

BRADFORD-SMITH

LANDSCAPE ARCHITECT

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# **WATERLOO PARK, ELETTRA AVENUE, WATERLOOVILLE, HAMPSHIRE, PO7 7XS**

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**Client: HARGREAVES MANAGEMENT LTD**

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## **Landscape Maintenance and Management Plan for the Retail Development**

Prepared for:  
**Hargreaves Property Holdings Ltd**  
Rustington House  
Worthing Road  
Rustington  
West Sussex  
BN16 3PS

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- Detailed Planting Plan drawing no. 836-PP-P-01

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## **I.0 INTRODUCTION**

### **I.1 Scope of Work**

- I.1.1 Bradford-Smith Ltd has been commissioned by Hargreaves Properties Ltd to provide a Soft Landscape Maintenance and Management Plan for the proposed planting at the new retail development at Waterloo Park, Elettra Avenue, Waterlooville, Hampshire, PO7 7XS for the Client: Hargreaves Management Ltd. The landscape maintenance and management plan covers 5 years which will provide an initial time for the proposed planting and the creation of new habitats to mature and develop. After the 5 years the management plan will be reviewed and updated where necessary, ensuring the long term objectives and ongoing management / maintenance of the site in consultation with Hargreaves Management Ltd and appointed management consultants.
- I.1.2 This document outlines the maintenance operations, management objectives, responsibilities, schedule of operations, timetable for implementation and programme of management prescriptions for the proposed landscape areas. The management plan provides a working document for use by an appointed Landscape Management Contractor, written as guidance for the establishment, ongoing management and up keep of the planted areas following the completion of the works.
- I.1.3 Bradford-Smith Ltd has compiled the Landscape Management Plan for the site on behalf of the client Hargreaves Management Ltd. This report shall be read in conjunction with the Ecological Appraisal compiled by Harris Lamb.
- I.1.4 The ecological features and a Preliminary Ecological Appraisal Report have been compiled by Harris Lamb Property Consultancy (HLPC).
- I.1.5 Tree Survey and Arboricultural Impact Assessment has been undertaken by Barrell Tree Consultancy.
- I.1.6 The drawings to be read in conjunction with the management plan in the Appendix I are:-
- Detailed Planting Plan drawing no. 836-PP-P-01;
- I.1.7 Reviews: This Landscape Maintenance and Management Plan covers 5 years with interim review and opportunities for inspections to be carried out after Year 3 to ensure the maintenance and management aims/ objectives and specifications are relevant and maybe subject to minor changes and improvements as the different landscape and ecological features mature and develop. After Year's 4/5 a final review will be necessary to re-assess the condition and establishment of the new planting and ecological features within the site and update management and ecological objectives and prescriptions in a revised document to cover the long term ongoing future years.

### **I.2 Description of Site**

- I.2.1 The site is part of the former BAE site with all the existing buildings subsequently removed leaving the site dominated by bare earth and hard standing, located off Elettra Avenue on Waterlooville Industrial Estate, Waterlooville, Hampshire. The site is approximately 1.0

hectares, located 1km north-west of Waterlooville town centre, set within an urban environment dominated by commercial and housing developments.

- I.2.2 The site is currently vacant with the former structures, cleared /removed leaving the hardstanding associated with the previous use. The site is bounded by Elettra Avenue to the north-west, west and south- west The site access is from a roundabout on Elettra Avenue at the northern side with a spur access road serving Lidl Food store and McDonalds Drive Thr buildings and car parking areas. To the east lies the remainder of the cleared vacant Waterloo Park, outside the site boundary but within the ownership of Hargreaves Properties.
- I.2.3 The majority of the existing trees and vegetation are located along the periphery boundaries to the north and north-western adjacent to Elettra Avenue – an overgrown hedge of poor quality which consist predominately of willow, oak, ash and blackthorn – for details of tree works refer to the Tree Survey and AIA report.
- I.2.4 The development proposals consist of three units (one discount food store and two Drive Thru, associated car parking, service yard and infrastructure. The current site access / egress off Elettra Avenue to be retained with a new entry access onto the site from the existing spur road to the north. A new access/egress is proposed off Elettra Avenue along the western boundary to serve the service yard and staff car parking for the food store unit. Proposed planting primarily consists of tree planting within the car parking, planting along the road frontages and a landscape buffer strip to the north-western and western boundaries consisting of mixed native trees and shrub planting.

### **I.3 Policy Relating to the Site**

- I.3.1 The site lies within the Local Authority – Havant Borough Council.
- I.3.2 Bats: All bats and bat roots are protected under the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017. All site personnel to be aware of avoiding disturbance or harm to bats and their roosts.
- I.3.3 Birds: All birds and their nests are protected under the Wildlife and Countryside Act 1981. Work to maturing trees and shrubs shall be undertaken during the winter months outside the bird nesting season which is generally between March – August inclusive. Any emergency works required during the bird nesting season will need to be preceded by a check for nesting birds, by a suitably qualified and experienced ecologist.
- I.3.4 Reptiles: are protected under the Wildlife and Countryside Act 1981 and species of principal importance as listed under Section 41 of the NERC Act, 2006 and included on the Hampshire (BAP). Prior to construction a reptile fence installed under the supervision of ecologist

management team – refer to Reptile Method Statement in HLPC Ecology Report. Trees felled during the autumn/ early winter with grubbing out of stumps (if required) completed in the autumn the following year to avoid potential harm to hibernating reptiles.

- I.3.5 Hedgehogs: are protected under the Wildlife and Countryside Act 1981 (Schedule 6). During the construction phase it is recommended that deadwood habitats within the site are carefully cleared by hand to avoid potential harm to stag beetles (if present) can be safely relocated to surrounding habitats outside the construction zone.
- I.3.6 Badgers: badgers and their setts are protected under the Protection of Badgers Act 1992. Prior to construction a badger updated survey undertaken by an experienced ecologist.
- I.3.7 Invertebrates: species of principal importance as listed under Section 41 of the NERC Act, 2006. During the construction phase it is recommended that deadwood habitats within the site are carefully cleared by hand to avoid potential harm to stag beetles (if present) can be safely relocated to surrounding habitats outside the construction zone.

## **I.4 Ecology**

- I.4.1 HLPC have undertaken a Preliminary Ecological Appraisal Report to ascertain the ecological value of the site. Please refer to the HLPC report.

## **I.5 Ecological Mitigation and Enhancements for the Site**

- I.5.1 The retention of existing trees and boundary hedgerows: All existing trees to be retained shall be protected in accordance with BS 5837:2012 - Trees in Relation to Construction. Existing levels within the root protection area (RPA) shall be retained around the existing trees to be retained. Any tree works pruning to existing trees within the site shall comply with the BS 3998: 2010, Tree Work Recommendations and undertaken by an Arboriculture Association approved Contractor.
- I.5.2 Enhancement planting: Proposed planting of mixed native trees and shrubs along the north-western and western boundaries adjacent to Elettra Avenue and areas of wildflower grass areas within the site to increase the biodiversity of the site.
- I.5.3 Bats and Birds: the provision of a minimum of 3nr. bat boxes and 3nr. bird boxes - location and type refer to the Ecological Mitigation and Management Plan.

## **I.6 Existing trees and Vegetation**

- I.6.1 Existing Trees shall be maintained in accordance with good arboricultural practice throughout the maintenance contract period: dead, damaged or diseased material to be cut back to undamaged wood, cuts to be left clean and neat to heal over.

- I.6.2 Ground work, planting within Root Protection Area (RPA) of existing trees - Any required excavations within RPA's for the new planting/ soft works shall be undertaken using hand held tools only to minimize any root damage. All such works will be undertaken in full accordance with Section 7.2 of BS5837: 2012. Any required root pruning will be undertaken by the Arboricultural Consultant (where such works are appropriate in accordance with the above Standard) and as detailed in Section 7.2'. Plants shall be locally adjusted to avoid tree roots.
- I.6.3 Vegetation Clearance: All vegetation clearance/ removal and any further vegetation works during the maintenance / management period shall be undertaken outside the breeding season i.e. undertaken September-February or if within the breeding bird season (typically March-August inclusive) should be checked prior to works commencing by the ECoW.

## **I.7 Responsibilities**

- I.7.1 This document provides a management plan for Hargreaves Management Ltd appointed Landscape Management Contractor that ensures the successful establishment and ongoing maintenance for all the proposed planting - trees, understory planting, native shrub mix, hedgerows, groundcover planting and wildflower grass areas.
- I.7.2 The Landscape Management Contractor will be responsible for any necessary remedial work to the soft landscape works for the duration of the 5 year maintenance / management period. Replanting any losses or failures of plant material annually and assess the maintenance/ management techniques annually to provide opportunities to include minor changes/ alterations within the management plan.
- I.7.3 Ecological Management Team: An ecological manager and ecological clerk of works (HLPC) will be appointed and be responsible for briefing all site personnel on ecological issues on site, obtaining the necessary related Licences and providing guidance to the Landscape Management Contractor. Full details as required of roles refer to Ecological Mitigation and Management Plan.

## **I.8 Existing and New Services**

- I.8.1 The Landscape Management Contractor shall determine the position of all services in any areas where landscape maintenance works are to take place, and shall take all necessary precautions to ensure that they are not damaged in any way during the maintenance operations. The Landscape Management Contractor is to make good at his own expense any damage to public or private water, gas and any other mains or power services, drains and sewers caused by his own negligence, omission or default, and shall give all necessary notices to the local authority or statutory undertaker before commencing operations on site.

## **1.9 Health and Safety**

- 1.9.1 Health & Safety at Work:** The Landscape Management Contractor is responsible for complying with the provisions of the Health and Safety at Work Act and all other regulations in respect of Health and Safety. All machinery or apparatus brought onto the site and used shall be safe to avoid unnecessary risk to health and safety, and shall be maintained to a standard that will not constitute an offence under the Health & Safety Act or any other relevant statutory provision.
- 1.9.2 Safety and Security:** The Landscape Management Contractor is to ensure that the site is left safe and secure at the end of each working day. All materials, plant and tools are to be locked away or secured when not in use. Any areas affected by works which could endanger the safety and wellbeing of the public and operators of the facility must be adequately cordoned off until that particular item of work is complete. The Landscape Management Contractor should allow for regular monitoring of safeguards (all necessary protective fencing, barricades, screens, etc.) and shall adapt and maintain them as necessary to ensure the level of protection.
- 1.9.3** The Landscape Management Contractor shall be adequately trained, informed and supervised and sufficiently competent to perform their work without risk to health and safety to themselves or other persons on site especially where COSHH is applicable. All work shall be carried out in accordance with the relevant codes, best practice methods and safety practices which are currently in force.
- 1.9.4 Steep Ground Working on the highway embankments:** The Landscape Management Contractor shall be fully trained to work safely on steep ground without risk to health and safety to themselves or other persons on site. All work shall be carried out in accordance with the relevant codes, best practice methods and safety practices which are currently in force.
- 1.9.5** The Landscape Management Contractor shall implement a quality management system, to ensure that all subcontracted works are undertaken by skilled and experienced workforce who have an understanding in working and delivering projects of this nature and in accordance with best practice environmental safeguards and mitigation.
- 1.9.6** All personnel on site and working on site shall use personal protective equipment and clothing in the interest of health and safety to avoid harm to themselves or any other persons. All site personnel will be briefed by the Ecological Management Team (Ecological Manager and /or Ecological Clerk of Works) on ecological issues on site and informed that should they discover a protected species in the working areas – all works shall stop immediately and reported to the Landscape Management Contractor/ Ecological Manager. The Ecological Management Team shall be highly qualified and experienced ecologists, for their roles and duties please refer to the Ecological Mitigation and Management Plan.

## **2.0 MANAGEMENT AREAS, TYPES AND OBJECTIVES**

2.1.1 The soft landscape will consist primarily of all new planting areas. The physical and visual aspects of the site landscape should be considered in the following ways:

- the context of the soft landscape within the general area and its appearance from outside the site, particularly from Elettra Avenue where it will be seen predominantly by people travelling by car;
- as a robust, functional landscape resource which can withstand the harsh environment of a busy road corridor;
- as a new landscape and ecological resource that will develop as it matures, providing a transition between the road corridor and retail development;
- the need to ensure visibility of the proposed retail units, road signage on the site for motorists and directional signage to the site itself;
- the need to maintain visibility over the sightline at the entrance to the site;

### **2.2 The Landscape Management Areas**

2.2.1 The main landscape maintenance / management areas within the site are as follows:

- Native shrub mix to the north-western and western boundaries;
- Internal new planting areas;
- Road frontages;
- Wildflower grass areas.

### **2.3 The Landscape Management Types**

2.3.1 The landscape management types will consist primarily of all new trees, hedgerows, shrub planting and wildflower grass areas as follows:

- New tree planting;
- New mixed native shrub planting;
- New clipped hedgerow planting;
- New ornamental shrub and groundcover planting;

- Wildflower grass areas;

## **2.4 The Landscape Objectives**

2.4.1 The main objectives of the maintenance strategy as listed below:-

- The landscape proposals seek to provide a landscape buffer strip along the north-western and western boundaries with new mixed native tree and shrub planting.
- To maintain the landscape in a clean, healthy, and attractive condition as a setting to the retail units, enabling adequate visibility at the site access entrance and front entrance of the building.
- To promote and ensure the successful establishment and growth through to maturity of the trees, hedges, shrubs, ground cover planting and wildflower grass areas;
- To maintain the landscape to ensure free and safe movement of site users (including operational and emergency servicing), avoiding potential hazards/obstructions and controlling growth for visibility/security purposes.
- To maximise the ecological potential of the landscape.
- To establish a flexible management and maintenance regime able to respond to changing needs or objectives over the 5 year period and future on-going management of the site.

## **2.5 The Ecological Objectives**

- Enhance the biodiversity of planting on site using native plant species;
- Minimise impacts to protected species during construction through appointment of Ecological Clerk of Works (ECoW).

### **3.0 MAINTENANCE SPECIFICATION: GENERAL INSTRUCTIONS**

3.1.1 These general instructions apply to the full life of this management plan: Years 1 to 5 inclusive.

#### **3.2 General Construction Operations / Habitat Work Safeguards**

3.2.1 Best practice methods shall be employed and the appropriate measures shall be taken to prevent and minimize the following:

- No burning on site;
- Dust and air pollution;
- Noise and vibration and
- Management of surface water run –off.

#### **3.3 General Management Operations / Habitat Safeguards**

3.3.1 All existing trees to be retained and protected in accordance with BS 5837:2012 - Trees in Relation to Construction.**Existing Trees:** All planting within the root protection area (RPA) of existing trees shall be notched planted and locally adjusted to avoid tree roots. All shrub planting to be undertaken by hand using hand tools only to minimize root damage. If significant roots are encountered, these will be left undamaged and dug around; No new top soiling operations to take place within the RPA - all new planting to be planted into existing soil on site. No changes of levels (raising or reducing) during planting operations within the RPA's.

3.3.2 Pruning to existing and new trees within the site shall comply with the BS 3998: 2010, Tree Work Recommendations and undertaken by an Arboricultural Association approved Contractor.

3.3.3 Work to maturing trees and native shrubs shall be undertaken during the winter months outside the bird nesting season which is generally between March – August inclusive. Any emergency works required during the bird nesting season will need to be preceded by a check for nesting birds, by a suitably qualified and experienced ecologist.

3.3.4 Deadwood should only be removed from mature trees where there is a risk to people or property or when necessary to avoid spread of pests or disease. Care shall be taken when felling trees or removing limbs to avoid damaging adjacent trees or vegetation which is to be retained. Wood from felling operations shall remain on site. Log piles will be created from existing trees which are felled/ pruned/ coppiced on site and used for invertebrates and potential hibernacula for reptiles.

### 3.4 Site Waste Management

3.4.1 The Landscape Management Contractor shall reduce and minimize the amount of waste material on site as far as reasonably practical through waste management, recycling, and re-using materials.

3.4.2 The Landscape Management Contractor shall ensure the following:

- No burning of waste will be permitted on site.
- All arisings from management and maintenance operations shall be taken to a green waste composting area off site.
- Any litter and non-biodegradable material shall be collected and removed from site and taken to a licensed waste disposal site.
- Storage of liquid and hazardous waste – stored in a secure location and not mixed with general waste and prevent ground contamination.

### 3.5 Pruning Generally

- Prune in accordance with good horticultural practice. Prune larger branches and woody stems in accordance with good arboricultural practice.
- Maintain all new tree planting in accordance with BS8545:2014 *Trees: From Nursery to Independence in the Landscape – Recommendations*.
- Thin, trim and shape appropriately to each species, location, season, and stage of growth, leaving a well-balanced natural appearance.
- Use clean sharp secateurs, hand saws or other tools approved by the FM (facility manager). Trim off ragged edges of bark or wood with a sharp knife.
- Remove branches without damaging or tearing the stem.
- 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.
- Notify Hargreaves Management Ltd facility manager (FM) of any disease or fungus. Do not apply growth retardants, fungicide or sealant unless instructed by the FM.

### **3.6 Cleanliness**

- 3.6.1 The site shall be left in a clean and tidy condition on completion and after each management operation. All rubbish and litter found within the planted and grassed areas shall be removed.
- 3.6.2 Leaf litter and arisings: collect, remove and dispose of grass cuttings, leaves, weeds, debris arising from maintenance works to be taken to the green waste composing area off site.
- 3.6.3 Mulch shall be swept off all paved areas after each maintenance visit.

### **3.7 General Watering**

- 3.7.1 Watering: as necessary to ensure the continued health growth of all plants, until restrained from doing so by statutory legislation.
- 3.7.2 Where necessary loosen the soil or form a depression around the base of the stem of plants to ensure water reaches the root zone instead of dispersing on the surface.
- 3.7.3 Ensure full depth of topsoil is thoroughly watered. Use a fine hose or low pressured hose where appropriate to avoid damage to plants.

### **3.8 Machine Tools**

- 3.8.1 Use only tools and machinery suitable for the site conditions and the work to be carried out. Using hand tools only around the existing and proposed trees and shrubs.
- 3.8.2 Works shall only be carried during the appropriate season. Ground and weather conditions shall be appropriate and suitable for the relevant operations.

### **3.9 Notices**

- 3.9.1 The Landscape Management Contractor shall provide Hargreaves Management Ltd a programme / timetable to be agreed for the maintenance visits.
- 3.9.2 The Landscape Management Contractor is required to provide a statement on completion of each visit. This statement should itemise precisely the work carried out during that visit. This will provide a record of the work completed and the number of visits.

### **3.10 Use of herbicides and pesticides, composts and mulches**

- 3.10.1 **Legislation** - Pesticides include herbicides, insecticides, fungicides and plant growth regulators. The use of pesticides is governed by legislation. The Landscape Management Contractor must comply with the 'The Control of Pesticides Regulations 1986' made under the 'Food and the Environment Protection Act 1985', 'The Control of Substances Hazardous to Health Regulations 1988' made under the 'Health and Safety at Work Act 1974' and any other legislation enacted

during the contract period. All pesticides must be products on the current list of Agricultural Chemicals Approval Scheme. All pesticide users shall comply with the conditions of approval relating to use clearly stated on the product label and used in accordance with the manufacturer's instructions and guidelines.

- 3.10.2 Use of herbicides should be avoided, where possible. Any use of herbicides adjacent to the ditch/ watercourse should be avoided. The used of all herbicides near watercourses require written approval from the Environment Agency and only approved herbicides may be used by authorised contractors.
- 3.10.3 The Landscape Management Contractor must be compliant in obtaining all the necessary certificates (a recognized nominated storekeeper's certificate of competence (BASIS) shall be required for storing more than 200 litres of pesticides. All pesticides transported or stored in the Landscape Management Contractor's vehicles (regardless of quantity) shall be locked in a separate storage compartment in the vehicle or within a lockable container in 'pickups' that are bolted to the floor of the vehicle.
- 3.10.4 The Landscape Management Contractor shall keep a written logbook detailing all the uses and pesticide applications carried out within the site (if necessary) and a copy shall be submitted to the ecological manager and client's facilities manager for their records.
- 3.10.5 Use only non- residual herbicides and pesticides. Prevent weed species spreading by topping prior to seeding and combining a regime of repeated cutting to reduce vigor and spreading of weed species.
- 3.10.6 Use only organic peat free composts/ mulches and soil conditioners to PAS 100.

### **3.11 Protection**

- 3.11.1 The Landscape Management Contractor shall provide whatever protection is necessary to delineate or protect areas of newly planted/ seeded areas to prevent damage during establishment of planted areas.
- 3.11.2 Protective Fencing – temporary fencing/ guards may be erected (tbc) around newly planted trees and shrub areas to deter damage by rabbits. Ensure all temporary protective fencing and rabbit guards/ enclosures are kept in a good and effective condition, vertical and repair as necessary to prevent unauthorized access to all planted areas until such time as instructed to dismantle and remove the fencing and guards from the planted areas. The temporary fencing areas shall be checked regularly for adjustments, replacement or removal as and when required.

### **3.12 Programme of the Works**

- 3.12.1 The proposed landscape works shall be managed over a period of 5 years. For specific tasks and areas  
- Refer to Maintenance & Management Operations - Table A.
- 3.12.2 The Landscape Management Contractor shall co-ordinate with the Ecological Management Team. Any potential failures to meet the specified program shall be reported to the Hargreaves Facilities Manager.

## **4.0 MAINTENANCE SPECIFICATION: INITIAL ESTABLISHMENT**

- 4.1.1 This section identifies the maintenance for soft landscape works associated with new planting. Maintenance operations detailed below apply for the first three year period after the implementation of the new planting tree and shrub areas.
- 4.1.2 During this time any replacement planting will have a high water demand, but most of the planting should be requiring nutrients for growth once the root systems have established. Space for development should not be an issue as the young trees and shrubs are unlikely to be competing for space at this stage.
- 4.1.3 **WATERING:** During establishment of planting and seeding, ensure that sufficient water is applied to maintain healthy growth. Volume of water used shall reflect soil type and rooting depths. Individual trees to be assessed based on size, soil type, rooting depth and pit size. To ensure establishment of newly planted trees, watering shall be carried out at least once a fortnight throughout the growing season and once per week in dry periods.
- 4.1.4 **MONITORING WATER NEED:** Water as necessary to ensure the establishment and continued thriving of all planting. During prolonged dry periods, monitoring of soil moisture levels are to be undertaken and a written report shall be submitted after each maintenance/ watering visit to confirm action taken to maintain adequate water provision.
- 4.1.5 **DROUGHT CONDITIONS:** During exceptional hot weather (normally during July & August) or in cases of extreme drought, following 10 consecutive days without rainfall, planted areas shall be watered weekly until the onset of natural rainfall. If water supply is, or is likely to be restricted by emergency legislation, the Landscape Management Contractor shall arrange import of second class water from a sewage works or other approved source. Soil moisture levels shall be monitored.
- 4.1.6 **LITTER COLLECTION:** Collect and remove all extraneous rubbish not arising from the contract work and detrimental to the appearance of the site, including paper, packaging materials, bottles, cans, and similar debris.
- 4.1.7 **CLEANLINESS:** Remove soil and arisings from hard surfaces and leave the works in a clean, tidy condition after maintenance operations.
- 4.1.8 **TREES AND SHRUBS:** Trees and shrubs shall be maintained according to good horticultural practice to ensure the healthy growth of each plant species. Plants shall be pruned to remove damaged, dead or diseased wood according to good horticultural practice to facilitate a healthy and bushy growth according to each particular species.

- 4.1.9 HEDGEROWS: Hedges shall be maintained according to good horticultural practice to ensure the healthy growth of each plant species. Plants shall be pruned to remove damaged, dead or diseased wood according to good horticultural practice to facilitate a healthy and bushy growth according to each particular species. Aim to manage the hedgerows to form an 'A' shape.
- 4.1.10 GRASS AREAS: shall be cut frequently and maintained to encourage good root growth, to establish a dense grass cover free from weeds. Operations shall be carried out according to good horticultural practice. Spot treatment/ removal of any weed ingressions shall be carried out as necessary.
- 4.1.11 WILDFLOWER TURF GRASS AREAS: Spot treatment/ removal of any weed ingressions shall be carried out as necessary. Cut annually in autumn to 25-50mm and removal of all arisings from site. Leaf clearance will be required in the winter to remove any leaf litter from the trees within the wildflower areas.
- 4.1.12 CONTROL OF WEEDS: During the initial establishment of newly planted trees and shrubs, carry out maintenance of the planted areas as follows:
- Maintain a weed free area around each tree and shrub, minimum diameter of 1.0m or the surface of the original planting pit. Keep planting beds clear of weeds, by hand weeding, as appropriate.
  - Beds shall be forked over as necessary to keep soil loose, with gentle cambers and no hollows, taking care not to reduce depth or effect of mulch.
  - The condition of tree stakes and ties shall be checked regularly and adjusted, re-fixed or replaced as required.
- 4.1.13 FERTILIZER: In March or April, 15:15:15 N:P:K fertilizer shall be evenly spread, carefully incorporating into soil below mulch.
- 4.1.14 MAINTENANCE OF MULCH :
- On an annual basis top up with same type of mulch (peat free) to thickness of a minimum of 50mm.
  - Remove weeds growing on or in mulch by hand weeding.
- 4.1.15 REMOVAL OF DEAD PLANT MATERIAL AND REPLACEMENT PLANTING: At the end of the growing season, check all trees and shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems. Replace losses at the next appropriate planting season.

Replacements must match the size of adjacent or nearby plants of the same species or should match the original specification, whichever is the greater.

## **5.0 MAINTENANCE SPECIFICATION: ONGOING**

- 5.1.1 This section identifies the regular maintenance operations which are to be introduced beyond the establishment period. It addresses the short to medium term development of the soft landscape and covers the period after the three years initial establishment.
- 5.1.2 During this time the plants should have established sufficiently to be able to withstand some periods of drought, and soil nutrient levels will be stabilising from natural processes. Formative pruning may be the priority and some plants may require thinning where they are reaching a closed canopy.
- 5.1.3 The general maintenance operations are to be applied to all areas, unless otherwise noted. The need for watering will be less than for the establishment years, and required only during exceptionally hot weather, as directed by the facility manager. Specific maintenance and management requirements are described below and are summarised in Table A.

### **5.2 Pruning requirements for ongoing management:**

- 5.2.1 Pruning will be carried out as for the establishment phase with additional management requirements as listed below:
- Prune to encourage healthy and bushy growth and desirable ornamental features, e.g. flowers, fruit, autumn colour, stem colour.
  - Sightlines: ground cover planting species have been specified so as to not exceed 600mm. Where plants exceed the expected height these shall be pruned and trimmed to below 60mm to maintain the recommended visibility sightlines
  - Suckers: Remove by cutting back level with the source stem or root.

### **5.3 Mulch:**

- On a twice annual basis top up with same type of mulch (fine ornamental bark mulch) to thickness of 50-75mm only in areas where coverage is inconsistent.
- Sweep up and replace mulch spilling onto adjacent areas and, if not contaminated with weeds or rubbish, return to planted area.
- Remove persistent weeds growing on or in mulch by hand weeding only; if spot treatment with glyphosate is required agreement with ecological team where herbicide is required.

## **5.4 Dead plant material and fallen leaves:**

- 5.4.1 At the end of the growing season, check all trees and shrubs and remove all dead foliage, dead wood, and broken or damaged branches and stems. Replace losses at the next appropriate planting season. Replacements must match the size of adjacent or nearby plants of the same species or should match the original specification, whichever is the greater.
- 5.4.2 In autumn and winter, collect and remove accumulations of drifted leaves from the vicinity and from planting beds.

## **5.5 Hand weeding:**

- General: Remove weeds entirely, including roots.
- Disturbance: Remove the minimum quantity of soil, and disturb plants and mulched surfaces as little as possible.
- Completion: Rake area to a neat, clean condition.
- Mulch: Reinststate to original depth.

## **5.6 Soil aeration:**

- Compacted soil surfaces: Aerate the soil of root areas and break surface crust. Reduce clods to crumb and level off. Do not damage plants and their roots.

## **6.0 ADDITIONAL MAINTENANCE OPERATIONS**

6.1.1 Additional maintenance operations for specific areas and planting types are as follows:

### **6.2 Existing Trees**

6.2.1 The majority of the existing mature trees to be retained and maintained to ensure the continuing landscape value, amenity, character, setting and they shall be maintained in a safe and healthy manner.

6.2.2 Felling the poor, diseased and dead/ dying trees and remove deadwood from the trees which are a risk to people or property. Trees which are felled/ pruned/ coppiced on site the wood shall be used to create log piles for invertebrates and potential hibernacula for reptiles and amphibians.

### **6.3 Advanced Nursery Stock; Extra Heavy Standard and Heavy Standard Trees**

6.3.1 It is the intention to allow trees to develop their natural shape and size. Inspect at every planned visit and additionally after strong winds. The following operations to be carried out:

- Prune to remove dead, dying, diseased branches. Advise Landscape Architect of any major works required and if necessary obtain an assessment from an approved arboriculturalist. (FM approval required). Maintain in accordance with BS8545:2014 *Trees: From Nursery to Independence in the Landscape – Recommendations*.
- Trees to be pruned annually, during the dormant season (winter months) outside the bird nesting season which is generally between March – August inclusive. Remove suckers from base.
- Around the base of each tree ensure all weeds/ vegetation that maybe harmful to the establishment of the trees are removed. Top up mulch, around the base of the tree to a depth of 50mm to ensure effective weed suppressant.
- Stakes and ties must be regularly maintained and checked to prevent damage to new tree planting. Adjust, re-fix or renew as necessary, either stake or tie to ensure that no damage occurs to the new tree through instability. Adjust as required to maintain stability and to ensure all trees are upright. Straighten if necessary.
- Firm up trees which have suffered frost heave or are affected by strong winds. Tread around the base until firmly bedded.
- Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and re-firm.

- Ensure that sufficient water is applied to maintain healthy growth. Refer to landscape specification for initial watering requirements. Water quantities to reflect soil type and rooting depths. Individual trees to be assessed based on size, soil type, rooting depth and pit size. During the establishment period watering of newly planted trees to be carried out at least once a fortnight throughout the growing season and once per week in dry periods. The establishment period to be 3-5 years for new trees and reviewed after 3 years.
- Dependent on location, apply N.P.K. slow release fertiliser (at rates recommended by the manufacturer) on annual or two-yearly basis. Monitor for healthy growth.
- Keep the trees free from pests and diseases through environmentally sensitive means i.e. without chemicals, where possible. Monitor trees regularly to catch any problems early.
- Continue protection of all trees from rabbits, (if required) and other pests, by ensuring all protective fences are intact. Monitor and review after five years.
- Tree stakes and supports shall be retained for a minimum of three to five years, after which their value shall be reviewed in relation to the establishment of the trees. Remove stakes and backfill holes with lightly compacted soil.

## **6.4 New Native Shrub Planting**

6.4.1 The intention is to encourage the establishment of planting to provide continuous cover using a balanced mixed shrub layer.

- Keep all beds weed free by hand weeding.
- Fork over beds as necessary to keep soil loose with no low or high spots.
- Re-firm plants where loosened by wind or frost.
- Clear soil and/or mulch from adjacent hard surfaces.
- Until review period (year 5) apply a (15:15:15) N.P.K. slow release fertiliser during March/April in accordance with manufacturer's recommendation.
- Prune shrubs to remove dead, damaged or diseased branches, dead flower heads, etc.
- Prune to maintain shape appropriate to the species with additional shaping or height maintenance as specified. Pruning to be carried out at the following times of year:
  - o Winter flowering shrubs: Spring.
  - o Shrubs flowering between March and July: Immediately after the flowering period.

- o Shrubs flowering between July and October: Back to old wood in winter.
- At end of growing season remove redundant plant supports. Remove litter, debris and arisings at end of each maintenance visit.
- Remove plants with significant damage or dieback and notify Hargreaves Management Ltd facilities manager; replacement planting where required.
- During periods of prolonged drought apply sufficient water to maintain healthy growth.
- Maintain beds rubbish and litter free.
- Retain plants with a strong healthy habit. Minimise disturbance to adjacent plants making good any minor damage immediately. Refill holes with topsoil to leave an even graded surface and restore mulch as original specification.
- Coppicing: proposed native shrub mix planting may be subject to small scale rotational coppicing management to commence in Year 5 (where necessary) to provide continuity of habitat for birds/wildlife etc. Hazel and cornus coppiced in groups on a 5-10 years rotation; Blackthorn, field maple, hawthorn, holly and elder 15-20 years rotation. The Landscape Management Contractor shall co-ordinate with the Ecological Management Team.

## **6.5 Hedgerows**

6.5.1 The intention is to encourage the establishment of healthy plants to provide strong hedgerows of seasonal interest, colour and wildlife benefits using native species.

- Trim to enable hedges reach planned height as rapidly as possible: trim back lateral branches to encourage bushy growth down to ground level and to maintain required shape and desired height indicated on drawings.
- Trim the sides of the hedge, aiming to form an 'A' shape to ensure that sunlight reaches the top and bottom equally. Aim for a width of about 1m at the base, tapering upwards to the desired height.
- Pruning to promote vigour and healthy species.
- Keep weeds under control within the hedge planter; remove by hand weeding, where necessary.
- Ensure adequate watering to plants during growing season and prolonged dry period; even during the winter months.

- Remove plants with significant damage or dieback and notify Hargreaves Management Ltd facilities manager; replacement planting where required.
- An intermediate review is to be carried out after the first three years from planting completion, to assess the planting and if replacements are required.
- Keep the hedges free from pests and diseases through environmentally sensitive means i.e. without chemicals, where possible. Monitor trees regularly to catch any problems early.
- Continue protection of all hedges from rabbits, deer (if required) and other pests, by ensuring all protective fences are intact. Monitor and review after five years.

#### 6.5.2 **Hedge trimming:**

- Road frontage Escallonia hedgerows – maintained at 1.2-1.5m high (refer to drawing for heights; Annual trim in late summer and possibly at the end of winter. Immediately after flowering periods.
- Native hedgerows: trimmed every 2/3 years in late winter (January/ February), outside the birds nesting season (which is generally between March – August inclusive).

### 6.6 **Ornamental Shrub Planting**

6.6.1 The intention is to encourage the establishment of planting to provide continuous cover using a balanced mixed shrub and ground cover layer.

- Keep all beds weed free by hand weeding.
- Fork over beds as necessary to keep soil loose with no low or high spots.
- Re-firm plants where loosened by wind, frost or vandalism.
- Clear soil and/or mulch from adjacent hard surfaces.
- Until review period (year 5) apply a (15:15:15) N.P.K. slow release fertiliser during March/April in accordance with manufacturer's recommendation.
- Prune shrubs to remove dead, damaged or diseased branches, dead flower heads, etc.
- Prune to maintain shape appropriate to the species with additional shaping or height maintenance as specified. Pruning to be carried out at the following times of year:
  - o Winter flowering shrubs: Spring.
  - o Shrubs flowering between March and July: Immediately after the flowering period.

- o Shrubs flowering between July and October: Back to old wood in winter.
- At end of growing season remove redundant plant supports. Remove litter, debris and arisings at end of each maintenance visit.
- Remove plants with significant damage or dieback and notify Hargreaves Management Ltd facilities manager of replacement planting where required.
- During periods of prolonged drought apply sufficient water to maintain healthy growth.
- Maintain beds rubbish and litter free.
- From year 2, deciduous plants to be cut back by 50% every 3 years to promote new growth and vigour. Shrub blocks to be cut back on a rotational system where and when required.
- From year 2, thin when foliage of adjacent plants has begun to touch. Retain plants with a strong healthy habit. Minimise disturbance to adjacent plants making good any minor damage immediately. Refill holes with topsoil to leave an even graded surface and restore mulch as original specification.
- From Year 2, trim ground cover shrubs to maintain tidy appearance and to limit spread within planting beds and to prevent encroachment and obstruction of any right of way.
- Coppicing for coloured stems (Dogwoods to road frontage): After the initial planting, leave them to establish over the first year. Hard prune (coppicing) in late winter (end of February) annually. Cut all the stems to approx. 150mm above the ground level or just after where the plant begins to branch out at the base

## **6.7 Ground flora planting**

- 6.7.1 The intention is to encourage the establishment of ground cover planting to provide continuous cover using ground cover layers to provide seasonal interest, colour and wildlife benefits.
- The ground flora will be assessed every 3 years after planting to assess the rate of natural colonisation. If this has been poor, introduction of additional native species through plugs and or container plants will be conducted.
  - Plant communities will be allowed to develop through natural colonisation.
  - Maintain beds rubbish and litter free.

- All ground flora shall be sourced locally and be UK local providence.
- All planting within highway visibility sightlines: maintain maximum height of 600mm.

## **6.8 Grass & Wildflower Areas**

6.8.1 All amenity grass verge areas shall be cut frequently and maintained to encourage good root growth, to establish a dense grass cover free from weeds. Operations shall be carried out according to good horticultural practice.

- Spot treatment/ removal of any weed ingressions shall be carried out as necessary.
- All grass areas within highway visibility sightlines: maintain maximum height of grass as 600mm.

6.8.2 **Wildflower Grass Areas:** The intention is to provide seasonal and wildlife interest within the site.

- Cut annually in autumn to 25-50mm and remove all arisings from site.
- Before mowing: Remove litter, rubbish and debris.
- Maintain a mowing strip adjacent to public highway as for amenity grass (see above).
- Leaf Litter Clearance: remove all fallen leaf litter and removed from site, undertaken during the winter months.
- Replacement Meadowscape – Pro shall be installed in accordance with the manufactures instructions. Refer to Appendix I for maintenance regime.

## **7.0 MAINTENANCE SPECIFICATION YEARS 3 TO 5**

- 7.1.1 An intermediate review is to be carried out after the first three years, at which point any adjustments to the management specifications for the following Years 4-5 can be made. The Landscape Management Contractor shall co-ordinate with Hargreaves Management Ltd facilities manager and the Ecological Management Team to make any minor alterations to the management specification.
- 7.1.2 At this stage the planting undertaken in the initial first three years should be able to withstand all but the most severe periods of drought. Occasional de-compaction of soil and applications of fertilizer may be required to improve the soil environment and boost nutrient levels.
- 7.1.3 An annual inspection shall be carried out (late summer/early Autumn) to monitor progress and to identify any remedial or additional work (due to either unforeseen circumstances or functional changes) that may be required prior to the start of the planting season.
- 7.1.4 A further final review of this management plan will be carried out at Year 5 to allow for the continuance or amendment of the maintenance operations in accordance with the long term requirements and objectives. The ongoing review will be carried out in consultation with Hargreaves Management Ltd Facilities Manager, Hampshire County Council Highways and Havant Borough Council.

**TABLE A - Table of Annual Maintenance and Management Operations**

| Operations                                                                                                                                                                                                | Target area                                             | Frequency/timing  | Comments                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------|
| <b>Monthly maintenance visits – throughout the year</b>                                                                                                                                                   |                                                         |                   |                                                                                     |
| Litter picking (if required)                                                                                                                                                                              | All areas                                               | At least monthly  | Attention to all areas.                                                             |
| Mulch and soil spill.                                                                                                                                                                                     | All new shrub and tree planting areas                   | At least monthly  | Remove or return to planting bed as specified                                       |
| Hand Weeding– maintain weed free areas.                                                                                                                                                                   | All new shrub, tree planting and wildflower grass areas | At least monthly  | Allow for a minimum of 16 -20 visits                                                |
| Check general condition, plus stability of trees and large shrubs. Re-firm as necessary. Check tree ties and stakes. Adjust as required. Remove from end of Year 5 after planting, if no longer required. | All new tree planting                                   | At least monthly  | Intermediate checks after severe weather.                                           |
| Note any dead, dying, diseased or damaged wood to be remedied during seasonal maintenance visits.                                                                                                         | All new trees and shrubs                                | At least monthly  | Balanced form to be maintained. Advise management team of major works if required.  |
| Replacement Planting undertaken the following planting season.                                                                                                                                            | All new trees and shrubs                                | November to March |                                                                                     |
| Watering - Monitor need for additional watering.                                                                                                                                                          | All new shrub and tree planting areas; Planting troughs | At least monthly  | Additional watering maybe required seasonally to meet weather conditions.           |
| Monitoring need for additional pruning.                                                                                                                                                                   | All new trees and shrubs                                | At least monthly  | Note overcrowding and dominance issues for potential thinning of plants by removal. |
| Remove suckers from base.                                                                                                                                                                                 | All new trees and shrubs                                | At least monthly  |                                                                                     |
| Pest and disease control.                                                                                                                                                                                 | All new trees and shrubs areas                          | At least monthly  |                                                                                     |

| Operations                                                                                                                                                                                                                                                   | Target area                                                                           | Frequency/timing                                                                                            | Comments                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Temporary rabbit fencing - inspect and repair where necessary.                                                                                                                                                                                               | All new trees and native shrub mix                                                    | At least monthly                                                                                            |                                                                                                                                          |
| <b>Watering and grass cutting visits – as required throughout the year but predominantly during growing season - operations may coincide with monthly maintenance visits, with additional visits which may be required seasonally to meet specification.</b> |                                                                                       |                                                                                                             |                                                                                                                                          |
| Water all newly planted areas as required with particular attention to trees and shrubs.                                                                                                                                                                     | All new trees and shrub areas.                                                        | At least fortnightly March-September.<br>Monthly or according to weather conditions at other times of year. |                                                                                                                                          |
| <b>Spring maintenance visit – March/April – additional seasonal operations which may coincide with one or both monthly maintenance visits at this time of year</b>                                                                                           |                                                                                       |                                                                                                             |                                                                                                                                          |
| Pruning trees and shrubs                                                                                                                                                                                                                                     | Any trees (if required urgently) and winter flowering shrubs                          | Annually                                                                                                    | Avoid disturbance to nesting birds. Balanced form to be maintained. Advise Arborist /Ecological Management Team of major works required. |
| Fork beds and apply fertiliser                                                                                                                                                                                                                               | All new trees and shrub planting.                                                     | Annually                                                                                                    | Apply in accordance with manufacturers recommendations.                                                                                  |
| Reinstate mulch                                                                                                                                                                                                                                              | All new planting areas.                                                               | Twice annually (Again in autumn)                                                                            |                                                                                                                                          |
| <b>Summer maintenance visit – July/August – additional seasonal operations which may coincide with one or other monthly maintenance visit at this time of year</b>                                                                                           |                                                                                       |                                                                                                             |                                                                                                                                          |
| Summer pruning of new trees and shrubs including clipping hedges.                                                                                                                                                                                            | Any trees (if required urgently) hedges (if required) and shrubs flowering March-July | Escallonia hedges – trim in late summer.                                                                    | Avoid disturbance to nesting birds. Balanced form to be maintained. Advise Ecological Management Team of major works required.           |

| Operations                                                                                                                                                                                                                                                                                         | Target area                                                                    | Frequency/timing                                            | Comments                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Autumn maintenance visit – September/October – additional seasonal operations which may coincide with one or both monthly maintenance visits at this time of year</b>                                                                                                                           |                                                                                |                                                             |                                                                                                                                                         |
| Existing trees – annual safety inspection and undertake essential safety works on mature trees in particular adjacent to buildings and roads.                                                                                                                                                      | Any trees - September / October.                                               | Annually                                                    | Avoid disturbance to bats /birds. Delay if necessary. Balanced form to be maintained. Advise Arborist/ Ecological Management Team major works required. |
| Autumn pruning of new trees and shrubs.                                                                                                                                                                                                                                                            | Any trees (if required urgently), shrubs flowered July – October (if required) | Annually                                                    | Avoid disturbance to bats /birds. Delay if necessary. Balanced form to be maintained. Advise Arborist /Ecological Management Team major works required. |
| Remove compaction                                                                                                                                                                                                                                                                                  | All planting areas                                                             | Annually                                                    |                                                                                                                                                         |
| Remove dead plant material                                                                                                                                                                                                                                                                         | All planting beds                                                              | Annually                                                    |                                                                                                                                                         |
| Rake up and remove dead leaves                                                                                                                                                                                                                                                                     | All new planting areas.                                                        | Twice annually (again in winter)                            |                                                                                                                                                         |
| Reinstate mulch                                                                                                                                                                                                                                                                                    | All new planting areas.                                                        | Twice annually (previously in Spring)                       |                                                                                                                                                         |
| Assess losses for replanting over winter and in spring                                                                                                                                                                                                                                             | All new trees and shrubs areas.                                                | Annually                                                    | Advise Hargreaves Management Ltd facilities manager/ Ecological Management Team of any infill planting required.                                        |
| Wildflower Turf Areas: Spot treatment/ removal of any weed ingress shall be carried out as necessary. Cut annually in autumn to 25-50mm and removal of all arisings from site. Leaf clearance will be required in the winter to remove any leaf litter from the trees within the wildflower areas. | Wildflower Grass Areas                                                         | Annually in September – may require additional cut in June. |                                                                                                                                                         |

| Operations                                                                                                                                                                          | Target area                                                                       | Frequency/timing                      | Comments                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------|
| <b>Winter maintenance visit – November – February – additional seasonal operations which may coincide with one or both monthly maintenance visits at this time of year</b>          |                                                                                   |                                       |                                                                                |
| Winter pruning of all trees (if required)                                                                                                                                           | All trees (if required) shrubs flowering since autumn maintenance visit           | Annually                              | Avoid disturbance to nesting birds.                                            |
| Copping Dogwoods for coloured stems                                                                                                                                                 | Dogwoods ( <i>Cornus</i> species)                                                 | Annually                              | Avoid disturbance to nesting birds.                                            |
| Replacement planting trees, shrubs and groundcover planting.                                                                                                                        | Any trees, shrubs and groundcover planting as required and agreed where necessary | Annually                              |                                                                                |
| Rake up and remove dead leaves, especially within planting beds.                                                                                                                    | All areas                                                                         | Twice annually (previously in autumn) |                                                                                |
| <b>Protected Species</b>                                                                                                                                                            |                                                                                   |                                       |                                                                                |
| Check bird and bat boxes. Bird boxes clear nesting material and other debris shall be cleaned after each breeding season. No management or monitoring of the bat boxes is required. |                                                                                   | Annually in October/ December         | Liaison with the Ecological Management Team. Undertaken by qualified ecologist |

# **APPENDIX I**

## **Landscape Drawings**

- Detailed Planting Plan drawing no.836-PP-P-01.

# **APPENDIX 2**

## **Wildflower Grass**

- **Wildflower Turf Landscape Specification & Maintenance**
-

NATIVE SHRUB PLANTING MIX

- 59 No. *Acer campestre* 10%
- 59 No. *Carpinus betulus* 10%
- 59 No. *Corylus avellana* 10%
- 236 No. *Crataegus monogyna* 40%
- 59 No. *Ilex aquifolium* 10%
- 59 No. *Prunus spinosa* 10%
- 59 No. *Salix caprea* 10%

clearance and removal of building debris. Bottom of tree pit broken up to a depth of 150-200mm and scarified sides. Tree pits within soft landscape areas: min. 1000 x 1000mm x 300mm deep (min). Depth of tree pit dependant of depth of rootball; check dimensions of rootballs prior to planting. Tree pits backfilled with 300mm imported topsoil over subsoil. Tree pits within hard surface areas refer to construction detail on drawing.

Hedge and shrub planting areas: minimum 300mm deep. Wildflower areas: Green-teak Low fertility soil is a specially blended growing medium created specifically for use with wild flower turf and seed.

**Ameliorant's: Fertilizers & composts:** Landscape contractor responsible for submitting imported topsoil analysis to inform requirements. All topsoil ameliorant's (compost & fertilizers), approved peat - free to PAS100 & incorporated during backfilling & cultivation at required rate to full depth of growing medium.

**Backfilling with Topsoil**

Tree pits and shrub beds shall be backfilled, in layers, with previously prepared topsoil excavated from the tree pit and imported topsoil as required. Topsoil thoroughly mixed with planting organic compost and slow release fertilizer shall be used to plant all trees, shrubs and hedges. All finished levels shall be 25mm above adjacent paving. The shrubs shall be shaken during backfilling to avoid air pockets and the soil must be firmed as the hole is filled. All backfilled material shall include an organic compost and slow release fertilizer.

**Cultivation:** Topsoil shall be cultivated to a minimum of 400-450mm deep on planting areas to a medium tilth, removing all rubbish, vegetation, perennial weeds, roots, stones over 50mm in any one dimension and raked to even levels.

30m larch, free from projections and large knots, with one end pointed. Drive stakes vertically at least 300mm into bottom of the pit either side of rootball. Cross band - 100 x 38mm secured to stakes using galvanised nails. Stakes above ground level - approximately one third of clear stem height - 750mm above ground level. Each stake secured to cross bar using galvanised nails. Tree secured to cross bar with rubber tree tie and tree cushion spacer/pad, fixed to support the tree. All fixing nails shall be galvanised to avoid an annular ring.

Immediately following planting, all plants shall be watered-in to field capacity.

**Shrub & Shrub Shelters:** To be confirmed on site if required. All native tree and shrub planting (hedgerows & native shrub / tree planting) shall be protected by an appropriate sized recyclable green shrub & tree shelters supplied by Tubex Ltd. Stake to be positioned on windward side of plant and driven vertically into the ground; stake attached to the shelter with a min. of two ties.

**MULCH:** Prior to the application of mulch, the planting areas shall be completely weed free and watered sufficiently to achieve field capacity. The surface of the planting areas shall be mulched with a layer of bark mulch. Native Shrub Planting Areas: ornamental bark mulch (8-35mm bark) to a depth of 50-75mm. All other planting beds a layer of fine composted bark mulch (0-8mm bark) to a depth of 50-75mm, ensuring that the low branches of shrubs plants are not smothered. Supplied by AHS Ltd or similar approved. The mulch shall be topped-up to maintain, after settlement, a depth of not less than 50mm.

**WILDFLOWER GRASS AREAS:** seeded with either Meadowspice Pro - Shade- 41 or Meadowspice Pro - Landscape 34 supplied by Wildflower Turf Ltd refer to drawing for locations. All seeded areas shall be seeded in accordance with the manufacturers instructions.

**IMPLEMENTATION**

**NOTES**  
**Copyright:** This drawing is the property of Bradford-Smith Landscape Architect. It must not be copied or reproduced or passed to a third party without written consent of Bradford-Smith Ltd.  
**Dimensions:** Only figured dimensions are to be taken from this drawing. All contractors must visit site and be responsible for taking and checking all dimensions related to the works shown on the drawing. All levels in meters.  
**Utilities/Highways/Environment:** It is the responsibility of the client or their contractor to liaise with Utility Providers, Highways Authority's and Environment Agency and to ensure that all approvals are in place. It is the responsibility of the contractor to ensure that all underground services prior to construction.  
**Drawings:** All drawings and levels to be checked on site prior to the construction works commencing on site. All drawings shall be checked in conjunction with relevant landscape plans.  
**Discrepancies:** Any discrepancy on the drawings shall be referred to the CA  
**Interpretation:**

## NOTES

**Existing trees & vegetation to be removed-** refer to Barrell Consultancy Report & Drawing.

**Tree Survey & RPA's** - Barrell Consultancy Report & Drawing.

**Underground Services:** All pipe work shall be protected with Terram Root Guard (or similar approved) in the vicinity of new tree planting. No new services shall be located within the RPA of existing trees. External drainage and levels - Refer to Drainage & Highway Proposals Plan.

**Hard landscape details and drainage** - refer to Architects and Engineers details. For details on retaining structures, please refer to engineers / architects details.

C 03-03-2021 Amendment to Access to Aids service yard  
B 25-02-2021 Planting amended to incorporate revised layout  
A 18-02-2021 Planting amended to revised layout

Date \_\_\_\_\_

Revisions

**BRADFORD-SMITH**

LANDSCAPE ARCHITECT

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|                                                                        |              |          |
|------------------------------------------------------------------------|--------------|----------|
| Drawing Title<br><b>PROPOSED DETAILED PLANTING PLAN &amp; SCHEDULE</b> |              |          |
| Scale                                                                  | Date         | Drawn    |
| 1 : 250 @ A1                                                           | January 2021 | MS       |
| Drawing No.                                                            |              | Revision |
| 836-PP-P-01                                                            |              | C        |

|                                                                  |                                                        |
|------------------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Preliminary                             | <input type="checkbox"/> Issued for Design/Information |
| <input checked="" type="checkbox"/> Issued for Planning Approval | <input type="checkbox"/> Issued for Tender             |
| <input type="checkbox"/> Issued for Construction                 | <input type="checkbox"/> As Built                      |

## Wildflower Turf Ltd

### Meadowscape Pro™ Landscape: WFT-Meadowscape Pro-Landscape-34

SEED SPECIFICATION – 100% flowers, no grasses unless requested

❖ Subject to seed availability

|    | FLORA                    |                                 |     |
|----|--------------------------|---------------------------------|-----|
| 1  | Autumn Hawkbit           | ( <i>Leontodon autumnalis</i> ) | P   |
| 2  | Betony                   | ( <i>Stachys officinalis</i> )  | P   |
| 3  | Bird's foot Trefoil      | ( <i>Lotus corniculatus</i> )   | P   |
| 4  | Bladder Campion          | ( <i>Silene vulgaris</i> )      | P   |
| 5  | Cat's ear                | ( <i>Hypochaeris radicata</i> ) | P   |
| 6  | Common Knapweed          | ( <i>Centaurea nigra</i> )      | P   |
| 7  | Common Sorrel            | ( <i>Rumex acetosa</i> )        | P   |
| 8  | Common Toadflax          | ( <i>Linaria vulgaris</i> )     | P   |
| 9  | Common Vetch             | ( <i>Vicia sativa</i> )         | P   |
| 10 | Cowslip                  | ( <i>Primula veris</i> )        | P   |
| 11 | Field Scabious           | ( <i>Knautia arvensis</i> )     | SLP |
| 12 | Kidney Vetch             | ( <i>Anthyllis vulneraria</i> ) | P   |
| 13 | Lady's Bedstraw          | ( <i>Galium verum</i> )         | P   |
| 14 | Meadow Buttercup         | ( <i>Ranunculus acris</i> )     | P   |
| 15 | Meadow Cranesbill        | ( <i>Geranium pratense</i> )    | P   |
| 16 | Meadowsweet              | ( <i>Filipendula ulmaria</i> )  | P   |
| 17 | Musk Mallow              | ( <i>Malva moschata</i> )       | P   |
| 18 | Ox Eye Daisy             | ( <i>Leucanthemum vulgare</i> ) | P   |
| 19 | Perforate St John's Wort | ( <i>Hypericum perforatum</i> ) | P   |
| 20 | Ragged Robin             | ( <i>Lychnis flos-cuculi</i> )  | P   |
| 21 | Red Campion              | ( <i>Silene dioica</i> )        | P   |
| 22 | Ribwort Plantain         | ( <i>Plantago lanceolata</i> )  | P   |
| 23 | Rough Hawkbit            | ( <i>Leontodon hispidus</i> )   | P   |
| 24 | Salad Burnet             | ( <i>Sanguisorba minor</i> )    | P   |
| 25 | Self-heal                | ( <i>Prunella vulgaris</i> )    | P   |
| 26 | Tufted Vetch             | ( <i>Vicia cracca</i> )         | P   |
| 27 | White Campion            | ( <i>Silene latifolia</i> )     | P   |
| 28 | Wild Carrot              | ( <i>Daucus carota</i> )        | P   |
| 29 | Wild Marjoram            | ( <i>Origanum vulgare</i> )     | P   |
| 30 | Wild Red Clover          | ( <i>Trifolium pratense</i> )   | P   |
| 31 | Yarrow                   | ( <i>Achillea millefolium</i> ) | P   |
| 32 | Yellow Rattle            | ( <i>Rhinanthus minor</i> )     | A   |

**Key: P = Perennial; B = Biennial; A = Annual; SLP = Short Lived Perennial**

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## 1. Meadowscape Pro™ Landscape

|     |                                                                                                                                                                                                                                                                                                                       |  |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1.1 | Meadowscape Pro™ is a unique soil-free wildflower growing medium. The material uses an inert, pH modified, low nutrient, compost based growing medium that incorporates wildflower seed as well as a number of ingredients to promote successful wildflower seed germination and strong plant and root establishment. |  |
| 1.2 | Meadowscape Pro™ Landscape is made up of 100% UK native perennial wildflowers (no grass) designed to have a natural 'hay meadow' look and feel. Bespoke mixes are produced to order.                                                                                                                                  |  |
| 1.3 | Meadowscape Pro™ can be supplied in bulker lorries or in bulk bags and has an approximate weight of 10kgs/m². Each bag contains enough growing medium to cover 40m² in 1m³ bulk bags or 80m² in 2m³ bulk bags. Bulker lorries hold enough loose growing medium to cover approximately 2-3,000m².                      |  |

## 2. Meadowscape Pro™ Preparation and Installation

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 2.1 | Do NOT rotovate, dig or disturb the soil. The existing vegetation should be killed or removed. Spraying off the area should be conducted according to the chemical manufacturer's instructions a minimum of 2 weeks before installation of the Meadowscape Pro™. If there is a residue of more than a light covering of dead surface vegetation after two weeks then this needs to be cut and removed. This is necessary otherwise Meadowscape Pro™ will be suspended on the dead thatch above the soil surface, preventing good seed germination and successful seedling growth. Meadowscape Pro™ can also be laid on <b>sterile</b> imported soil, but if so the soil needs to be levelled for a smooth finish for ease of laying product. | Soil Preparation              |
| 2.2 | Ensure soil is not waterlogged or compacted prior to installing Meadowscape Pro™. The soil does not need to be fertilized before or after the installation. We would advise <b>not</b> stripping back the top soil to reduce soil fertility before using Meadowscape Pro™ as it needs some level of fertility to get well-established initially and is an unnecessary ground preparation step. However, where soil is fertile, particular attention must be paid to the maintenance regime – see section 3.1                                                                                                                                                                                                                                 | Soil conditions and fertility |
| 2.3 | When laying Meadowscape Pro™, care should be taken to ensure a uniform depth of 20 – 25mm is laid. Do not over or under apply the material. Over application results in an imbalance of seed and nutrient ratios for a given area creating too much competition between the plants. Under applying will create a thinner layer of seeded material creating sparser and poorer germination results whilst also                                                                                                                                                                                                                                                                                                                                | Laying Meadowscape Pro™       |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 2.4 | <p>limiting Meadowscape Pro's™ ability to suppress weed seeds in the surface of the soil beneath.</p> <p>Once laid, water the area thoroughly, for the first few weeks until a seedling sward starts to appear– this could take up to 4-6 weeks (weather dependent). There is no need to soak the soil before laying but it is important to check that the initial watering soaks through the entire dressing of growing medium and ideally into the soil beneath. Do this by scratching the growing medium during watering to assess sufficient water uptake. Once the Meadowscape Pro™ is wet through, stop watering – excessive watering will lead to run off and erosion of the material. Do not allow the profile of the Meadowscape Pro™ to dry out while the seeds establish – this is very important. Depending on the time of year, seedlings will emerge in the first few weeks and these plants will develop rapidly as a result of the perfect growing conditions the Meadowscape Pro™ provide.</p> | Watering |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

### 3.0 Meadowscape Pro™ Maintenance

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 3.1 | No fertilizer is needed, although in some circumstances, for example on a green roof or where the wildflower installation is on very low fertility soil such as sand or gravel, the addition of a light dose of fertilizer in the spring may improve plant development. Please refer to Wildflower Turf Ltd.                                                                                                                                                                                                                                                                                                                                    | Fertilizer            |
| 3.2 | Once established Meadowscape Pro™ requires little maintenance. For the annual maintenance cut in the Autumn, it is important to cut the meadow down to 1 to 2 inches (25mm to 50mm) off the ground and remove all cuttings. This can be done by strimming and raking, or using a mower and collecting the cuttings. Make sure these tools are sharp. The cut is an important part of the meadows life cycle and ensures that re-growth and species diversity year on year. Cuttings should not be left on the meadow, as they add undesirable fertility to the ground. It is also important to remove all leaf litter that falls onto the area. | Annual Maintenance    |
| 3.3 | The annual maintenance cut should be done in late September, early October. There is no need for a set date, but this timing will allow the plants in the meadow to regenerate before the first frost typically in November. You can choose to cut only half of the meadow area at one time to allow time for fauna to migrate to the uncut meadow. Allow some regrowth of the cut area before cutting the second half, but aim to have finished all cutting by the end of the first week of October. Over time alternate the areas that are cut early and the areas that are left as this will benefit species diversity.                      | Timing the cut        |
|     | On fertile sites or where you might have species dominance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Managing fertility in |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |            |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 3.4 | <p>or too vigorous early growth, a second cut at the end of May, beginning of June can be introduced. This high cut, approximately 8 to 10 inches off the ground (200mm to 250mm) to remove the flower heads but leaving enough plant stems and leaf area to regenerate, and removal of all cuttings, will help to knock back some species dominance, reduce soil fertility and open up the sward to more light and air circulation to promote diversity of lower growing species. Once the cutting has been completed and all cuttings removed, give the area a good soaking with water to encourage the next flush of growth. Introducing this early summer cut and removal will mean your second Autumn cut and removal will be later that year, up to the end of October.</p> | the ground |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|