

2304-010 03 Landscape Management Plan

HERITAGE GATE, COED DARCY
JEHU

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APPENDICES

APPENDIX A: PLANTING PLANS

1 INTRODUCTION

1.1 Background and Context

- 1.1.1 This report presents a Management Plan for the communal areas and areas of Public Open Space (POS.) including the tree planting, native shrub-mix, garden hedges, ornamental shrubs, climbers and herbaceous planting, amenity grassland and wildflower meadow associated with Land off Glamorgan Green, Crown Way and Tank Farm Rd at Heritage Gate, Coed Darcy in Wales. The management of these areas forms part of the planning consent.
- 1.1.2 The management responsibility will be with the appointed Management Company set up on behalf of the residents by JEHU. Areas are to be managed in accordance with this Management Plan for a minimum five-year period, commencing at the time of completion of the contractor's defects liability period. For the duration of the contractor's defects liability period (12 months after completion of works) the maintenance liability of all areas will lie with the developer.
- 1.1.3 This report has been designed to provide a steering manual for the day-to-day management of Heritage Gate (from here on known as the Site) and one, which can be updated as required. It sets out in broad terms the landscape aspirations for the Site, both in the short and longer term and provides practical means by which these aims may be translated to well managed results on the ground.
- 1.1.4 The report relates directly to the planting plans – Drawings 2304 006-009.
- 1.1.5 The Landscape has been designed to the following objectives:
- Enhance the quality and amenity of the landscape by creating attractive frontages and provide a green open space for recreation and leisure for local residents to enjoy.
 - Provide new trees that are appropriate to the character and setting and create vertical structure to the streetscape. Over time, garden trees will help to provide privacy from overlooking between neighboring rear gardens.

- Provide a landscape with native species within the POS to enhance biodiversity.
- Provide a wildflower meadow as an attractive public space feature that will also aid in biodiversity conservation.

1.2

Report Structure

1.2.1

The report is structured as follows:

- Section 2: describes the management aims and objectives for the Site.
 - Section 3: sets out the management plan for the Site.
 - Section 4: sets out the management for proposed planting within the Site, with specific advice relating to routine maintenance and management operations
 - Section 5: sets out the management for site specific, non-planting, areas within the Site, with specific advice relating to routine maintenance and management operations
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2 MANAGEMENT AIMS AND OBJECTIVES

2.1.1 The primary landscape objective for the Site, subject to this Landscape Management Plan, is to create and maintain a functional, attractive and sustainable landscape for local residents to enjoy on a day to day basis. The main aim of the Landscape Management Plan is to set mechanisms in place which ensure that the open space is well managed in perpetuity, for the benefit of the residents so they do not become degraded through neglect, inappropriate management or misuse. Throughout this report watering is scheduled in both short and long term operations as a critical action. This is critical for establishment, growth and survival. All watering visits are subject to weather/climatic change and are the responsibility of the maintenance contractor.

2.1.2 The principle aims for managing the Site are as follows:

- To introduce strong management policies which will enhance the visual appeal of the Site.
- To encourage appropriate use of the Site by residents, whilst strongly discouraging inappropriate and indiscriminate use of the Site by, for example, vandalism, tipping, anti-social behaviour;
- To ensure that the long term health and vigour of the new planting is optimised in the future.
- Promote wildlife habitats within the Site.

3 MANAGEMENT PLAN

3.1 Works Programme

3.1.1 It is expected that the Management Plan will commence following completion of the landscape works. The provisions of the establishment maintenance specification set out below should also be adopted by the contractor during the 12 month defects liability period, prior to handover.

3.1.2 It should be noted that the proposed annual timing of operations in the following Works Programme are flexible and it is anticipated that the exact programme of works will be influenced by seasonal weather conditions and factors such as variability in growth rates.

3.1.3 In the management schedules set out below, the timing of operations (by season or month) is only given where this is critical, either in terms of achieving optimum results or minimising potential disturbance to wildlife. In general terms pruning or other works to established hedgerows, shrubs and trees, which may contain breeding birds, should avoid the bird breeding season. In most years this is from February to July.

3.2 Legal Constraints

3.2.1 Any inhabitation by statutorily protected species will need to be given due consideration with respect to management operations in the affected areas.

4 MANAGEMENT OPERATION FOR PROPOSED PLANTING

4.1 Operation 1: Proposed trees

- 4.1.1 **Objective:** To promote early establishment and vigour in all newly planted trees within the development area. Longer-term management to include replacement as required and formative pruning to create a healthy, strategic landscape component and to perpetuate the original design aims. Please refer to drawings 2304 006-008 for tree positions.

Establishment Maintenance of proposed trees

- 4.1.2 Establishment Maintenance of newly planted trees will be required for the first three years after planting to ensure rapid early growth. Visits shall be undertaken at least monthly between April and September, with two visits during the dormant season, to ensure that the following maintenance requirements are satisfactorily undertaken:

- Watering as required to ensure healthy growth, particularly in Years 1 and 2. All trees to be visited weekly in periods of dry weather and sufficient water to be applied to eliminate drought related stress.
- All trees to be treated with an annual application of an approved slow-release fertilizer (e.g. Osmocote) at the manufacturer's recommended rates in April of Years 1, 2 and 3. Slow release fertiliser to be applied no further from the tree than the first metre and to be placed under mulch and covered to ensure a hazard is not presented on the ground surface. Chemicals are not to be used within 3 metres of, or within areas that drain directly into, attenuation basins, swales and watercourses to avoid nutrient pollution.
- Trees that have become loosened, lifted up or out of the ground to be set upright and re-firmed by treading. Tree supports (including underground guys) to be regularly checked, adjusted, repaired and replaced as necessary and irrigation tubes to be kept free of blockages.

- Tree stake ties to be adjusted (loosened or tightened) regularly to avoid asphyxiation of the tree trunk and to ensure rubbing does not occur owing to wind rock.
- Weed control is required to keep all planting areas free of grass and weed growth. This weed control must be by hand in Year 1, with chemical control, using Glyphosate, permitted only in 1.0m squares around clear-stemmed trees in Years 2 and 3. Chemical weed controls are not to be used within 3 metres of, or within areas that drain directly into watercourses to avoid nutrient pollution.
- Trees to be kept free of pests and diseases; regular monitoring to be undertaken.
- General pruning to be carried out to remove straggling stems, over-vigorous shoots, epicormic growth suckers and dead, misshapen, broken or otherwise unhealthy branches.
- Planting areas to be kept free of litter and leaf fall and grass edges to be kept regularly trimmed and tidy.
- Where mulch is used as a top dressing, this to be regularly topped up to 100mm, to ensure a minimum depth of 75mm. Mulch to be kept cleared off adjacent grass, paved areas etc. Mulch used shall be a coarse composted bark. Application shall be even across the extent of the planting area and there should be no mounding of bark mulch around the base of the tree (known as volcano mulching).
- General autumn tidy.
- All arisings to be removed and the Site to be left clean and tidy at all times.

4.1.3

An inspection is to be made in August each year. Any losses of planted trees, whether by natural means or vandalism and any other plants that have failed to thrive, to be replaced in the planting season following the loss. Replacement trees are to be of the same specification and size as the original plants.

- 4.1.4 New tree planting within the Public Open Space should be regarded in a different light to those within the immediate residential area. As such, in the longer term these trees may be subject to minimal management to allow the trees to develop into character trees of value to wildlife.

Longer Term Management of Proposed Trees

- 4.1.5 Regular maintenance visits should be made at quarterly intervals each year. It will be necessary to undertake general inspection for pests and disease, 'tidying' e.g. pruning of any poor or damaged branches, removal and replacement of dead trees, litter and leaf fall clearance, topping up, raking and sweeping of mulch to provide a tidy appearance etc., as described above for the Establishment Period. All arisings to be removed from site and the site to be left clean and tidy at all times.
- 4.1.6 An inspection to be made in August up to and including Year 5. Any losses of planted trees, whether by natural means, wear and tear or vandalism and any other trees that have failed to thrive, to be noted and the trees replaced in the planting season following the loss. Replacement trees to be of the same specification, location and size as the original trees, unless the LPA gives its written consent to any variation.
- 4.1.7 Tree guards, grilles and any other supports to be checked and when necessary adjusted, repaired, removed or replaced, to ensure healthy unrestricted growth. If a tree support is no longer required as the tree is supporting itself, remove the tree support entirely. The tree support is generally removed around year 3, however this judgement shall depend on how well the tree has established before tree support removal is considered. Tree guards / grilles of street trees are likely to require removal in the long term as the tree base / trunk expands.
- 4.1.8 Following completion of the Establishment Period, the need for both watering and weed control is likely to be reduced but must still be undertaken as necessary to ensure healthy growth and maintain the mulched tree beds in a weed free condition. At this stage it will be possible to use an approved residual soil acting herbicide, to minimise the need for physical removal of weeds. Tree surroundings to be maintained in a weed free state, with trimmed edges and mulch material to

be kept topped up to a depth of 75mm. In dry summers trees will require watering using the irrigation system to ensure healthy growth.

4.1.9 Regular monitoring for pests and diseases will also be needed on an on-going basis and any necessary control measures undertaken as soon as possible.

4.1.10 General, corrective pruning to trees to remove die back, straggling stems, over-vigorous shoots, suckers, epicormic growth and dead, misshapen, discoloured, thin, weak, over-crowded, old, broken or dangerous branches from trees by pruning back with a clean cut to the main stem, or to a sound and healthy outward growing lateral. Any removal of dead, diseased or ill formed trees is also to be undertaken at this time and any required replacements undertaken.

4.2 Operation 2: Proposed Native Shrub-mix

Objectives: Promote early growth of new native shrub plants to create healthy and dense hedges of value to local wildlife.

Initial Establishment Maintenance of Proposed Native Shrub-mix

4.2.1 Establishment Maintenance of new native shrub planting will be required for the first three years after adoption to ensure rapid early growth. Monthly visits to be undertaken between April and September, with two visits during the dormant season, to ensure that the following maintenance requirements are satisfactorily undertaken:

- Watering as required to ensure healthy growth, particularly in Years 1, 2 and 3. All planting to be visited weekly in periods of dry weather and sufficient water to be applied to eliminate drought related stress.
- Native shrub plants to be treated with an annual application of an approved slow-release fertiliser, at the manufacturer's recommended rates in April of Years 1, 2 and 3. Chemical weed controls are not to be used within 3 metres of, or within areas that drain directly into watercourses to avoid nutrient pollution.

- Plants, which have become loosened, lifted up or out of the ground to be set upright and re-firmed by treading.
- The need for weed control will be minimised through the use of mulch in planting areas. The mulch is to be regularly topped up to 75mm, ensuring that the lower branches and foliage of plants are not smothered. Mulch to be kept clear of adjacent grass, paved areas etc. This will generally suppress weeds but there may be some localised ingress of weeds. Any additional weed control required to keep the hedge trench free of grass and weed growth must be by hand.
- Plants to be kept free of pests and diseases, regular monitoring to be undertaken.
- General pruning to be carried out to trim laterals, remove straggling stems, over-vigorous shoots, suckers and dead, misshapen, broken or otherwise unhealthy branches. Leading shoots to be left untrimmed during the Establishment Period.
- Planting areas to be kept free of litter and leaf fall.
- General autumn tidy.
- All arisings to be removed and the Site to be left clean and tidy at all times.

4.2.2 An inspection to be made in August each year. Any losses of hedge plants, whether by natural means or vandalism and any other plants that have failed to thrive, to be replaced in the planting season following the loss. Replacement plants to be of the same specification and size as the original plants.

Longer term Management of Proposed Native Shrub-mix

4.2.3 Following completion of the Establishment Period, the need for both watering and weed control is likely to be reduced.

4.2.4 As a minimum, maintenance visits should be made in spring and late autumn between (April and October) with a visit during the dormant season each year.

- 4.2.5 Planting, laying and cutting will be carried out between October and March. Hard pruning may be required if the planting is likely to cause an impediment in the following growing season to adjacent to paths, roads or other features if left. Where possible to ensure that birds are not nesting and ideally in January and February to ensure that the fruiting berries are not lost. If a native shrub must be trimmed during the fruiting season it is essential to only cut one side so that plenty of food remains. A healthy plant can normally recover well from severe cutting, but repeated cutting at the same height can gradually cause whole plants to die off.
- 4.2.6 Mature shrubs will need cutting to prevent the native hedge becoming 'leggy' and to encourage dense growth. Cutting on a three-year cycle (one side, top, other side) will allow time for flowering and fruiting shrubs to develop throughout the length of the hedge and is the most beneficial for wildlife.
- 4.2.7 Gaps will either be planted with new plants, which are an opportunity to increase the botanical diversity of the shrub-mix or regenerate naturally if possible. Any new planting will need to be protected from stock, rabbits and deer for approximately 3-4 years. Initially the surrounding shrub-mix may need cutting back to ensure the new plants receive sufficient light. Regular trimming in the early years of the shrub-mix will help make it dense.
- 4.2.8 An inspection to be made in August each year. Any losses of planted plants, whether by natural means, wear and tear or vandalism and any other plants that have failed to thrive, will be replaced in the planting season following the loss. This to include any plants that are relatively short lived, and which will require routine replacement during the period of the management plan. Replacement plants to be of the same specification and size as the original plants.
- 4.2.9 Recommended cutting machinery for trimming operations will be by use of a handheld mechanical hedge trimmer or a tractor-mounted flail/cutting bar/circular saw attachment for bigger material. All cut faces should be left neat and clean with no jagged ends or tears.
- 4.2.10 Intermittent laying will be used as a renovation and wildlife-friendly management technique. As the shrubmix grows and they gradually become more tree-like; gaps tend to appear lower down and the stems cease to provide an effective barrier. At

this point, the plant should be allowed to grow sufficiently tall (3-5m high) so that it can be laid, both to fill in the gaps and to ensure the long-term viability of the shrubmix by promoting vigorous regrowth from the base. Laying involves partially cutting stems, so that they will bend without breaking, at ground level and laying them at an angle of between 35 degrees to the ground and horizontal. These cut stems, known as pleachers, will be laid parallel to each other and tucked tightly together. Vertical stakes and binders will be used to strengthen and thicken the hedge, depending on regional variation. The aim should be to manage the shrubmix through cutting so that it is not necessary to lay more often than at least every 20 years.

4.3 Operation 3: Proposed Garden Hedging

Objectives: Promote early growth of garden ‘hedging’ – low lying rows of shrub planting allowed to take its natural form resulting in minimal maintenance - to create well-structured and healthy, dense hedges.

Initial Establishment Maintenance of Proposed Garden Hedging

4.3.1 Establishment maintenance of new garden hedging will be required for the first three years after planting to ensure rapid early growth. Visits shall be undertaken at least monthly between April and September in the first year, with two visits during the dormant season. In the second and third years the frequency of visits can be reduced to bi-monthly. Maintenance visits are required to ensure that the following maintenance requirements are satisfactorily undertaken:

- Watering as required to ensure healthy growth, particularly in Year 1 and 2. All planting areas to be visited weekly in periods of dry weather and sufficient water to be applied to eliminate drought related stress.
- Garden hedging shall be maintained in accordance with the preceding clauses, with special care to keep hedges clear of invasive ruderal species. Pruning, clipping, and training of hedges shall be carried out in September each year, to avoid disturbance to birds in the breeding season. The aim is to produce a dense, low lying, informal hedge. To this end leading stems and other top growth to be allowed to grow for 3 - 4 years, laterals should be trimmed back

annually to rectangular shape, to encourage dense bushy growth. Once new sections of hedge have reached the desired dimensions, they shall be managed according to the longer-term management prescriptions as set out below.

- Hedge plants to be treated with an annual application of an approved slow-release fertiliser used as a top dressing at the manufacturer's recommended rates in April of Years 1 and 3.
- Plants which have become loosened, lifted up or out of the ground to be set upright and re-firmed by treading.
- The need for weed control will be minimised through the use of mulch in planting areas. The mulch is to be regularly topped up to 75mm, ensuring that the lower branches and foliage of plants are not smothered. Mulch to be kept clear of adjacent grass, paved areas etc. This will generally suppress weeds but there may be some localised ingress of weeds. Any additional weed control required to keep the hedge trench free of grass and weed growth must be by hand.
- Plants to be kept free of pests and diseases, regular monitoring to be undertaken.
- General pruning to be carried out to trim laterals, remove straggling stems, over-vigorous shoots, suckers and dead, misshapen, broken or otherwise unhealthy branches. Leading shoots to be left untrimmed during the Establishment Period.
- Planting areas to be kept free of litter.
- All arisings to be removed from site and the site to be left clean and tidy at all times.

4.3.2

An inspection to be made in August each year. Any losses of hedge plants, whether by natural means or vandalism and any other plants that have failed to thrive, to be replaced in the planting season following the loss. Replacement plants to be of the same specification and size as the original plants.

Longer term Management of Garden Hedging

- 4.3.3 Regular maintenance visits should be made at a minimum of monthly intervals between April and September with two visits during the dormant season each year. It will be necessary to undertake general 'tidying' e.g. removal of litter, as described above for the Establishment Period. All arisings to be removed from site.
- 4.3.4 Hedges will need cutting to prevent the vegetation becoming 'leggy' and to encourage growth. Cutting on a three-year cycle (one side, top, other side) will allow time for flowering and fruiting shrubs to develop throughout the length of the hedge and is the most beneficial for wildlife.
- 4.3.5 Hedges are to receive formative pruning to remove straggling stems, over-vigorous shoots, suckers and dead, misshapen, discoloured, thin, weak, over-crowded, old or broken branches from shrubs by pruning back with a clean cut to the main stem, or to a sound and healthy outward growing lateral.. Laterals should be trimmed back annually to rectangular shape, to encourage dense bushy growth and create a symmetrical hedge.
- 4.3.6 Planting and cutting will be carried out between November and March where possible to ensure that birds are not nesting and ideally in January and February to ensure that the fruiting berries are not lost. If a hedge must be trimmed during the fruiting season it is essential to only cut one side so that plenty of food remains. A healthy hedge can normally recover well from severe cutting, but repeated cutting at the same height can gradually cause whole hedges to die off.
- 4.3.7 Gaps shall be planted with new plants. Any new planting will need to be protected from stock, rabbits and deer for approximately 3-4 years. Initially the surrounding hedge may need cutting back to ensure the new plants receive sufficient light. Regular trimming in the early years of a hedge's life will help make it dense.
- 4.3.8 An inspection to be made in August each year. Any losses of planted plants, whether by natural means, wear and tear or vandalism and any other plants that have failed to thrive, will be replaced in the planting season following the loss. This to include any plants that are relatively short lived, and which will require routine replacement during the period of the Management Plan. Replacement plants to be of the same specification and size as the original plants.

4.3.9 Following completion of the Establishment Period, the need for both watering and weed control is likely to be reduced.

4.3.10 Recommended trimming machinery for hedging operations will be by use of a handheld mechanical hedge trimmer. All cut faces should be left neat and clean with no jagged ends or tears.

4.3.11 Regular monitoring for pests and diseases will be undertaken on an ongoing basis and any necessary control measures will be undertaken as soon as possible.

4.4 **Operation 4: Proposed Ornamental Shrubs, Climbers and Herbaceous Planting**

4.4.1 **Objective:** to create a high-quality ornamental planting scheme to complement the development and its setting. Longer-term management will aim to perpetuate the original design aims and sustain shrubs, climbers and herbaceous planting in a healthy, vigorous condition and to maximise the visual amenity of the planting.

Establishment Maintenance of Proposed Ornamental Shrubs, Climbers and Herbaceous Planting

4.4.2 Establishment maintenance of new planting will be required for the first three years after planting to ensure rapid early growth. Visits shall be undertaken at least monthly between April and September in the first year, with two visits during the dormant season. In the second and third years the frequency of visits can be reduced to bi-monthly. Maintenance visits are required to ensure that the following maintenance requirements are satisfactorily undertaken:

- Watering as required to ensure healthy growth, particularly in Years 1 and 2. All planting areas to be visited as often as required to ensure that plants are kept healthy to eliminate drought related stress. In periods of dry weather, a more frequent watering schedule will be required.
- All plants to be treated with an annual application of an approved slow-release fertiliser used as a top dressing at the manufacturer's recommended rates in April of Years 1 and 3.

- Plants that have become loosened, lifted up or out of the ground to be set upright and re-firmed by treading.
- The need for weed control will be minimised through the use of mulch in planting areas. The mulch is to be regularly topped up to a depth of 75mm, ensuring that the lower branches and foliage of plants are not smothered. Mulch to be kept cleared off adjacent grass, paved areas etc. This will generally suppress weeds but there may be some localised ingress of weeds. Any additional weed control required must be by hand in Year 1, with chemical control, in line with current regulations, permitted only in Years 2 and 3 in those areas without herbaceous plants. Where herbaceous species are present hand weeding will be required.
- Plants to be kept free of pests and diseases, regular monitoring to be undertaken.
- General pruning to be carried out to remove straggling stems, over-vigorous shoots, suckers and dead, misshapen, broken or otherwise unhealthy branches.
- Planting areas to be kept free of litter and leaf fall.
- General autumn tidy.
- All arisings to be removed from site and the site to be left clean and tidy at all times.

4.4.3 Climbers against walls will not receive as much rainwater as the ornamental plants so will require additional watering. Apply a mulch to the base of the climber to help retain moisture.

4.4.4 Once climbers are established and climbing on the wall remove any nursery supports, such as canes etc.

4.4.5 An inspection to be made in August each year. Any losses of shrubs or herbaceous plants, whether by natural means or vandalism and any other plants that have failed to thrive, to be noted and replaced in the planting season following the loss. Replacement plants to be of the same specification and size as the original plants.

Longer Term Management of Ornamental Shrubs, Climbers and Herbaceous Planting

- 4.4.6 Regular maintenance visits should be made at monthly intervals between April and September with at least two visits during the dormant season each year. It will be necessary to undertake general 'tidying' e.g. removal and replacement of dead plants, litter and leaf fall clearance, topping up, raking and sweeping of mulch to provide a tidy appearance etc., as described above for the Establishment Maintenance. All arisings to be removed from site and the site to be left clean and tidy at all times.
- 4.4.7 Following completion of the Establishment Maintenance, the need for both watering and weed control is likely to be reduced but topping up of mulch must still be undertaken as necessary to maintain the beds in a weed free condition. At this stage it may be possible, in those areas without herbaceous planting, to use a residual soil acting herbicide to minimise the need for physical removal of weeds. Planting beds to be maintained in a weed free state and mulch material to be kept topped up to a depth of 75mm, as appropriate. In dry summers some ornamental beds may require watering to ensure healthy growth.
- 4.4.8 Regular monitoring for pests and diseases will also be needed on an ongoing basis and any necessary control measures undertaken as soon as possible.
- 4.4.9 General and formative pruning to shrubs to remove straggling stems, over-vigorous shoots, suckers and dead, misshapen, discoloured, thin, weak, over-crowded, old or broken branches from shrubs by pruning back with a clean cut to the main stem, or to a sound and healthy outward growing lateral. Ground cover plants to be trimmed to shape and to prevent encroachment onto adjoining hard surfaces, shrub species or grass edges in April to June each year.
- 4.4.10 Vigorous species to be pruned as necessary to restrict lateral and top growth, to prevent infringement on adjoining plants, paths, grass, edges etc. It may be necessary in 5 + years after planting, to undertake rejuvenative pruning of these and other species, if they outgrow their location or become over-mature. In these cases, shrubs to be cut to 100mm above ground level in March. Plant re-growth is to be monitored and any shrubs which do not regenerate successfully to be

removed and replaced, with plants of the same size and specification as the original plants.

- 4.4.11 Ground cover and under storey mixes to be monitored and pruned in single species groups to ensure that swamping of less vigorous species does not occur.
- 4.4.12 Herbaceous planting to be dead headed after flowering with flower stems cut to ground level, with the exception being of plants which display decorative seed heads which are to be kept tidy and seed heads removed in the following spring. The other exception is biennial species, which should be allowed to set seed in the vicinity of the parent plant, to progenerate. Seedlings to be retained and re-distributed as necessary.
- 4.4.13 Where necessary to maintain a tidy appearance and in accordance with good horticultural practice, herbaceous plants to have dead leaves cut back to ground level in the autumn. Those species, which retain attractive winter, leaves to be retained unpruned but tatty leaves to be cut out on a regular basis. Vigorous herbaceous species to be divided and splits used to extend/gap up the original planting in October, as necessary to ensure longevity and free flowering of the parent plants. Following this treatment, the areas affected should be re-mulched.
- 4.4.14 Due to the relatively short-lived nature of some plants, provision should be made for plant replacement after 5-10 years. Similarly, it may be necessary to replace some of the herbaceous species, which have a tendency to die out, in time. This to be undertaken in early spring, as necessary.
- 4.4.15 Climber's shoots encroaching onto buildings and into private gardens need to be cut back to a reasonable length sticking within the boundaries of the allotted wall.
- 4.4.16 Climbers to be pruned back and dead headed once a year after flowering in Autumn.
- 4.4.17 Ornamental grasses to be kept in a tidy condition and grass heads to be cut down after flowering. Leaves to be cut down as necessary to retain a tidy appearance.

4.5 Operation 5: Proposed Short Amenity Grass

- 4.5.1 **Objectives:** Areas of short mown grass are to be maintained for informal recreational use and leisure by local residents.

Establishment Maintenance of New Areas of Short Grass

- 4.5.2 Areas of newly seeded/turfed grass to be subject to establishment maintenance during the first year after seeding.
- 4.5.3 Swards to be cut six times during the growing season, once the grass has established sufficiently to be stable and well rooted. The first cut to be made when the grass has reached 50mm in height and the grass shall not be cut lower than 25mm. All cutting operations to be carried out in suitable dry weather conditions. Cuttings to be removed or distributed lightly and evenly over the sward.
- 4.5.4 Any failed areas of grass to be seeded at the correct season. Any ingress of pernicious perennial weeds to be hand pulled. Any stones or litter on the surface to be removed.

Longer Term Short Amenity Grass Management

- 4.5.5 Areas of short grass seeding once established for twelve months are to be cut a minimum of six times during each growing season (ie between March and October). However, it will be weather permitting and should be reviewed to suit extreme weather ie extremely dry arid conditions it may be necessary to reduce the cut leaving the grass slightly longer. The height of grass shall not exceed 50mm before cutting, topped to a height of 25mm. Any short grass that abuts a vertical obstacle to be trimmed at the same time as each grass cut to achieve a neat edge. Swathes of arisings to be collected up and composted or removed from the POS.
- 4.5.6 All grass edges against paved areas, kerbs or other hard surfaces to be edged regularly to maintain a 10-20mm clear gap between the two surfaces.
- 4.5.7 In March and September of each year, all grass edges to be trimmed in accordance with the above paragraph, to be re-cut to a straight line or smooth curve as appropriate using a half moon edging tool or similar.

- 4.5.8 The sward to be treated with an approved selective herbicide, at the recommended rate of application on an annual basis in May of each year, to control broad-leaved weeds.
- 4.5.9 Any damage to the sward caused by pests (moles, rabbits etc.) or by vehicles or general wear and tear, to be reinstated by top dressing, re-cultivation, re-seeding and watering, at the correct season, as necessary. Any reinstated areas to be protected and subject to establishment maintenance as itemised above. If grass growth is poor it may be necessary to apply a spring and / or autumn fertilizer to the sward, to encourage vigour. Similarly, turf aeration and scarification may also be necessary, to alleviate compaction and control the development of thatch.
- 4.5.10 Any leaf material, broken branches or other debris which occur on the grass, to be removed as necessary, to maintain a clear grass surface.
- 4.5.11 **Specification:** Shade tolerant amenity grass mixture – *Germinal amenity A19 All Purpose landscaping*.
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5 MANAGEMENT OPERATION FOR SITE SPECIFIC AREAS

5.1 Operation 6: Proposed Wildflower Meadow

5.1.1 **Objective:** Areas of native wildflower meadows and grassland are to be maintained as a high value resource for wildlife and aesthetics in the POS.

Establishment Maintenance of Native Wildflower Meadow

5.1.2 Areas of newly seeded/turfed grass to be subject to establishment maintenance during the first year after seeding. All maintenance regimes are suit manufacturers recommendations.

5.1.3 Cut to height of 75mm, once in late August, once again in mid-October and in mild winters once again in mid-March. All cut material should be collected at once, except for the August cut which shall be left for 3-5 days after cutting to allow to dry, for re-dispersal of seeds. This can then be collected using the collection box on a sit on mower. NB. It will be necessary for the company maintaining the wildflowers to understand the principles of wildflower management, which is different from normal amenity grass management. This should ideally be demonstrated before the contract for the ground maintenance is let.

5.1.4 Strimming by hand may be required in more difficult to reach areas, arisings will need to be raked up by hand.

5.1.5 **Specification:** Meadow Mixture for Loamy Soils - *Emorsgate EM5 or similar approved. Recommended sowing rate 40 kg/Ha.*

5.2 Operation 7: Proposed Green Terramesh

5.2.1 **Objective:** Maintain an even coverage of vegetation across the terramesh and prevent overgrown, dense and invasive vegetation to occur.

Establishment Maintenance of Green Terramesh

5.2.2 For both establishment maintenance and long term maintenance for the green Terramesh refer to the Engineer's drawings and specifications.

5.3 Operation 8: Site Housekeeping, Hard Landscaping, Play and Open Spaces

5.3.1 **Objective:** Ensure that the Site is respected and that the hard and soft landscape elements including furniture are maintained in good condition, without the risk of degradation through natural processes or abuse. This is to include the following;

- Proposed informal play equipment within POS
- Proposed benches

Play areas

5.3.2 Play space equipment, furniture and surfacing to be subject to formal safety checks such as (IPI or ROSPA) as required by the party with whom liability is with (annual inspections anticipated). Play area to be checked as part of the required routine, undertaken management company. Any loose, damaged or missing elements of play equipment to be reported. Any repairs or replacements are to using manufacturers materials as directed. Play equipment to be kept clean and suitable for use without compromise of health and safety of any user.

5.3.3 The play area should be closed to public access during works.

Routine Site Monitoring

5.3.4 All furniture including play equipment and benches etc., are to be regularly checked and cleaned and if necessary repaired, treated with an appropriate preservative or replaced as appropriate, and in accordance with manufacturer's instructions.

5.3.5 Regular routine checks of the Site will be required and any litter, dumped material or other debris to be removed on a weekly basis. Vigorous attention will be required with respect to control of dog fouling.

5.3.6 All areas of paving, flush and raised edging to paths and planting, kerbs, macadam and other hard surface areas throughout and/or adjacent to the Management areas of the Site, to be kept free of leaves, litter and silt deposits by sweeping or alternative method of debris removal e.g. suction or blowing, on a monthly basis and maintained free of grass, weed, moss or algae growth, using

appropriate translocated (e.g. Glyphosate) and residual (e.g. Casaron) herbicides and moss-killers. Particular attention is required to areas that may become slippery. It may be necessary to use a pressure washer on occasion to remove any silt or algae build up.

5.3.7 Longer term management of bordering paths, as well as kerbs, macadam and other hard surfaces etc., will include twice annual monitoring in April and September of each year and any repairs/replacement works required are to be reported back to the client.

5.3.8 Site drainage issues also to be addressed on a routine basis to ensure that there are no problems relating to blockages or disrepair of main drains or laterals, dispersal of surface water etc. This will include regular checking and clearance of any drainage gulleys and grated drainage channels and rodding of underground drainage pipes as necessary.

5.3.9 Any unauthorized use of the areas or vandalism/graffiti/loitering/dens or other abuse or anti-social behavior, to be reported immediately to the Local Authority for further action and/or removed as soon as possible. Similarly, any inappropriate use of the open space by residents e.g. installation of personal possessions/ children's play equipment etc. into the communal areas, dumping of shopping trolleys, storage of bikes etc., to be similarly reported so that any appropriate action/warnings can be issued.

6 SUMMARY OF FIVE-YEAR POST-CONSTRUCTION MANAGEMENT PLAN

This table below describes the programme of annual management post-construction.

Annual management actions years 1-5

Action	Month											
	J	F	M	A	M	J	J	A	S	O	N	D
<i>Proposed Trees, Native Shrubs and Hedge Planting</i>												
Water (using irrigation systems for non-woodland trees) during periods of dry weather.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Treat all trees, shrubs and hedges with application of slow-release fertiliser.				✓								
Re-firm and set upright trees, shrubs, hedges which have become loosened up or out of the ground. Check guards, grilles, supports and irrigation tubes.		✓		✓	✓	✓	✓	✓	✓		✓	
Control of weeds to keep planting areas free of grass and weed growth.		✓		✓	✓	✓	✓	✓	✓		✓	
Check trees, shrubs, hedges for pests and diseases regularly		✓		✓	✓	✓	✓	✓	✓		✓	
General pruning. Clearing of litter, leaf fall and grass edges from mulch beds.		✓		✓	✓	✓	✓	✓	✓		✓	
Topping up of bark mulch to 75mm, where used as top dressing.		✓										
General Autumn tidy									✓	✓	✓	
Inspection for any losses of planted trees, shrubs, hedges.								✓				
Replacement of dead, damaged or diseased new planting in the next appropriate season i.e. not in	✓	✓	✓							✓	✓	✓

Annual management actions years 1-5

	Month											
Action	J	F	M	A	M	J	J	A	S	O	N	D
the summer months and not in frost conditions												
Any epicormic growth or suckers to be removed from the trunk/basal area of the trees		✓		✓	✓	✓	✓	✓	✓		✓	
<i>Proposed Ornamental Shrubs, Climbers and Herbaceous Planting</i>												
Water during periods of dry weather.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Treat all plants with application of slow-release fertiliser.				✓								
Re-firm and set upright plants which have become loosened up or out of the ground.		✓		✓	✓	✓	✓	✓	✓		✓	
Control of weeds to keep planting areas free of grass and weed growth.		✓		✓	✓	✓	✓	✓	✓		✓	
Check plants for pests and diseases regularly		✓		✓	✓	✓	✓	✓	✓		✓	
Clearing of litter, leaf fall and grass edges from mulch beds.		✓		✓	✓	✓	✓	✓	✓		✓	
General pruning.									✓	✓	✓	
Pruning for climbers once a year.										✓		
Topping up of bark mulch to 75mm, where used as top dressing.		✓										
General Autumn tidy									✓	✓	✓	
Inspection for any losses of planted plants.								✓				
Replacement of dead, damaged or diseased new planting in the next appropriate season i.e. not in the summer months and not in frost conditions	✓	✓	✓							✓	✓	✓
<i>Proposed Short Amenity Grass</i>												
Year 1: Sward to be cut 6 times during initial growing			✓		✓	✓	✓		✓	✓		

Annual management actions years 1-5

	Month											
Action	J	F	M	A	M	J	J	A	S	O	N	D
season to height of 25mm, only once grass has reached 50mm.												
Year 2-5: Sward to be cut minimum of 16 times during the growing season to height 25-50mm.			✓	✓	✓	✓	✓	✓	✓	✓		
All edges around bases of trees planted in grass to be cut to a smooth curve.			✓						✓			
Removal or leaf material, broken branches or other debris which occur on grass.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Inspection in May to plan restorative management for the following year.					✓							
Undertake works to repair grassland by top dressing re-cultivation and watering at the correct season.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Undertake works to control weeds including spot treatment with glyphosate.			✓	✓	✓	✓	✓	✓	✓	✓		
Re-seed areas of failed grass using original specified seed mix.			✓						✓			
Wildflower Meadows												
Strim to height of 75mm, once late August, once mid October and if mild winter once mid March.			✓					✓		✓		
Undertake control of weeds by hand pulling or repeated strimming.			✓	✓	✓	✓	✓	✓	✓	✓		
Site Housekeeping												
Furniture, hard surfacing and drainage inspections and actions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

HERITAGE GATE, COED DARCY

LANDSCAPE MANAGEMENT PLAN

Planting Plans

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