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C0084 Royal Heights, Reading

For Allies Group

5 YEAR LANDSCAPE MANAGEMENT AND MAINTENANCE PLAN

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Revision History

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1.0 INTRODUCTION

1.1 The following Landscape Management Plan has been drawn up by Cameo and Partners on behalf of Allies Group. It sets out the necessary prescriptions for the landscape management of the new planting associated with the residential development at Royal Height in Reading.

1.2 The management plan covers the landscaping associated with the housing area and areas of public open space. Areas of management are as per drawing C0084 L100.

1.3 Maintenance prescriptions have been formulated to maximise the landscape amenity of the site, maintain healthy plant growth, keep planting beds free from weeds / litter and ensure plant stock remains free from disease. This plan deals with the maintenance of the following areas:

- Maintenance of Proposed Tree Planting;
- Maintenance of Proposed Hedge Planting;
- Maintenance of Proposed Shrub Planting;
- Maintenance of Proposed Green Roofs;
- Maintenance of Hard Surfaces & Street Furniture;
- Ecological Monitoring

1.4 The plan covers the first 5 years of maintenance. After which, the plan should be reviewed, with fresh objectives and prescriptions for the long term maintenance, in consultation with any relevant stakeholders, including any emerging residents groups.

1.5 This plan should be read in conjunction with detailed planting proposals drawing C0084 L300.

1.6 Following initial development of the site, it is anticipated that the first 12 months planting maintenance will be the responsibility of the landscape sub-contractor as appointed by the developer. Any planting areas that are conveyed to the individual dwellings will remain the responsibility of the occupier.

1.7 Where a British Standard or Code of Practice exists, appropriate to any materials, workmanship or operations necessitated by the Works or part thereof, such materials, workmanship or operations shall comply with the latest edition of that British Standard or Code of Practice unless otherwise stated.

2.0 SITE DESCRIPTION

2.1 The development is located in Reading, between Queen's Road, Watlington Street and Kennet Side which runs along River Kennet. The proposal is a refurbishment of the existing building along Queen's Road, retaining existing building along Kennet Side and introducing a new residential block along Watlington Street. Currently the plot is occupied by a tarmac car park. The proposal creates new green buffer zones to the perimeter of the site and a new courtyard space between the buildings. Despite a requirement for car parking within the courtyard landscape feature softening the space have been proposed so the space feels as green as possible.

3.0 IMPLEMENTATION OF THE WORKS

3.1 All works should be installed in accordance with the details and specification set out in this report and that contained on drawing C0084 L100.

3.2 All planting should take place in the first available planting season following completion of the dwellings and any associated open space areas, and to meet the criteria of the general planting specification set out in on the drawings.

3.3 The actual programme of installation will be dependent on the build programme of the developer and a more detailed programme of installation should be developed once construction of the housing areas has commenced.

3.4 Planting should be maintained by the installing landscape contractor for a minimum period of 12 months following installation, with any defective planting replaced at the end of the first year (or before).

3.5 The Contractor shall carry out all operations as necessary and shall provide all materials, labour, machinery, monitoring, analysis, supervision and administration to fulfil at all times, the following requirements:

- That the grounds be fit for the purpose in every respect as a high quality landscape. That the grounds be maintained in a clean, safe, orderly and litter-free condition.
- That the protection of the health and safety of all people in the grounds be ensured. The Contractor shall comply with all relevant health and safety legislation and provide evidence of doing so.
- That inconvenience to all people in the public spaces and units be minimised by the execution of maintenance operations in such a manner and at such times as to reduce disturbance to the lowest level reasonably possible.
- That all defective items be replaced as soon as is reasonably possible and in accordance with the original specification.
- That all defective shrubs and grass areas be replaced at no additional cost to the contract unless their failure is caused by, vandalism or construction activities by others.
- The Contractor shall produce a programme of works for the duration of the contract. This shall be reviewed at contract meetings to be held at Client's offices. The meeting attendance dates will be regular although not always on the same day each visit. For each meeting a report on work carried out, resources, progress, health and safety and information required shall be produced for distribution in advance by the Contractor.

That the grounds are maintained and monitored to keep and increase the enhanced ecological value

3.6 The Contractor shall be responsible for all supervision required to ensure that the works are carried out in accordance with the specification and shall employ experienced and competent foremen on site throughout the duration of the works.

3.7 The Contractor shall appoint a Foremen fully qualified in all aspects of horticulture. Such personnel shall be available at all times to supervise key activities such as: pest control, plant nutrition, control of plant disease, pruning, replacement planting, irrigation, soil analysis etc.

The Contractor shall employ Supervisors conversant with all aspects of soft and hard landscape. Landscape operatives shall be trained in all aspects of their work.

4.0 GENERAL MAINTENANCE ITEMS

4.1 Maintenance of the landscape areas shall be undertaken by a competent Landscape Contractor, registered with the British Association of Landscape Industries (BALI). For the purposes of this report the appointed landscape contractor is referred to as 'The Contractor'.

4.2 Maintenance visits shall be undertaken at minimum monthly intervals (i.e. 12 visits per year). Visits may need to be increased at certain times of the year to enable the operations set-out within the report to be properly executed.

At each visit the following operations shall be undertaken:

- (i) Regularly litter pick entire site to ensure that all planting and amenity areas are kept free from litter;
- (ii) Rake-up any leaf litter and remove from site;
- (iii) Ensure that all adjacent areas affected by maintenance operations are protected using boards or tarpaulins. Do not place excavated or imported materials directly onto grass/hard surfaces;
- (iv) Undertake weeding of planted areas;
- (v) Undertake watering (as required) to ensure healthy growth / establishment of plant stock especially during the summer months (May to Aug) or during periods of prolonged drought where more frequent visits may be required;
- (vi) Sweep all communal hard surfaces to ensure they are kept free from litter and leaves; and
- (vii) Undertake all the necessary landscape maintenance outlined in the following sections.

4.3 All soft landscape areas to be maintained to BS7370-4:1993.

4.4 The Contractor shall physically maintain the whole of the site in accordance with the schedules and specification included within this document. The landscape maintenance is to be carried out to a high standard at all times.

4.5 A record or log of all maintenance visits should be undertaken by the Contractor and these should be collated on a six monthly basis and submitted to the management company for review.

4.6 The Contractor shall ensure that any chemical application is undertaken by trained personal / operatives only, who have the appropriate NPTC certificates and in accordance with the manufacturer's recommendations. The 'Code of Practice for the Safe Use of Pesticides for Non-Agricultural Purposes' will be observed where applicable. The use of any chemicals shall be noted on the record sheets as outlined above.

4.7 The Contractor should ensure that the site is left in a tidy and safe state following the undertaking of works outlined in the enclosed schedules and this shall be at the end of the day of each visit. All arisings should be removed from site in accordance with the schedules.

4.8 The Contractor shall programme and vary their agreed time of visits to coincide with appropriate weather conditions for carrying out of operations, with particular regard for the use of chemicals and the mowing of grass. The mowing of grass during excessively wet weather or following periods of extended rain is strictly prohibited.

4.9 The Contractor should notify the management company to any significant pest or disease problem affecting the planted stock and shall provide a suitable strategy for treatment to be agreed with the client.

4.10 The Contractor shall advise the management company of all trees and other plants found to be dead, dying, vandalised or suffering significantly from the current growing conditions. All failed / defective plants identified within the first 12 months of installation should be replaced by the contractor at the soonest available planting season to ensure a continued coverage of growth. Replacement plants should be of the same species and specification of the failed specimens.

4.11 Chipping and shredding is not permitted on site without prior consent.

4.12 Should mammalian pests become a significant problem on site, then proposals for their control / eradication should be submitted for approval.

4.13 Ensure that a suitable water supply is available to carry out the operations detailed in this document. In the event of water restrictions (e.g. drought), the contractor will be responsible for submitting proposals to the management company for an alternative source of water e.g. use of a trailer mounted bowser.

5.0 MAINTENANCE OF NEW TREE PLANTING

Objectives

5.1 To ensure new tree planting is suitably cared for to enable its successful establishment, and to promote healthy growth and attractive form.

Prescriptions

5.2 Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.

5.3 Apply annually a single dose of evenly spread, 11:22:9 NPK, slow release fertiliser to the base of the tree at a rate of 50g per tree, from March – April; replace any mulch layer.

5.4 Inspect ties to trees, twice yearly or after severe weather. Test for soundness in early and late winter, and replace tight or ineffective ties.

5.5 Re-firm trees in ground after strong winds, frost heave or other disturbances.

5.6 Monitor and replace failed planting with new plants between October and March. Ensure planting is conducted into well-prepared ground.

5.7 Trees should be routinely inspected for pests and diseases and any remedial action taken swiftly to prevent the spread of disease and control pests.

5.8 Annually review and undertake crown pruning of young trees by removing dead branches and reducing selected side branches, ensuring development of a single strong leader. Pruning should be carried out in accordance with BS 7370-4.

5.9 Maintain a mulch layer at the base of each tree by annual topping-up to a depth of 50mm to a diameter of 1.2m around the trunk. Ensure mulch layer is free from weeds by hand cultivation.

6.0 MAINTENANCE OF NEW HEDGE PLANTING

Objectives

6.1 To ensure newly planted hedges are suitably cared for to enable successful establishment into a dense bushy hedge that can be suitably maintained for ornamental and amenity value.

Prescriptions

6.2 During and following the establishment of the planting ensure that sufficient water is applied to maintain healthy growth as required. Ensure that full depth of topsoil is saturated. Watering programme should be monitored to ensure that at times of water shortage (e.g. drought), sufficient water is applied to meet the conditions.

6.3 Prune and re-shape hedge species at the appropriate time according to individual requirements to promote good growth and compact form, removing any dead or dying wood.

6.4 Allow new hedges to attain a planned height of 1.2m, by trimming lateral growth once annually in mid to late summer. Once established, hedges should be maintained at their planned dimensions.

6.5 Keep all hedge planting trenches clear of weeds by cultivating and use of approved herbicides. Fork-over/hoe beds as necessary to keep soil loose, disposing of arisings off-site.

6.6 Apply an annual single dose of evenly spread, 11:22:9 NPK slow release fertiliser at a rate of 60g per m², from March - April.

6.7 Top-up the mulch surface (where applicable) with chipped tree bark following planting, to a depth of 50mm. Regularly monitor mulch levels and re-mulch in July to original depth, or when required.

6.8 Regularly check for plants which have been loosened by wind or frost and re-firm any loose plants back into the ground.

6.9 Monitor and replace failed planting with new equivalent plants between October and March.

6.10 All plants should be maintained in a disease and pest free state through the application of a suitable proprietary herbicide/pesticide.

7.0 MAINTENANCE OF NEW SHRUB PLANTING

Objectives

7.1 To ensure planting within communal areas adjacent to dwellings and in areas of public open space is suitably cared for to enable its successful establishment, to maintain growth and shape of plants and prevent planting beds becoming overgrown and untidy.

Prescriptions

7.2 During and following the establishment of the planting ensure that sufficient water is applied to maintain healthy growth as required. Ensure that full depth of topsoil is saturated. Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.

7.3 Prune and re-shape shrub species at the appropriate time according to individual requirements. Remove dead or dying wood, in order to promote healthy growth and attractive form. Shrubs should be prevented from becoming overgrown, with particular attention to plants adjacent to windows, footpaths and roads to prevent obstruction. Avoid hard pruning to bare wood.

7.4 Keep all beds clear of weeds by cultivating and use of approved herbicides. Fork-over/hoe beds as necessary to keep soil loose, disposing of arisings off-site.

7.5 Apply an annual single dose of evenly spread, 11:22:9 NPK slow release fertiliser at a rate of 60g per m², in March - April.

7.6 Mulch the surface of the planting beds with chipped tree bark following planting, to a depth of 50mm. Regularly monitor mulch levels and remulch in July to original depth, or when required.

7.7 Regularly check for plantings which have been loosened by wind or frost and re-firm any loose plants back into the ground.

7.8 Regularly check beds on routine visits to assess whether thinning is required. When plantings are starting to overlap it may be necessary to remove some individual plants to retain the character of the bed. Thinning should take place as required in a logical process over several stages.

7.9 Monitor and replace failed planting with new equivalent plants between October and March. All plants should be maintained in a disease and pest free state through the application of a suitable proprietary herbicide/pesticide.

7.10 Dead head flowering shrubs following the flowering period to promote further flowering. NB:- Remove arisings from site.

8. MAINTANANCE OF GREEN ROOFS

Objectives

8.1 To ensure planting on roofs is suitably cared for to enable its successful establishment, to maintain growth and shape of plants.

Prescriptions

Sedum roof

8.2 Watering will be required for a minimum of 2 months during the establishment period. Depending on the weather and year of planting it may need to be longer. After the initial establishment period maintenance activities will be focused on upkeep and observation, especially during the active spring and summer growing seasons.

8.3 Vegetation-free zones (VFZs) to roof perimeters and around roof penetrations should be inspected at least every two weeks. Errant green roof vegetation and any debris (pebbles, sticks, leaves, trash, etc.) should be removed.

8.4 Remove trash, pebbles, sticks, fallen leaves etc. from the green roof on a regular basis.

8.5 Weeds and any tree seedlings to be removed during monthly inspections. Care should always be taken to prevent weeds from setting seed.

8.6 Watering should be carried out during the summer and periods of prolonged hot dry weather. Supplemental water may not be needed during periods of rain or milder temperatures. During prolonged hot dry weather or when plants become drought stressed, supplemental water should be applied, temporarily, to re-wet the soil to the point of saturation. This will keep plants from going dormant, keep them plump and healthy so they can cover the soil effectively, and optimize their appearance. It also enhances the evaporative cooling effect of the green roof.

9.0 MAINTENANCE OF HARD SURFACES AND STREET FURNITURE

Objectives

9.1 To ensure that hard surfaces and street furniture are maintained in a safe, debris-free state to facilitate all-year-round use of the open spaces areas.

Prescriptions

Hard Surfaces

9.2 As required, ensure all hard surfaces are maintained free from debris, litter and fallen leaves through regular sweeping. Remove any arisings from site.

9.3 Undertake regular inspections to ensure that all hard surfaces are sound and free from cracks or trip hazards. Patchy, worn areas or where the hard surface finish has visibly failed, are to be clearly fenced-off from the public and repaired as new as soon as feasibly possible.

Street Furniture

9.4 Undertake bi-annual checks of all street furniture to ensure that it remains soundly and safely installed. Re-install any loose furniture.

9.5 In the case of street furniture containing timber elements, ensure that the timber has not become worn or the preservative treatment eroded by continual use or UV exposure. Any worn or damaged timber should receive an application of proprietary timber preservative to match the colour and treatment of the adjacent timber.

9.6 In the case of street furniture containing painted metal elements, ensure that any painted surface has not become worn or eroded through continual use. Any worn or damaged paint work should be rectified by the application of an appropriate paint to match the existing.

9.7 Undertake bi-annual checks for graffiti. The contractor should keep accurate records of any graffiti and should make every endeavour to remove / remediate street furniture that is subject to graffiti.

10. ECOLOGICAL MONITORING

Objectives

10.1 In order for the Plan to be in accordance with the British Standard, an ecologist will undertake an ecological monitoring programme that will measure the success of the planting and use of the enhancements by birds and invertebrates as key biodiversity indicators. The monitoring for birds and invertebrates in particular should occur annually for the first 3 years and biennially thereafter. Monitoring would focus on the diversity and abundance of these species.

In addition, due to the proximity of the scheme to Heathrow Airport, bird monitoring is essential and shall be carried out in accordance with the Bird Hazard Management Plan prepared by Aspect Ecology.

Prescriptions

10.2 Annual monitoring programme requires surveys to be undertaken between May and August. Survey for signs of invertebrates and bird species using the roof areas.

A list of ecological enhancements adopted for this scheme is given below:

- Biodiverse Roofs. (See section 10 of this document)
 - Rubble / stone piles
 - Sand piles
 - Log piles
- Areas of wildlife friendly landscaping including trees and wildflower meadows
- Bird boxes. (Refer to Ecologist report for specification for more information)
- Bat boxes. (Refer to Ecologist report for specification for more information)

10.3 The monitoring and completion of any remedial measures is the responsibility of the maintenance contractor. The maintenance operatives must ensure they respect these areas of ecological enhancement, ensuring there is no damage to these habitats during typical landscape maintenance operations.

Any damage to the features listed above should be reported to the on site management team and repaired in accordance with the original ecologist's recommendations

11.0 MAINTENANCE SCHEDULES

11.1 A schedule of work is provided in the following tables, giving a timetable for management actions for the first five years post implementation. Before the end of this Management Plan period the management agency shall review these prescriptions in consultation with any interested parties and provide an updated Management Plan for on-going management.

APPENDIX A – ANNUAL MAINTENANCE SCHEDULE

NO	TASK	J 1	F 2	M 3	A 4	M 5	J 6	J 7	A 8	S 9	O 10	N 11	D 12	NOTES
1.0	General Tasks for all landscape areas													
1.1	Litter collection and removal from site	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	Keep litter free at all times
1.2	Weed control	X	X	♦	X	♦	♦	♦	♦	♦	X	♦	X	As specified
1.4	Watering				X	X	X	X	X	X				Daily if required in summer
1.5	Top up mulch, firm plants, Check ties, supports etc			♦							♦			To 50mm as required
1.6	Pest and disease control			X	X	X	X	X	X	X	X			As required
1.7	Bird and Bat Boxes:			♦										Check bird and bat boxes remain securely fixed to trees and buildings
2.0	TREE and MIXED PLANTING													
2.1	Pruning to shrubs and hedges		X	♦	X	X	X	X	X	X	♦	X		As required for species
2.2	Dead head shrubs			♦		♦	♦	♦	♦	♦				Weekly as required
2.3	Thin out planting, Lift / divide										♦			As required
2.4	Replacement planting (all plant types)	X	X	X								X	X	By agreement as schedule
2.5	Works to trees		X								X			As required to maintain form
3.0	HARD LANDSCAPED AREAS													
3.1	Sweep mulch and litter from all hard areas, Remove all stains, debris, vegetation and litter from all hard areas, furniture, drains and gullies		♦		♦		♦		♦		♦		♦	
3.2	Treat any weeds in paving or edge of paving				X		♦		X		X			
3.3	All other repairs to hard paving and furniture, including clearing snow and ice	X	X	X	X	X	X	X	X	X	X	X	X	

♦ - Critical months for operations.

X - Operations to take place subject to site requirements