66 The aftercare should ensure a safe and healthy development whilst promoting their wildlife value.



- 5.67 To maintain health and safety requirements to all publicly accessible areas of public open space for all residents and visitors.
- 5.68 Maintain bark mulch and weed control.
- 5.69 To control the spread of pests and diseases.

#### Management Prescriptions

##### *General*

- 5.70 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.
- 5.71 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*

- 5.72 Refer to section 6 for general maintenance operations.
- 5.73 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.
- 5.74 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. 1<sup>st</sup> Year - Cut back any side shoots to leave snags with 2-3 buds (50-75mm long).
- c. 2<sup>nd</sup> 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

- d. 2<sup>nd</sup> 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.
- e. 3<sup>rd</sup> 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

- f. Follow formative pruning as per a-c above to create a clear stem height of 75cm.
- g. To avoid excessive growth cut off the leader shoot when the tree is 2m tall.
- h. Shorten the ends of spreading branches to keep the desired shape.

#### *Medium to Long Term Management*

5.75 Follow the tree work guidelines given in section 4.

5.76 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.

5.77 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.

#### Stone Fruit Trees

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

5.78 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. Further information is available as per 5.79 below.

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

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

## **Proposed Ornamental Hedgerow Planting**

### Management Aims and Objectives

- 5.81 Maintain the hedgerow to encourage healthy establishment and a good neat shape.
- 5.82 Prevent the spread of undesirable species.
- 5.83 Avoid ingress onto public paths.
- 5.84 Keep hedgerow base litter free.

### Management Prescriptions

#### *Short Term Management*

- 5.85 Refer to section 6 for general maintenance operations.
- 5.86 Pruning - Pruning the hedgerow shall have the following objectives:
  - i. To remove any dead, dying or diseased wood.
  - j. To remove suckers or other unwanted growth.
  - k. To achieve a regular height of 1.2m with trimmed edges and top.
  - l. Formal hedgerow along site boundaries - to a maximum height of 200mm above the adjoining fence with trimmed edges and top.
  - m. Formal Buxus hedgerow - to a 400 x 400mm box with trimmed edges and top.
- 5.87 Carry out formative pruning in the first two years to promote dense hedge growth as below:
  - a. Deciduous hedgerows (upright plants e.g. Crataegus, Ligustrum) - cut back plants to 30cm on planting, followed by trimming side branches in the summer. In the second year (Feb-Mar) cut back growth by half, followed by further trimming of side branches in the summer. Cut the leader shoot to the desired height in the autumn.
  - b. Deciduous hedgerows (stocky, bushy at the base of plant e.g. Carpinus, Corylus, Fagus) - cut back leading and side shoots by one third on planting. Repeat this in the following winter.
  - c. Evergreen hedgerows (upright plants e.g. Buxus, Lonicera, Escallonia) – cut back all stems by one third after planting and repeat at the same time the following year.
  - d. Evergreen hedgerows (conifers and other evergreens e.g. Prunus, Cotoneaster, Pyracantha) – Lightly cut back straggly side shoots and leave leading shoot unpruned on planting followed by further trimming of side shoots in the summer (up to Aug).

#### *Medium to Long Term Management*

- 5.88 Continue to weed seasonally.
- 5.89 Maintenance pruning shall include:
  - a. Deciduous hedgerows – Trim annually in June and again in August to a shape that tapers at the top.
  - b. Evergreen hedgerows (upright plants e.g. Buxus, Lonicera, Escallonia) – trim the top and sides to maintain the desired shape and height.
  - c. Evergreen hedgerows (conifers and other evergreens e.g. Prunus, Cotoneaster, Pyracantha) – trim the hedge and leading shoot to the desired shape and height. Avoid hard pruning to expose old wood.

- 5.90 Protection – Remove (remnants of) tree and shrub guards before they start to restrict growth.
- 5.91 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.
- 5.92 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 aren't 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

- 5.93 Ornamental planting should be managed to promote the healthy growth and development of decorative features such as flowers, foliage and stems.
- 5.94 Allow plants to flower and fruit / set seed
- 5.95 Prevent the spread of undesirable species.
- 5.96 Avoid encroachment onto public paths and play areas.
- 5.97 Keep shrub beds litter free.

### Management Prescriptions

#### *Short Term Management*

- 5.98 Refer to section 6 for general maintenance operations.
- 5.99 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.
- 5.100 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.
- 5.101 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*

- 5.102 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.
- 5.103 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 per 5.54 h). 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.

- 5.104 Advise client when thinning of groundcover planting may be necessary and await instruction before carrying out this work so as to maintain ornamental shrub areas.
- 5.105 Continue to weed seasonally.
- 5.106 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 aren't present or will not be disturbed. If birds are present the pruning should be left until the young have fledged the nest.

### **Proposed Bulb Planting**

#### Management Aims and Objectives

- 5.107 Bulb planting should be managed to promote the healthy growth and development of flowers.

#### Management Prescriptions

- 5.108 Short to Long Term Management
- 5.109 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.
- 5.110 Watering - water as necessary to maintain moist soil conditions during the growing season.
- 5.111 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.
- 5.112 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.
- 5.113 Check regularly for damage or infection and remove as necessary.

### **Proposed Pond Aquatic and Marginal Planting**

#### Management Aims and Objectives

- 5.114 Where the ground is only occasionally or seasonally wet refer to the pond edge meadow grassland maintenance requirements.
- 5.115 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.

- 5.116 Cleaning of water inlets and outlets should be undertaken as required to prevent blockages.

#### General Management Prescriptions

- 5.117 Where the ground is only occasionally or seasonally wet refer to the pond edge meadow grassland maintenance requirements. 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.

- 5.118 Cleaning of water inlets and outlets should be undertaken as required to prevent blockages.

#### *Short Term Management*

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

#### *Medium – Long Term Management*

- 5.121 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.
- 5.122 Every third year sections of emergent/ marginal 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.
- 5.123 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.
- 5.124 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.

### **Grassland Generally**

#### Grass Maintenance Operations Generally

- 5.125 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 turfing: 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/m<sup>2</sup>. In September of each year, apply a 3/12/12 fertiliser at 35g/m<sup>2</sup>). 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.

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

5.127 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.

5.128 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 Grassland**

#### Management Aims and Objectives

5.129 Amenity grassland forms the majority of the grassland area and shall be managed more intensively in order to provide more formal recreational space.

5.130 Maintain a safe useable surface for public use.

#### Management Prescriptions – Close Mown

#### *Short to Long Term Management*

- 5.131 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 September with a maximum allowable height of growth of 50mm, but with cuttings removed.
- 5.132 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.

### **Species Rich Grassland and Wet Grassland**

#### Management Aims and Objectives

- 5.133 Species rich grassland shall be managed less intensively in order to provide a more diverse sward with greater biodiversity value.
- 5.134 Prevent the spread of undesirable species
- 5.135 Prevent soil enrichment by removing mowing arisings.
- 5.136 Provide a visual distinction between the areas for recreation (amenity grassland) and areas for wildlife value.

#### Management Prescriptions

##### *Short Term Management*

- 5.137 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 at least 8 weeks after sowing 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.
- 5.138 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 wild flowers).
- 5.139 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.
- 5.140 Oversow with the same seed mix as necessary.

#### First growing season

- a. Time of first cut: March/April after autumn sowing or May after spring sowing.
- b. Height of first cut: to 50 mm.

- c. Frequency of subsequent cutting (minimum): Every 2 weeks 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 late July / August after flowering. Flowering grassland should not be cut between spring and late July / August 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 1-7 days and then remove from site.
- d. Time of second cut: Cut re-growth in late autumn/ winter.
- 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.

#### **Sports Grass**

- 5.141 The short, medium and long term management objectives are to ensure overall design continuity and shall accord with Cherwell District Councils Document 3: Technical Specifications. In summary, the following are key objectives:
- i. Grass areas will be maintained in suitable weather conditions as Category Sports Facilities, Specification 1.0 and BS7370: Part 3 1991, i.e. mown weekly or every week and a half to 25mm (min. 20mm) between April and November with a maximum allowable height of growth of 50mm. Cuttings are to be returned.
  - ii. All markings should be maintained between the 1<sup>st</sup> Saturday before 1<sup>st</sup> August and on the last Friday before 30<sup>th</sup> April.
    - a. All markings shall be carried out in accordance with the current requirements of the sport's governing body, which may be subject to change during the course of the contract. All angles and lengths should be true and lines straight.
  - iii. Time of first cut - Mar/Apr after Autumn sowing or Jun/Jul after Spring sowing. Then cut as necessary to maintain a grass height of 25mm.
  - iv. The standards to be achieved for short amenity grass shall be as follows, abstracted from Table 6 of BS7370: Part 3 1991:
    - v. Total ground cover (by area) to be at least 85%.
    - vi. No stones or hard litter at the surface with a diameter greater than 10mm.
    - vii. Prevent the encroachment of herbaceous or scrub species and keep amenity grassland areas free of flower stalks, weed species and other grasses.
  - viii. Maintain an uncut 1m buffer zone around log piles and hibernacula.
  - ix. Monitor grass erosion annually and reinstate damaged or worn areas. Re-sow failed areas of grassland with original specification seed mix and protect with temporary fencing until sufficiently established for intended use.

Rolling

- 5.142 The Contractor shall allow for the rolling of all pitches to achieve a level profile and a firm surface, to be carried out each month throughout the playing season timing to be agreed by the CA. This should be carried out with regard to the prevailing weather conditions and not when the ground conditions are unsuitable which may damage the playing surface. This should be carried out using a tractor drawn roller at least 3m wide and weighing between 1000kg and 1500kg.

Spiking

- 5.143 In order to give players, and in particular goalkeepers, a flat dry surface, the Contractor shall be required to aerate all Rugby and Football pitches and cricket outfielders using 100mm - 150mm spikes, hollow tines or slit tines at maximum 300mm centres to their full depth, each month throughout the playing season timing to be agreed by the CA. The machine passes must overlap by 300mm on each run.
- 5.144 The spiking machinery must be approved by the CA, and works shall only be carried out when ground conditions are suitable, not when the ground is too wet, frosted or covered with snow.

Harrowing

- 5.145 During the playing season the pitch should be harrowed monthly to maintain surface levels.
- 5.146 Harrowing should be carried out in one pass in one direction longitudinally.

## 6. GENERAL 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.

### Maintenance Operations – GENERAL

#### General Pruning Operations – Existing and Proposed Planting

- 6.2 Pruning operations for trees and shrubs shall have the following objectives:
- a. To remove any dead, dying or diseased wood, rubbing/crossing/broken branches and stems, and/or potentially weak or tight forks.
  - b. To maintain clearances above and within footpaths, seating/car parking/grassed areas and building lines to a height of 2.5m.
  - c. 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.
  - d. To remove suckers or other unwanted growth.
  - e. 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:
- a. When removing branches do not damage or tear the stem or bark.
  - b. Keep wounds as small as possible and cut cleanly back to sound wood.
  - c. Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
  - d. 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.
  - e. 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.
  - f. Use clean sharp secateurs, hand saws or other approved tools and trim off ragged edges of bark or wood with a sharp knife.
  - g. 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:
- a. *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. 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. Additional watering may be required in periods of drought/dry weather to ensure plant survival. After 10 continuous days without rain during the growing season the trees shall be watered twice a week as above.
- 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; retained within planting bed for ornamental shrubs and hedging. Rake to a neat, clean condition.
- i. *Fertiliser* –Apply late winter/spring granular fertiliser (a 20:10:10 spring fertiliser at 30g/m<sup>2</sup>) 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* - For all other grassland, 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 brush / 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 so as 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 TREATEMENTS**

- 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 To provide and maintain an attractive/visually appealing and robust landscape setting to the development all year round.
- 7.3 To maintain furniture in a safe and good condition.
- 7.4 To 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.
- 7.5 Create a litter free environment.
- 7.6 The contractor should 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

- 7.7 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)" 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 doesn't 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

- 7.8 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 and Flag Paving

- 7.9 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.
- 7.10 If the paving become loose, fill gaps to original specification of either sharp sand or mortar and reset.
- 7.11 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/hardsurfacing 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.

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

#### Asphalt Paving

- 7.13 The tarmacadam should be identified as 'bituminous surfacing' within Table A1 inspection and maintenance checklist.
- 7.14 The weeds should be removed by the application of an approved herbicide once a year and regrowth spot treated as necessary.

#### Self-Binding Paths, Hoggin and Informal Gravel Footpaths

- 7.15 The pathway should be identified as 'Self binding / gravels / hoggin' within table A1 inspection and maintenance checklist.
- 7.16 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.
- 7.17 Any depressions should be made good with additional surfacing as necessary (to be topped up and rolled to fill all hollows to stop puddling).
- 7.18 Maintenance of the established surface will include spiking the surface to improve drainage if any puddling should occur.
- 7.19 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.

#### Bound Safety Surfacing

- 7.20 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.

#### Reinforced Grass Surfacing

- 7.21 For amenity grass maintenance follow item 5.129 Amenity Grass.
- 7.22 Repair any damaged cells by lifting as required in accordance with the manufacturer's

#### Drainage channels/gullies/conduits

- 7.23 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.
- 7.24 Keep all gullies, drainage channels, conduits, or similar, free flowing by rodding or specialist cleaning operative. Frequency: Annually or as notified/required.

## **Furniture**

### General Management Prescriptions

- 7.25 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.
- 7.26 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.
- 7.27 Ensure all lighting units are operational and replace bulbs as necessary.
- 7.28 Signage shall be inspected monthly for damage or vandalism and repaired as necessary in consultation with the original manufacturer.
- 7.29 Refer to the original manufacturer for specific guidance on repairs.
- 7.30 Waste from litter and dog bins to be removed off site on a weekly basis to a licensed location.
- 7.31 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.

## **Public Boundary Treatments (Walls, Fencing and Gates)**

### General Management Prescriptions

- 7.32 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.
- 7.33 The contractor should maintain visual appearance and safety of all boundary treatments and structures in accordance with the original design intention. The Contractor shall:
- a. 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.
  - b. Apply clear wood preservative every 5 years to softwood fence and gates as necessary to ensure adequate protection.
  - c. Repair any corroded parts with a rust preventative ready for subsequent painting to match the specified finish.
  - d. Inspect brickwork and rendering and repair as necessary in accordance with BS7370 Part 2: 1994 section 5.6.
  - e. Refer to the original manufacturer for specific guidance on repairs.

## **Play Areas**

### General Management Prescriptions

- 7.34 The contractor should maintain the visual appearance and safety of structures, hard surfaces and play elements in accordance with original design intention.
- 7.35 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.
- 7.36 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.
- 7.37 General maintenance operations will include:
- a. 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.

## **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 a Management Company appointed by Barratt David Wilson Homes.
- 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.

## **9. LANDSCAPE MAINTENANCE SCHEDULE**