

Cwmgelli, Blackwood

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Landscape Maintenance and Management Plan

Reserve Matters Application (RMA) - October, 2023 (Revision D)

On Behalf Of:

**Taylor
Wimpey**

Produced By:

theurbanists



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01/02 INTRODUCTION, OBJECTIVES, AND SITE INFORMATION

01. INTRODUCTION

1.1 This document has been prepared by The Urbanists on behalf of Taylor Wimpey Plc for a residential development at Cwmgelli, Blackwood. This document outlines the operations needed to ensure establishment of the landscape proposed, with a **five year** (5) maintenance and rectification period included. Following year 5, the development will remain in private ownership and maintenance of the landscape areas will be carried out by an appointed maintenance company under a separate agreement. Please refer to the Conveyance drawing/land control plan prepared by the surveyor for all private plot boundaries, Land Control information, for example which areas are managed by a Management company, local authority (if applicable). This report provides information generally on the landscape design rationale and management objectives. Please refer to the following detailed layout drawings produced by The Urbanists for the landscape proposals covered by this maintenance document: 1835-URB-LA-DT-90-01 to 05 Softworks drawings, 1835-URB-LA-GA-90-06 Hardworks drawing. Drawings shown below under management and maintenance objects.

MANAGEMENT AND MAINTENANCE OBJECTIVES

1.2 Please refer to the adjacent pages for maintenance objectives for all POS, paths, and lanes within the site. Each plan provides site specific information. In addition, please ensure:

- The contractor/management company shall be responsible for preparing a yearly maintenance schedule based upon this report and updated to include ongoing Arborist inspections, Landscape Architects instructions/progress reports or approved changes to the landscape.
- Hedgerows - There are three (3) types of hedgerow specified throughout the development. (1. New native hedge, 2. Existing native hedge improved, 3. Ornamental, hedgerows. All **Ornamental** hedges are to be top cut to a height of 1100mm high and to the width shown on the Landscape planting plans. Ensure all hedgerows are pruned square top and sides, evenly shaped to Landscape Architects approval. NB, **Native** hedgerows to be allowed to grow to 2.5m high / 1.5m wide to create a natural edge to the development.
- For all grass areas there are several mowing regimes required. Please refer to the corresponding pages and ensure the mowing regimes are incorporated within a Maintenance schedules.
- All trees and shrubs – Please refer to the Landscape Planting plans for a suggestion on clear stemming trees. Where a 2m clear stem has been specified, the contractor/management company shall maintain a clear stem in proportion to the trees growth. It is important this is maintained on a regular basis to avoid vehicle visibility splays becoming blocked, pedestrian visibility and safety

potentially affected, or inhibit paths or the use of the site. All shrubs shall be pruned to allow natural form, do not box cut unless instructed by the Landscape Architect.

PRELIMINARIES

- 1.3 Any plants found to be defective during the five-year Defects Rectification Period as a result of failure, defective materials and/or workmanship, and/or lack of vigour are to be replaced by the Contractor with plants to match the original specification.
- 1.4 All loss or damage arising from theft or malicious damage prior to Practical Completion is to be made good by the Contractor.
- 1.5 The maintenance of trees and grassland areas after Practical Completion is to be carried out by the Contractor until responsibility is transferred to the appointed successor Management Company.
- 1.6 Any plants found to be defective following the five-year Defects Rectification Period as a result of failure, poor materials and/or workmanship, and/or lack of vigour are to be replaced by the Management Company.
- 1.7 There shall be no limit on the number of times plant replacement is carried out in order to achieve satisfactory plant growth and establishment and maintain the scheme as designed by the Landscape Architect. If the same replacement trees/plants or group of replacement trees/plants repeatedly fail to establish as a result of the contractor failing to adequately carry out maintenance/management in accordance with this report, the Landscape Architect holds the right to request larger plant stock (of expected growth) or extend the deficiency period to ensure the full 5 years has been achieved.

02. SITE INFORMATION

2.1 SITE SERVICES INFORMATION

Information regarding the nature and location of public and private services/utilities shall be provided upon request. However, it shall be the Contractor's responsibility to satisfy himself prior to commencement of works of the exact position of Statutory Undertakers' and other publicly or privately owned services or supplies affected by or near the works.

2.2 PERNICIOUS WEEDS

The presence of pernicious weeds will be established following a site inspection by a suitably qualified Horticulturist or Landscape Architect.

03 GENERAL CONDITIONS: HORTICULTURAL WORKS

3.1 TIMING OF HORTICULTURAL WORKS

- Planting of container-grown plants can take place at any time, subject to suitable weather conditions.
- Planting of deciduous plants (such as bare root or rootball stock), other than those that are container-grown, shall be between November and March inclusive, subject to suitable weather conditions.
- Grass seeding and turfing operations shall be undertaken when weather and soil conditions are suitable and, where possible, preference shall be given to autumn and early winter operations. No grass seeding operations shall be undertaken in exceptionally dry, or frosty weather, or in other unsuitable weather conditions.
- Suitable weather conditions shall mean open weather, i.e. mild, dull, overcast, even in winter, when the ground is moist and workable.
- Planting, turfing and grass seeding shall be suspended during periods of drought, when soil is frost-bound or waterlogged, during persistent drying, cold winds, or during any weather or ground conditions considered to be unfavourable to successful establishment. Planting turfing and grass seeding may take place at other times, but only on the written authority of the Contract Administrator (CA).

3.2 NOTICE OF INTENTION

The Contractor shall give 48 hours' notice to the CA of his intention to commence any of the following operations:

- Setting out.
- Topsoiling/Approval of imported topsoil/subsoil.
- Cultivations.
- Planting and seeding operations.
- Maintenance Visits.

3.3 CHEMICALS FOR HORTICULTURAL USE

- All pesticides / herbicides to be used must have been authorised by the CA and approved for use in amenity horticulture, in accordance with the Control of Pesticides Regulations 1986 (Amended 1997).
- Recognised Certificates of Competence are required by Contractor using pesticides approved for use in amenity plant protection, unless they are working under direct supervising of a certificate holder. The Contractor will be required to provide written evidence to the CA as to which member(s) of his staff are certified competent to apply pesticides.

3.4 DAMAGE TO PLANTS DURING TRANSIT/ PRIOR TO PLANTING

- The current recommendations of the JCLI "Plant Handling Code" will be observed at all times.
- All plants are to be carefully and adequately packed and protected to survive transportation from the suppliers to the site and final planting positions, so that the plants, after planting, are in optimum condition.
- The form of packaging, protection, and transportation shall be appropriate to the season and the type and size of plant.
- Damaged or broken branches or twigs on shrubs shall be cleanly pruned back to sound wood unless in the opinion of the CA, the ultimate shape of the plant would be affected detrimentally, where upon the plant shall be rejected.
- Plants rejected by the CA shall be replaced with suitable material at the Contractors own expense.

3.5 PROTECTION OF PLANT PRIOR TO PLANTING

- All container-grown material brought onto site but not able to be immediately planted shall be stored securely in an upright position in the Contractor's compound, or another approved safe place, and kept watered.
- All bare-rooted, root-wrapped or root balled plant material brought onto site but not able to be immediately planted, shall be heeled into a topsoil trench in a safe place, or covered by peat or straw and damp hessian and protected from wind and kept moist.

3.6 CONTAMINATION OF AREA TO BE PLANTED OR SEEDED

- Areas to be planted shall be kept free of contamination by oil, petrol, cement, builders' rubble, paint, scaffolding, litter, and any other deleterious material.

3.7 WATERING

- All new planting is to be thoroughly watered after implementation to bring the soil to optimum moisture content appropriate to the work in hand, (i.e. Field Capacity).
- Watering shall be implemented as required up to Practical Completion with all necessary hoses, fittings, sprays, etc. being provided by the Contractor.
- Where mains water is not available, delivery of fresh water shall be by bowser or other method.

03 GENERAL CONDITIONS: HORTICULTURAL WORKS

3.8 MAINTENANCE PERIOD PROVISIONAL

- The Maintenance Period shall be for a period of *60 months* from the date of completion of the phase 1 works.
- During the Maintenance Period, the Contractor shall carry out periodic (monthly) visits to carry out Maintenance work.

3.9 ACCEPTANCE OF HORTICULTURAL WORKS AT PRACTICAL COMPLETION

- Individual areas shall be protected and maintained as specified in the maintenance schedules until all the works are accepted at Practical Completion.
- The CA shall be notified in writing by the Contractor of the completion of all establishment maintenance works. Subsequent approval for formal handover shall be subject to agreeing on inspection that the work has been carried out to the reasonable satisfaction of the CA.

SOFTWORKS

4.1 HERBICIDES

- The use of Herbicides shall be subject to the written approval of the CA
- Herbicide formulation shall either be liquid, granules, pellets or wettable powders
- Total weed-killers containing Sodium Chlorate shall not be used.
- The type shall be approved by the CA for the situation, the season, and the species.
- Use of both contact and translocated herbicides may be required.

4.2 IMPORTED TOPSOIL (IF REQUIRED)

- Shall be compliant with BS3882: 2015 for landscape purposes. Have been found via a soil scientists interpretive report to be fit for the specific landscape function and contain no contaminants.
- Cultivate to alleviate any compaction and any sharp surface prior to topsoiling
- Shall be from an as-dug source.
- Shall be free from pernicious weeds and other deleterious material.
- Either a sample shall be provided for CA approval, or the CA may elect to inspect the proposed material at source.

4.3 IMPORTED SUBSOIL (IF REQUIRED)

- Shall be compliant with BS8601: 2013 for landscape purposes. Have been found via a soil scientists interpretive report to be fit for the specific landscape function and contain no contaminants.
- Shall be from an as-dug source.
- Shall be free from pernicious weeds and other deleterious material.
- Shall be provided as necessary as a planting substrate for wildflower areas and to make up any deficiency of topsoil on site and to complete the work

- Either a sample shall be provided for CA approval or the CA may elect to inspect the proposed material at source.

4.4 GRANULAR FERTILISER

- Shall be Enmag Slow Release fertiliser (supplied by: Scotts, Professional Products Tel: (01892) 275664) or equal and approved).

4.5 PRE-SEEDING FERTILISER

- Shall be Scotts PS5 Pre-seeder (3%N: 17% P2O5: 10% K2O: 5% MgO), or equal and approved.

4.6 TREE PLANTING COMPOST

- Shall be Tree and Shrub Planting Compost.
- Supplier: CPA Horticulture, Llety Coed, St Clears, Carmarthen, SA33 4JR; tel. 01994 231121, or other equal and approved.

4.7 PLANT SUPPLIES

- All trees, shrubs and transplants shall be agreed and approved first by the CA. To be grown, produced and obtained from a UK nursery. Specification must adhere to relevant British Standard BS 3936-1, Nursery Stock Specification for Trees and Shrubs.

4.8 MULCH (PROVISIONAL)

- Type: Wood bark mulch, Medium Ornamental grade, 8-35mm particle size.
- Supplier: CPA Horticulture Tel: (01269 591000), or equal and approved.
- A sample shall be provided for inspection and approval by the CA prior to bulk delivery.

4.9 GRASS SEED & REPLACEMENT GRASS AREAS

- Grass seed shall be EL1 Flowering Lawn Mixture and sowed in accordance with Plant Schedule.
- Supplier: Emorsgate Seeds Ltd.
- Contact the CA prior to ordering for final approval. All new or replacement grass areas shall match this seed mix, unless instructed otherwise by the Landscape Architect.

04 MATERIALS

4.10 WILDFLOWER SEED & REPLACEMENT WILDFLOWER SEED

- Grass seed shall be BFS9 Country Meadow Wildflower mix, sow at 5g/sq m in accordance with the plant schedule. Grass seed mix shall contain wildflower 20% (15 species), Grasses 80% (5 species)
- Supplier: British Flora (www.britishflora.co.uk)
- Contact the CA prior to ordering for final approval. All new or replacement meadow areas shall match this seed mix, unless instructed otherwise by the Landscape Architect.

4.11 BULBS & REPLACEMENT BULBS

- Bulbs as per plant schedule, 8 per m²
- Contact the CA prior to ordering for final approval. All new or replacement bulb areas shall match this mix, unless instructed otherwise by the Landscape Architect.

05 SITE CLEARANCE, EARTHWORKS, AND GROUND PREPARATION

5.1 GENERAL

- The precise scope of all the works described in the following shall be defined and agreed at the Pre-start Meeting.

SITE CLEARANCE

5.2 ABOVE & BELOW GROUND SERVICES

- Prior to working in any area, the Contractor shall check for below and above ground services in the vicinity.
- Inform the CA if works may be affected and obtain CA's instructions prior proceeding.

5.3 HERBICIDE APPLICATION (PROVISIONAL)

- Prior to commencement of works, agree with the CA areas of vegetation / grass to be cleared. These shall be identified and treated with a suitable total translocated non-residual herbicide. Allow fallow period following treatment as suppliers recommendations before clearance works.

5.4 REMOVAL OF EXISTING VEGETATION

- The Contractor shall remove all the existing vegetation within the site areas. Unless directed otherwise by the CA.
- Vegetation, including roots, shall be cut down or grubbed up/stump ground and all arisings removed from site. The contractor shall propose a method statement if working close to retained hard surfacing, structures, existing trees, existing hedgerows or other vegetation.

EXCAVATIONS

5.5 GENERAL

- Prior to commencement of the works, beginning the Contractor shall agree with the CA the general setting out and scope of work regarding the amended landform and finished levels to be obtained.
- It shall be the intention to minimise the need for the removal of hard and granular materials from site via the re-use of suitable excavated material; consequently the quantities of material for disposal from site shall be re-evaluated on site as the works progress.

5.6 REMOVAL OF SOFT MATERIALS

- Location: To be confirmed.
- The Contractor shall allow the lifting and removal of areas of soft (soils) materials (to depth of c. 200mm) once turf is removed, and stockpiled as a single resource.
- Material suitable for re-use as fill beneath hard areas shall

be set aside for re-use as fill on site. Excess material shall be removed from site.

5.7 TREE PITS

- The Contractor shall allow the excavation of materials to allow the incorporation of tree pits to Extra-Heavy Standard Trees to minimum dimensions of 1200mmx1200mm x1000mm deep. Refer to drawing 1835-URB-LA-DT-90-02 Softworks drawing for other tree pit details.
- Trees must be compliant with Table 1, p.21, BS 8545:2014. This is specific to tree form and is in the format of a checklist that should be ticked off by the landscape architect on delivery (and ideally prior to delivery) of trees.

TOPSOILING/SUBSOILING

5.8 GENERAL

- Locations: To be confirmed.
- The earthmoving operations described above will have provided the underlying landform that will be subject to over-filling with topsoils to the depths specified and monitored/supervised by a soil scientist.

5.9 SCARIFICATION

- Immediately prior to topsoiling, the graded subsoil formation levels shall be thoroughly broken up to alleviate any compaction and to allow adequate water penetration and drainage.

5.10 IMPORTATION (IF REQUIRED) & SPREADING TOPSOIL/SUBSOIL

- Import topsoil that complies with Clause 4.2 and BS3882:2015.
- Import subsoil that complies with Clause 4.3 and BS8601:2013.
- Do not compact topsoil. Preserve a friable texture of visible crumbs wherever possible. Spread topsoil to specified depths, as follows: Typically soil profiles are as follows; 300mm of topsoil over 600mm of subsoil (trees only), 300mm of topsoil over 300mm of subsoil (shrubs only) and 150mm of topsoil over 150mm subsoil (grass only).
- Ensure that topsoil is free from pernicious weeds and select plant to minimise disturbance, trafficking and compaction. Avoid contamination by subsoil and other deleterious material and ensure that topsoil is handled in dry conditions.

05 SITE CLEARANCE, EARTHWORKS, AND GROUND PREPARATION

5.11 ENSURE THAT MINIMUM FINISHED TOPSOIL LEVELS ARE:

- 25mm above adjoining paving or kerbs
- 100mm higher for shrub areas than adjoining grassed areas.

SOIL PREPARATION

5.12 GENERAL

- Locations: The following shall apply to all areas of new tree planting, ornamental shrub and scrub planting and grass/wildflower seeding.

TREE PITS

5.13 PREPARATION OF PITS FOR SPECIMEN TREES

- Excavate pits as specified - as per tree pit details. Please refer to drawing number 1835-LA-DT-90-02

SHRUB AND HEDGE PLANTING

5.14 PRIMARY CULTIVATIONS

- Cultivate all shrub beds to the full topsoil depth of 300mm, picking-off any deleterious matter and all stones greater than 50mm diameter in any one direction. Cart to tip. Rake over to achieve even lines and levels.
- All cultivation and ground preparation operations must be approved by the CA before continuing with the next operation in the planting sequence.
- Hand cultivation shall be carried out to achieve the same finish within areas where machinery access is not practicable, e.g. adjacent to kerbs, inspection covers and on steep slopes.
- Cultivations must not take place during wet weather, or when the soil is saturated, since this operation may destroy the soil structure. Similarly cultivations should be avoided during excessively dry periods. Soil moisture should be at or around field capacity. Any soil damaged during earthworks/cultivations shall be replaced by the contractor entirely at his own cost.

5.15 FERTILISER APPLICATION AND SECONDARY CULTIVATIONS

- Apply granular fertiliser at a rate of 70 gms per m² over each ornamental shrub bed and woodland plantation. Cultivate in to a depth of 200 mm to achieve a well-blended mix. Rake over to achieve even lines and levels, picking out any stones greater than 25 mm dia. Fertiliser and compost

should only be worked into the top 200mm of soil if soil analysis demonstrates the need.

- All Secondary Cultivations and ground preparation must be approved by the CA before continuing with the next operation in the planting sequence.
- Hand cultivations shall be carried out to achieve the same within the root zone of existing trees, and on areas where machines are impossible, e.g. adjacent to kerbs, inspection covers, and on steep slopes.

GRASSED AREAS (SEED MIX A19)

5.16 PRIMARY CULTIVATIONS TO GRASS SEEDED AREAS

- Break up any compacted areas of imported topsoil and existing subgrade. Reduce the top 150mm of topsoil to be seeded to a tilth suitable for blade grading (10 mm down particles).
- Remove all stones and clay balls larger than 25mm in any dimension, as well as all roots, rubbish and debris.

5.17 GRADING

- Topsoil shall be in a reasonably dry and workable condition.
- The topsoil shall be graded to achieve smooth flowing lines and levels, with falls adequate for drainage.
- All minor hollows and ridges shall be eliminated.
- After settlement, finished levels shall be 25 mm above adjoining paving, kerbs and inspection covers, etc.
- Blade Grading may be used to adjust topsoil levels, provided that the depth of topsoil is nowhere less than 100mm.

5.18 PRE-SEEDING FERTILISER

- Supply, distribute and rake-in pre-seeding fertiliser [Scotts Enmag or similar and approved] to a depth of 200mm, at a rate of 40gms per m² to areas to be seeded within the universal seed mix only. Fertiliser and compost should only be worked into the top 200mm of soil if soil analysis demonstrates the need.

5.19 FINAL CULTIVATIONS

- After grading and fertilising, reduce the seed bed to a fine tilth with a good crumb structure, and to an even depth of 25mm

05 SITE CLEARANCE, EARTHWORKS, AND GROUND PREPARATION

- Lightly rake over, to produce an even surface and a fine tilth which is friable and lightly firmed, but not compacted.
- Ensure that all deleterious material and earth clods and stones greater than 25mm in any one dimension are raked off and carted to tip.
- Obtain the CA's approval of the prepared seedbed before commencing seeding operations.

WILDFLOWER AREAS

5.20 PRIMARY CULTIVATIONS TO WILDFLOWER AREAS

- Wildflower seeding to be applied to a subsoil, either imported or existing.
- Break-up any compacted areas of subsoil and reduce the top 100mm to an even tilth suitable for blade grading (10 mm down particles).
- Remove all stones and clay balls larger than 25 mm in any one dimension, as well as all roots, rubbish and debris.

5.21 GRADING

- Soil shall be in a reasonably dry and workable condition.
- The soil shall be graded to achieve smooth flowing lines and levels, with falls adequate for drainage.
- All minor hollows and ridges shall be eliminated.
- After settlement, finished levels shall be 25 mm above adjoining paving, kerbs and manholes, etc.
- Blade grading may be used to adjust subsoil levels.

5.22 FINAL CULTIVATIONS

- After grading, reduce the seed bed to a fine tilth with a good crumb structure, and to an even depth of 25 mm.
- Lightly rake over, to produce an even surface and a fine tilth which is friable and lightly firmed, but not compacted.
- Ensure that all deleterious material and earth clods and stones greater than 25mm in any one dimension are raked off and carted to tip.
- Obtain the CA's approval of the prepared seedbed before commencing seeding operations.

06 SOFT LANDSCAPE WORKS

6.1 SETTING OUT

- The Contractor shall set out all beds in accordance with the planting plans and ensuring that each species grouping is evenly spaced avoiding straight lines and geometric patterns.
- No planting shall proceed without the CA's approval of the setting out following inspection on site.

PLANTING SPECIMEN TREES

6.2 PLANTING TREES IN PITS

- Refer to dwg 1835-URB-LA-DT-90-02 for Tree Pit Details.
- Tree planting operations shall comply with all relevant British Standards including BS4428:1989 C.O.P for General Landscape Operations and BS8545:2014 Trees: From Nursery to Independence in the Landscape.
- Trees must be compliant with Table 1, p.21, BS 8545:2014. This is specific to tree form and is in the format of a checklist that should be ticked off by the landscape architect on delivery (and ideally prior to delivery) of trees.
- The tree shall be set in the centre of the pit. Any damaged roots should be cut back to sound growth. The trees shall be vertical. The bottom of the planting pit shall be covered with 50-70 mm of planting medium before the tree is placed in the hole, and the roots spread and covered.
- The planting medium shall be thoroughly mixed, placed and carefully packed around the roots, in layers not deeper than 150 mm; each layer shall be lightly consolidated in the pit, taking care not to disturb the root-ball. Complete backfilling operations, heeling-in the top layer of planting medium firmly around the root collar. Trees shall be planted at the depth at which they have been previously growing in the plant nursery (nursery soil mark). Planting at nursery level is only appropriate if that does not mean continuing deep planting.
- The depths at the centre of the pits shall be adjusted to ensure that the trees are planted to the depth of the nursery soil mark or the stem, and this shall be maintained on the finished ground level to allow for settlement after planting. All damaged roots shall be cleanly pared back to sound growth.
- All root-ball wrappings and cages should be removed except where they are fully perishable (e.g single layer untreated hessian and narrow gauge non-galvanized wire) and root-ball soil is friable for textural reasons rather than inadequate root development. In these cases the upper third of the wrapping and cage should be removed at the same time as backfilling.

- Trees with the crown tied-in may have the fastenings removed and the branches freed before or after planing, at the discretion of the contractor.

- Immediately after planting, the Contractor must carefully cut back any damaged, dead or diseased branches to sound growth and remove any weak, thin or malformed stems.

- Where, in the opinion of the CA, the damage is such as to warrant the rejection of the tree, it shall be replaced by the Contractor entirely at his own expense. Trunk wrappings applied by the grower shall not be removed and any subsequent damage during planting shall be made good.

6.3 UNDERGROUND STAKING OF TREES

- Refer to drawing 1835-URB-LA-DT-90-02 for trees that require underground guying.

6.4 WATERING OF TREES AFTER PLANTING

- On completion of the backfilling, each tree shall be watered with a minimum of 200 litres of water. Where there is a risk of frost within 24 hours, watering shall be suspended until such risk has passed.
- Any subsequent reduction in soil level due to watering shall be made good immediately.

6.5 PRE-PRACTICAL COMPLETION MAINTENANCE

- Maintain all planting to the standards specified in the Maintenance Schedule until Practical Completion is certified.

ORNAMENTAL SHRUB & HEDGEROW PLANTING

6.6 PLANTING

- All planting operations shall comply with all relevant British Standards including BS4428:1989 C.O.P for General Landscape Operations.
- All containers and wrappings shall be removed immediately prior to planting. Excavate pit in topsoil bed large enough to accommodate the rootball of each plant and to a minimum of 450x450x450mm, carefully placing topsoil arisings to one side. Gently tease the plant out of each container.
- Backfill with topsoil arisings mixed as specified, ensuring that all air pockets are eliminated.
- Continue backfilling to ground level and lightly around the root collar of each plant.
- Thoroughly water each plant. Cut out damaged growth.

06 SOFT LANDSCAPE WORKS

- Cut back any damaged roots to sound growth.
- Bare roots shall be spread evenly in the pit. The plant shall be positioned so that, after firming, each is growing at the same depth as in the nursery.
- All containers and wrappings shall be removed immediately prior to planting.
- Continue backfilling to ground level and lightly around the root collar of each plant. Thoroughly water each plant.

Each boundary hedgerow plant requires a spiral guard and cane to support it. Hedgerow plants to be planted double-staggered rows 300mm apart and at a planting density of 5 plants/linear metre.

6.7 PLANTING PITS

- Plant pits shall be excavated to a depth and diameter large enough to accommodate the root system, (i.e. minimum of 450x450x450mm) and shall be located at specified planting distances, according to species, in a way that allows plants to be evenly distributed but which avoids straight lines and geometric patterns.
- Topsoil arisings shall be placed carefully to one side for mixing with ameliorates as described and used as backfilling.

6.8 MULCH

- Supply and spread mulch evenly to a depth of 50 mm over the whole of the shrub bed areas. Top up as necessary to ensure continued 50mm depth through the entire maintenance period, (i.e. 36 months).

6.9 PRE-PRACTICAL COMPLETION MAINTENANCE

- Maintain all planting to the standards specified in the Maintenance Schedule until Practical Completion is certified.

GRASS SEEDING

6.10 GRASS SEED

- Grass seed as Clause 4.9.
- Only use seed produced for the current growing season.
- The Contractor shall use blue label certified varieties to EC.
- Samples may be requested by the CA.

6.11 SOWING

- Ensure rain is forecast before sowing.
- Sow grass seed at a rate of 35 g per sq m. Sow in two

transverse directions by hand or by a hand-operated machine and gently rake seed into the top 25 mm of the seed bed.

6.12 FIRST CUT

- About 48 hours before first cut, stones more than 25 mm in any one dimension shall be removed, and all areas shall be rolled with a light roller to firm grass sward and press in all remaining stones.
- When the grass is established and approximately 100mm high, it shall be topped with a roto-scythe, or similar approved machine, to leave 50 mm of growth. All arisings removed from site.

6.13 SELECTIVE HERBICIDE

- Only when approved by the CA, apply an approved herbicide to control the establishment of weeds in the grass sward. Apply in accordance with the manufacturer's recommendations, and in accordance with the Control of Pesticides Regulations 1986 (Amended 1997).

6.14 OVER-SOWING

- During the establishment period, the Contractor shall over-sow any bare patches to make good the sward. Apply seed at 20 g per sq m.

6.15 EDGING

- Neatly edge cut borders with beds, newly planted trees, etc. to the desired lines, either straight, smoothly curved or circular, as appropriate.

6.16 COMPLETION

- Grass seeded areas shall only be accepted as having reached Practical Completion when germination has proved satisfactory and all weeds have been removed.

- No payment shall be made to the Contractor if the seed fails due to any cause whatsoever.

- The contractor shall be required to make good the soiling and repeat the seeding until a good sward is established.

6.17 MAINTENANCE TO FINAL COMPLETION

- Maintain up to Final Completion to the same standards as specified in the Maintenance schedule.

WILDFLOWER SEEDING

6.18 WILDFLOWER SEED

- Grass seed as Clause 4.10. & 4.11

- Only use seed produced for the current growing season.
- The Contractor shall use blue label certified varieties to EC.
- Samples may be requested by the CA.

6.19 SOWING

- The optimal time for seed sowing is late summer/early autumn, providing a good tilth can be prepared.
- Mix seed to ensure even species distribution.
- Sow seed at a rate of 5 g per sq m. Bulk up with sand/sawdust prior to seeding.
- Surface sow the seed, rake gently in and roll with a ring roller [Cambridge roller] to firm seed bed. Refer to British Flora guidance for further detail (www.britishflora.co.uk)

6.20 FIRST CUT

- About 48 hours before first cut, stones more than 25 mm in any one dimension shall be removed and all seeded areas shall be rolled with a light roller to firm grass and press in all remaining stones.
- When the grass is established and approximately 100mm high, it shall be topped with an appropriate mechanical mower, or using a brushcutter/trimmer, to leave 75 mm of growth. All arisings are to be removed from site.

6.21 SELECTIVE HERBICIDE

- Apply an approved herbicide in accordance with the manufacturer's written label recommendations, and in accordance with the Control of Pesticides Regulations 1986 (Amended 1997), as a spot treatment to control the establishment of pernicious perennial weeds in the grass sward.

6.22 OVER-SOWING

- During the establishment period the Contractor shall over-sow any bare patches to make good the sward. Apply seed at 5 g per sq m.

6.23 COMPLETION

- Seeded areas shall only be accepted as reaching Practical Completion when germination has proved satisfactory and all pernicious weeds have been removed.
- No payment shall be made to the Contractor if the seed fails due to any cause whatsoever.
- The Contractor shall be required to make good the soiling and repeat the seeding until a good sward is established.

6.24 MAINTENANCE TO FINAL COMPLETION

- Maintain up to Final Completion to the same standards as specified in the Maintenance schedule.

07 HARD LANDSCAPE WORKS

7.1 KERBS/EDGINGS

The following kerbs and edgings shall be used. Refer to drawing no. 1835-URB-LA-GA-90-06 Hardworks Drawing for reference. Produced to adhere to the requirements of the current version of BS EN1340. All laid to manufacturer's specification.

- British Standard Bullnose Kerb, silver grey colour, laid upright, 225mm x 125mm x 914mm.
- British Standard Flat Kerb, silver grey colour, laid flush, 225 x 125 x 914mm. In Home Zone to show clear delineation of footway / carriageway and to indicate the outline of visitor parking.
- British Standard Pin Kerb, silver grey colour, laid flush 63 x 150 x 915mm. Between paved and areas of vegetation. Cutting of kerbs to be neat, accurate and without spalling. Form neat junctions. Minimum length after cutting to be 350mm. Bedding of units to be true to line and levelled along top and front faces in a mortar bed on accurately cast foundations or on a race of fresh concrete. After bedding, secure with continuous concrete haunching. Concrete to Engineers specification and BS8500-2. Maximum difference in level between adjacent units to be 2mm.

7.2 PAVING MATERIALS

The following paving materials shall be used. Refer to drawing no. 1835-URB-LA-DT-90-06 Hardworks Drawing for the layout and extent of each element:

Paving type 1:

Manufacturer: Marshalls

Product: Keyblok paving

Size: Refer to Civil Engineers detail/Geotechnical Engineers report for detail.

Laying pattern: Herringbone

Paving type 2:

Manufacturer: Alpha Paver

Product: Chelmer Valley

Size: 200x48x58mm blocks. Laid on a 50mm laying course over a sub-base (Depth and material to Geotechnical Engineers report)

Colour: Abbi Dark Multi

Restraining edge: Concrete haunching, to Landscape Architects detail.

Footway Pattern: Running bond

Paving type 3:

Manufacturer: Marshalls

Product: Tegula paving (random mix) & Charcoal soldier course (200x100x50mm)

Colour: Traditional

Size: Varies per pack.

Footway Pattern: Running bond

Paving type 4:

Sports area surfacing and rubber play area surfacing

Product: Acrylic (non porous) surfacing

Detail: To Civil Engineer/Manufacturers detail. Civil to detail drainage and subbase.

Paving type 5 - Rubber play area surfacing:

Product: Pour in place (EPDM) rubber safety surface

Detail: EPDM top layer, base mat, and sub base to be detailed at Technical Design stage. Safety surface to be in accordance with to EN1176 and designed to accommodate play equipment fall height. Civil Engineer to detail all perforated drainage as required, including connection to storm.

Paving type 6:

Product: Self compacting Hoggin

Size: 50mm wearing course, over base course (based upon geotechnical Engineers report)

Edge: Tapered.

Finished appearance. Paving to be smooth and even with regular joints and accurate to line, level and profile. Cross-falls as Engineers drawings to drainage outlets. Paving units to be firmly bedded, free of mortar stains and cut cleanly and accurately without spalling, to give neat junctions with edgings and adjoining finishes. Maximum variation under a 3m straight edge to be 3mm and 2mm as a difference between adjacent flags/paving units. Sub-base materials to be of a known suitability for use in sub-bases (i.e. MOT Type 1), free from excessive dust, well graded, all pieces less than 75mm in any direction, minimum 10% fines.

08 MAINTENANCE

8.1 GENERAL

- All maintenance work is provisional.
- Maintenance of the works as described below shall be for a period of 60 months following the date of Practical Completion.

8.2 DEFECTS LIABILITY AND REPLACEMENTS

- The Defects Liability Period and the Maintenance Period for all plan material shall run concurrently and shall be for a total duration of 5 years from the date when the CA certifies that the works are agreed complete (i.e. Practical Completion is reached).
- Throughout the Maintenance Period, and immediately prior to its conclusion, works shall be inspected periodically by the CA.
- Any plants and areas of grass or wildflower seeding which are found to be missing, dead, dying or in poor health, must be replaced on a like-for-like basis, at the earliest suitable time, unless otherwise instructed.
- The full cost of all replacement planting and associated works, shall be borne by the Contractor.
- Defects in plant material which have previously been recorded as being the result of rodent or malicious damage, and agreed by the CA to be outside the Contractor's control, shall be excluded from the Contractor's replacement obligations.

8.3 TIMING OF VISITS FOR MAINTENANCE AND WATERING OPERATIONS

The need for Maintenance and Watering operations will depend on weather conditions and shall be carried out when deemed necessary by the Contractor, or as directed by the CA. Although the CA may instruct the Contractor to carry out an operation at any time during the Maintenance Period it is the sole responsibility of the Contractor to ensure that operations are arranged appropriately, so that weed growth, etc. is always kept in check, that the works are well watered, have a well-maintained appearance and become established in the intended manner.

8.4 MAINTENANCE AND WATERING VISITS / OPERATIONS

Allow for the following operations all as specified:

- 60 Nr. Maintenance Operations to Trees
- 60 Nr. Maintenance Operations to Planting Areas
- 60 Nr. Maintenance Operations to Grass Areas
- 36 Nr. Watering only Operations to Planting and Grass Areas.

8.5 MAINTENANCE SCHEDULE FOR TREES

- Items to be carried out as required; allow 60 Visits.

Frequency	Action
Weekly	All trees shall be watered following 10 days without rain, then weekly until rainfall between June and August.
Fortnightly	Remove litter across all areas.
Monthly	- Weed control of all areas to be undertaken as specified between April and October. - Mulches to be brushed monthly to ensure even coverage. Top up as necessary to maintain 50 mm depth. - Check that all protective guards are still in place and provide adequate protection, to prevent damage to trees by animals.
Quarterly:	Tree securement through staking to be checked at least four times a year during the establishment period and after periods of bad weather; being re-secured if required.
Annually	- Mulch to be topped up to specified depth of 75 mm. - Replacement of all dead, missing, dying, or defective trees annually with the same species and size of plants as per the original plant specification. - Pruning of dead or damaged wood to be carried out following inspection by an appropriately qualified agriculturalist. - Check for invasive species and treat with suitable approved selective herbicide. - Remove any unwanted seedlings.
Every 3 years	Management plan to be reviewed for minor variations to maintenance or timing of works.

TREE PLANTING

a) Check underground guying is adequate for each tree. Carry out remedial works to adjust, re-fix or renew guying as appropriate.

b) Check that each tree is growing healthily and remove all dead wood and diseased or damaged branches. Tie-back any loose branches onto the frames of pleached trees. The frame can be removed when the tree is established, as agreed by the CA. When pruning to maintain the shape of a pleached tree, first remove diseased/damaged wood and broken branches. This should be done at once or twice a year; late winter is a good time to assess any winter damage and trim before spring growth. All pruning to be removed off site.

c) Any wounds shall be neatly pared back to sound tissue.

- d) Re-firm trees which have been loosened by wind or frost.
- e) Water sufficiently to allow to fully penetrate the rooting zone.
- f) Apply Scotts Enmag Fertiliser annually to suppliers instructions.
- g) Topping up of mulch on all trees specified for a minimum of 3 years and stake a tie removal after no more than two growing seasons.

8.6 MAINTENANCE SCHEDULE FOR ORNAMENTAL SHRUB/HEDGE PLANTING

- Items to be carried out as required, allow 60 visits

SHRUB/HEDGE BEDS

- a) Keep whole areas free from rubbish, litter, grass and weed growth. All dead weed growth shall be forked out and removed to tip.
- b) Water sufficiently to allow to fully penetrate the rooting zone.
- c) Maintain mulched areas at 50mm depth, topping up as necessary, and sweep up mulch from adjacent edgings and paving. Weed control to be by hand or by herbicide. Tolerance to be no more than 5% of the area and not to reach more than 100 mm high.
- d) Apply Scotts Enmag fertiliser each spring as a top dressing to all planting areas, at a rate of 70gms/m² and rake-in lightly. To be applied during mid-May to August annually.

To Each Plant

- e) Check that each plant is growing healthily and remove any dead, diseased or damaged branches, water shoots and reversion growth. Prune shrubs to encourage bushiness. Flower stems and foliage of lavender hedge to be trimmed lightly with shears in October-November. All arisings shall be removed off site.
- f) Dead-head perennials after flowering, strictly in accordance with programme for specific species, as directed by the CA.
- g) Re-firm plants which have been loosened by wind or frost action.

To Hedgerows

- h) *Ornamental* hedgerows should be cut to a to achieve a final height of 1100mm and carried out once a year between September and February. Where transitions in hedge height and width are required, these shall be achieved in a smooth and

uninterrupted manner. Where abrupt changes in height are required, these shall be maintained as crisp right angled profiles. Native hedgerows to be allowed to grow to 2.5m high and 1.5m wide.

Year	Action
1	Ensure the base of each plant is kept clear of weeds, for a diameter of 1m. Litter picking during each visit.
2	Lightly trim plants in October-November and maintain weed free. Apply general purpose fertilizer in spring. Litter picking during each visit.
3-4	Lightly trim and start to shape hedge to final height of approx. 1m high by 1m wide. Litter picking during each visit. Year 4 - Apply general purpose fertilizer in spring.
5	<i>Ornamental</i> Hedge should have reached its final height of 1.1m and should be clipped at September and February, to maintain a neat and tidy appearance. <i>Native</i> hedgerow to grow to 2.5m high / 1.5m wide. A frequency of twice a month may be required during the spring and summer months where there is faster growth. Apply general purpose fertilizer in spring. Litter picking during each visit.

8.7 MAINTENANCE SCHEDULE FOR GRASSED AREAS

- Items to be carried out as required; allow 60 visits:
 - a) Close-mown sward: mow at appropriate intervals throughout the growing season, so that the height of the grass does not exceed 100mm and will be gradually reduced to 25-50 mm.
 - b) All arisings shall be gathered and removed from the site and swept from paved surfaces. Before mowing, remove all litter and rubbish.
 - c) Reinstatement: reinstate to original condition and within a reasonable period (according to season) any damage or disturbance occurring during the work, either by vehicles or others, to soil structure and sward during the maintenance period.
 - d) 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.
 - e) Over-sowing: allow for over-seeding patches that has become bare or scalped during mowing.
 - f) Edging: trim all edges abutting plants, paving, kerbs, roads etc. to leave a smooth, flowing line. Clip around all posts, obstacles and remove all arisings.

08 MAINTENANCE

g) Water: during periods of dry weather: apply water via sprinklers to thoroughly penetrate areas.

h) Fertilisers: one application of approved Autumn-winter dressing of NPK 3.12.12 granule fertiliser applied at the rate of 10gms/m. sq. during a maintenance visit.

8.8 MAINTENANCE SCHEDULE FOR WILDFLOWER AREAS

a) During first year after sowing, mowing will be undertaken to promote establishment as follows:

- Grassland will be cut at as and when necessary, between March and the end of October, to 75mm height; subsequent cuts through the maintenance period (i.e. years 2 to 5) the sward shall be cut twice annually. Cut 1 shall be carried out before flowering in March and Cut 2 shall be carried out following setting of seed in late August or September. Mowing may be undertaken using an appropriate mechanical mower, or using a brushcutter / strimmer where access for larger machinery is not possible.

b) Cut material will be removed and disposed of away from the grassland areas, e.g. baled as hay, or sent for composting. Ideally, material will be cut and left on the ground for 2-3 days to allow seed and invertebrates to drop out, but it may be necessary to use a mower / collector for practical reasons. In subsequent years, cutting will be undertaken as follows:

- Cut 75% of the area of grassland to 75mm in March and September, leaving 25% of the area uncut each year, the location of which should be rotated.
- Cut material will be removed as described above.

c) Weed and scrub control will be undertaken as required, so as to prevent pernicious perennial weed species and woody plants from becoming established. The growth of gorse and bramble will be monitored and controlled by manual or chemical means, as required. During the early developmental stages of the grassland, sward some 'undesirable' broadleaved species are to be expected, and should become less dominant as the communities become established and stabilised. Control methods will comprise hand-pulling or spot treatment with a suitable approved selective herbicide, as appropriate; timing will be dependent on the affected species.

d) Control of invasive species will be carried out in accordance with current best practice guidelines published by Natural Resources Wales.

8.9 LITTER REMOVAL

a) The areas of open space will be kept free of litter and other debris through a regular regime of monitoring, collection and disposal.

b) The Contractor shall take particular care when collecting litter and rubbish, so as to ensure that any discarded sharps/needles are safely removed. Such items must be packaged separately from the remainder of the litter, and contained in labelled, puncture-proof containers supplied by the Contractor.

c) All litter and debris shall be removed from site to an authorised tip, in accordance with the Code of Practice on Litter and Refuse and Associated Guidance 2007 (Welsh Assembly Government) and the Environmental Protection Act (1990).

OUTLINE SCHEDULE OF WORKS

The following general maintenance works are an example of periodic work to be carried out by the Contractor/Managing Agent. The list is not exhaustive and should be expanded and agreed as part of a kick-off meeting.

Weekly:

All trees shall be watered following 10 days without rain, then weekly until rainfall between June and August.

Fortnightly:

Remove litter across all areas.

Monthly:

Weed control of all areas to be undertaken as specified between April and October.

Mulches to be brushed monthly to ensure even coverage. Top up as necessary to maintain 75 mm depth.

Quarterly/Biannually:

Tree securement to be checked twice a year during the establishment period and after periods of bad weather; being re-secured if required.

Species rich grassland areas will be cut twice annually, at the end of July after flowering, and in September/October subject to weather conditions.

Cutting back of perennials and ornamental grasses where applicable.

Annually:

Mulch to be topped up to specified depth of 75 mm.

Replacement of all dead, missing, dying, or defective trees annually with the same species and size of plants as per the original plant specification.

Pruning of dead or damaged wood to be carried out following inspection by an appropriately qualified arboriculturalist. Check for invasive species and treat with suitable approved selective herbicide.

Remove any unwanted seedlings.

Light pruning/trimming of shrubs where applicable. Trim ornamental hedges as appropriate.

A slow-release fertiliser will be applied in March to all shrub/tree planting.

Native hedge to be trimmed/pruned in late winter/early spring or early Autumn to 2.5m high at maturity.

It is proposed that the Landscape Maintenance and Management Plan will be reviewed by the Resident Management Company annually for minor variations in maintenance or timing of work, and revised after 5 years to take account of changes to management operations.

Every 3-5 years:

Tree stakes and guards should be removed before Year 5 once the tree can stand unsupported without bending or shifting.

Review meadow / scrub / woodland habitat and carry out rotational woodland thinning and coppicing as appropriate and agreed with the Client and Local Planning Authority to encourage healthy growth and structural diversity. All arisings and cuttings to be collected and retained as dead wood habitats to increase the range of invertebrates.

Management plan to be reviewed for minor variations to maintenance or timing of works.

09 COLOUR PLANS

09 COLOURED PLANS



09 COLOURED PLANS



Meadow areas & long grass

Objectives:

- From the edge of the POS lawn, the landscape has been designed with long grasses, meadow grass, and native bulb planting with large specimen Oak trees, native field maple, and native Hawthorn & Apples. The intention is to visually 'connect' the adjacent greenfield to the site.
- Prune to maintain tree species form and vigour by a certified Arborist in accordance with BS3998, maintaining a 2m clear stem (except multistems).
- Cut grass to 150mm high AFTER flowering bulbs have turned and once every two months between March-November.
- The intention is the grass reaches a mature height of 300-400mm, before being re-cut to encourage bulbs and other flowering species.

POS Lawn:

Objectives:

- Short grass lawn for informal recreation.
- Cut once every two weeks between March-October to a height of 25mm max.
- Once a month between November-February

LEAP / Formal Play area

- Playarea to be regularly inspected in accordance with EN1176;
- Refer to manufacturer for all replacement parts, maintenance and equipment upkeep, and safety surfacing.
- Remove litter, sweep miscellaneous material (e.g sand) and ensure the playspace is clean and safe at all times

Park Planting

Objectives:

- Medium height shrubs, low groundcovers, ornamental grasses, and perennials around the edge of the planter, which will maintain open visibility around the playarea and park (for safety reasons)
- Refer to original softscape planting plan for intended shrub layout. Maintain this layout by pruning back spreading species. NEVER box cut/top shrubs, allow the plants to grow to their natural form

Furniture & Bins

- Refer to Landscape Drawings/spec for all furniture. Replacement parts, maintenance advice can be obtained from the manufacturer
- Bin waste to be coordinated with management company.

Native Scrub

Objectives:

- Tall native scrub.
- Prune back overhanging scrub from paths

Hoggin Paths

Objectives:

- Maintain a clean, even surfaced path
- Top dress hoggin wearing course, remove weeds, re-edge path annually to maintain path width and original design form.

Single Stemmed Trees (around lawn).

Objectives:

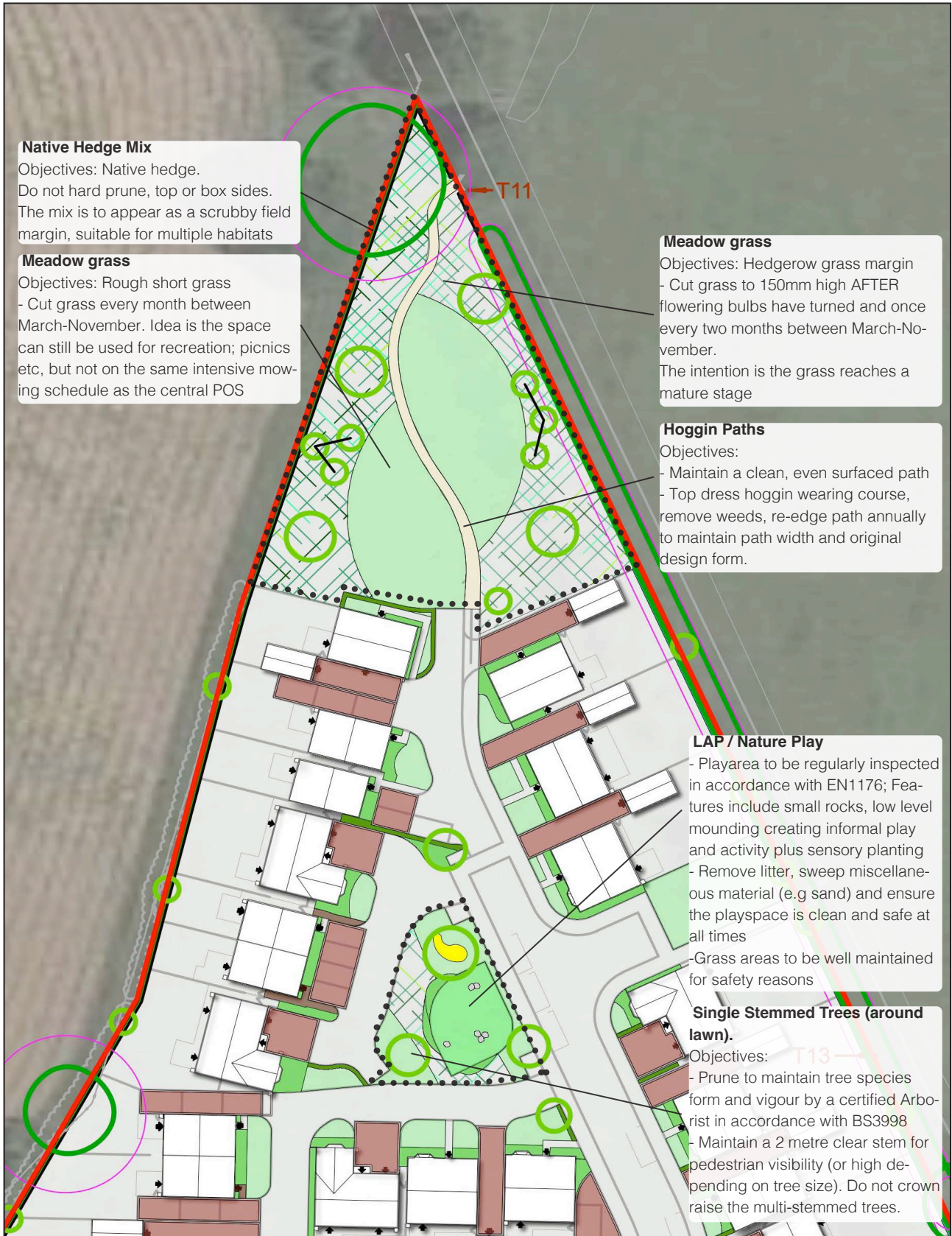
- Prune to maintain tree species form and vigour by a certified Arborist in accordance with BS3998
- Maintain a 2 metre clear stem for pedestrian viability (or high depending on tree size). Do not crown raise the multi-stemmed trees.

POS Native Scrub mix

Objectives:

- Maintain the native scrub mix to screen the park from the farm house and provide a wildlife corridor.
- Allow specimen trees to grow to maturity and full height, only pruning lateral growth if required (as agreed with the Landscape Architect)
- During the deficiency period, selective prune once/twice a year to maintain a dense scrub mix as per Landscape Architects site progress reports. Undertake work between October-March only.

09 COLOURED PLANS



09 COLOURED PLANS



The Urbanists, The Creative Quarter,
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theurbanists