

May 2023 / 0897-RFM-XX-00-RP-L-0003-S2-P04

Phase 3, Axis J9, Bicester Landscape Management & Maintenance Plan

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A Introduction

This report outlines the maintenance operations required for the landscape at Phase 3 of the Axis J9 Development in north west Bicester. The purpose of this management plan is to aid the efficient and effective management of the site, preserving the design intent for the first 25 years after practical completion.

In the event of failure of any of the soft landscape, the contractor will replace the soft landscape elements (trees, hedges, grass, planting) for a period of 12 months from practical completion or the completion of the landscape works, whichever is later.

All maintenance will be conducted by the client's chosen maintenance contractor after this period.

This document is to be read in conjunction with the following drawings and documents:

- 0897-RFM-XX-00-DR-L-0004-S2-P01-Detailed Planting Plan
- 0897-RFM-XX-00-DR-L-0005-S2-P01- Tree Retention and Protection Plan
- 0897-RFM-XX-00-DR-L-0006-S2-P01- Planting Schedule
- 0897-RFM-XX-00-DR-L-0007-S2-P02-Typical Planting Details
- 0897-RFM-XX-00-SP-L-0001-S2-P01-Soft Landscape Specification

B Design intent

The landscape to Phase 3 of the Axis J9 employment development continues many of the strategies from previous phases, responding to the specific requirements and characteristics of the site. The careful integration of the development into the landscape and visual context has been at the forefront of the design team's mind during the preparation of proposals for the site, and the landscape is a key part of this strategy. The North West Bicester SPD prepared by Cherwell District Council sets out principles for the development of land within the allocation, and includes guidelines and principles for green infrastructure, trees and hedges. The successful management of the landscape at the Axis J9 site will be necessary to deliver on these principles and guidelines.

The site benefits from an existing, maturing block of woodland to the western boundary, which helps to screen it from points to the west. An area of native woodland whip and standard tree planting between the existing woodland and the proposed buildings and hard standing will create a buffer from the development.

The eastern boundary is formed of the existing hedgerow to Howes Lane.

The existing hedgerow to the north of the site will also be retained. Native woodland planting to this edge will soften and screen proposed built form, and reinforce the existing boundary as applications for allocated land to the north comes forward for development.

Within the site planting is proposed to create new green infrastructure along the western edge of strategic link road, to separate vehicle and pedestrian movement and create pleasant, walkable routes, and to create attractive areas around the drainage basin while enhancing the habitat value of the area.

In preparing the proposals, we have worked with Tyler Grange to ensure the contribution of the soft landscape proposals to biodiversity net gain, and to ensure that their management will maximise their value to local wildlife.

Specific objectives & operations:

The object of the native woodland planting is to encourage full woodland growth to encourage the screening of large units. Trees shall be checked from 3 years to ensure healthy growth. Vigorous deciduous trees in the native woodland mix shall be thinned out after 7 to 10 years to allow slower growing species to reach their full height.

The following species are to be allowed to grow onto maturity:

Acer campestre

Pinus sylvestris

Prunus avium

Quercus robur

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Notes and conditions

The objectives of the management plan are summarised as;

- Ensure the soft landscape thrives and performs as needed to help integrate the development into the landscape and visual context
- Ensure that management of the landscape maximises its value to local wildlife and for biodiversity net gain
- Create an attractive setting for new built form and pedestrian and vehicle routes around the development.

General Conditions

- All cleaning materials and products to be in accordance with all relevant policies of Cherwell District Council and Albion Land, e.g. Waste Policy.
- At the time of tendering, maintenance contractors are to provide details of proposed materials/cleaning products. Products to be chosen based on minimum level of environmental impact.
- Maintenance contractors are to provide a method statement before commencement of any maintenance operations.
- Use only machines and tools suitable for the site conditions and the work to be carried out. Use hand tools around trees, plants and in confined spaces where it is impracticable to use machinery.

Good Practice

- Where products are not fully specified they are to be suitable for the purposes of the works stated and in accordance with good horticultural practice, including the relevant provisions of current British Standard documents.
- Maintenance standards should at all times reflect the development's high quality status and position in the city.

Health & Safety

Chemicals

The Maintenance Contractor must comply with 'The Control of Pesticides Regulations 1986' made under the 'Food and the Environment Protection Act 1985', 'The Control of Substances Hazardous to Health Regulations 1988' made under the 'Health and Safety at Work Act 1974' and any other legislation enacted during the contract period.

The Maintenance Contractor must comply with all relevant Codes of Practice issued by DeFRA. In particular where work is near water, comply with the Code of Practice for the Use of Herbicides on Weeds in Watercourses and Lakes'. Written approval from the Environment Agency should be obtained prior to the use of pesticides within these areas.

A recognised nominated storekeeper's certificate of competence (BASIS) is required by a Contractor storing more than 200 litres of pesticides.

The Maintenance Contractor shall dispose of waste pesticides and containers in accordance with the Control of Pesticides Regulations 1986, Control of Pollution Act 1974', and 'Water Act 1989'. Safe disposal arrangements shall be made before starting to apply pesticides.

Concentrated pesticides shall be disposed of in arrangement with the local Environmental Health Department or with a specialist waste disposal contractor.

The Maintenance Contractor shall be responsible for making good and or compensation for any damage resulting from negligence in the application, handling and storage of pesticides.

The Maintenance Contractor shall be responsible for keeping up to date with all legislation and regulations regarding the use of pesticides.

The Maintenance Contractor shall inform Albion Land of any subsequent changes to legislation and regulations that affect the contract.

In general the following precautions should be taken:

- Prior to maintenance/cleaning being undertaken a site specific risk assessment is to be carried out.

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Notes and conditions

- Prior to any chemicals being used a COSHH assessment is to be undertaken
- When using chemicals, protective clothing such as gloves, goggles, boots and overalls should be worn.
- Adequate ventilation is required when using chemicals in confined spaces.
- When using flammable materials i.e. cigarettes, naked flames and other sources of ignition should be carefully controlled.
- When diluting acids, ALWAYS add acid to water and not water to acid.
- Any clothing that is contaminated with chemicals should be disposed of safely.
- When using any chemicals, care must be taken not to damage, contaminate or stain any adjoining materials, landscaping or finishes.
- Care must be taken to protect personnel operating in the area of the cleaning from any injury or hazard created by the cleaning. The appropriate First Aid must be available on-site.
- All operatives should be properly trained / supervised / and hold up to date certificates where necessary.
- Before undertaking any cleaning operation a trial should be carried out on a small, preferably inconspicuous area, to determine the effect of the chemicals before treating a large area.

Tree management

General Notes

The Contractor shall maintain all tree stock in accordance with the specification set out below.

- All works should be in accordance with BS:3998 and Forestry and Arboricultural Training and Safety Council Safety Guides. All operatives undertaking chainsaw work must hold appropriate certification and should be approved members of the Arboricultural Association.
- When cutting, cut at fork or at the main stem to avoid stumps wherever possible.
- Large branches — remove only if unavoidable. Remove in small sections and lower to the ground with ropes and slings.
- Dead branches and stubs— when removing do not cut into live wood.
- Unsafe branches — remove epicormic shoots and potentially weak forks that could fail in adverse weather conditions.
- Disease of fungus — give notice if detected. Do not apply fungicide or sealant unless instructed.
- Bark Damage — wounds — do not attempt to stop sap bleeding. Gently remove ragged edges and remove splintered wood from deep wounds as small as possible. Give notice if there is any liquid or flux oozing from apparently healthy bark.
- Cavities in Trees — Cavities should be investigated. If bats are found present in the cavities, no further investigative work is to be carried out until a suitable trained ecologist has visited the site to investigate further and to agree a course of action with Natural England. Rubbish and rotten wood should be removed, subject to the above. The cavity should be probed to find the extent of any decay, and give notice. The cavities should not be covered.

Crown Lifting

- Removing branches: remove whole branches back to the stem, or cut lower portions of branches back to lateral or sublateral buds or branches. Do not leave stumps.
- In general for clearance remove branch systems to give clearances as follows:
2.5m above pathways, 3m above vehicle carriageways.

Crown Thinning

- When removing branches, remove inward growing, crossing, rubbing, dead and damaged branches. When thinning selectively remove an agreed percentage of secondary and small live branch growth evenly throughout the crown. When

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cutting make no cuts of more than 50mm diameter.

- Cut portions of branches back to lateral or sub lateral buds or branches without leaving stumps. The appearance should be uniform with a well balanced structure of branches and foliage.

Watering

- Care should be taken to ensure all trees are watered sufficiently to encourage establishment and healthy growth, using relevant guidance.

General Stipulations

Failures of planting

- Any trees/shrubs/plants that have died or failed to thrive (not developing full foliage throughout all branches) within the period of this maintenance plan should be replaced. Years 1 – 3 replacements must match the size of adjacent or nearby plants of the same species or should match the original specification, whichever is the greater. Years 4 – 10 replacements to be as original specification.

Watering

- The contractor shall make due allowance in his rates for carrying out these tasks outside normal working hours when necessary to avoid premature evaporation or leaf damage caused through watering in bright sunlight.
- The contractor is to allow for the provision of water, water carts or hoses with a fine hose attachment or sprinklers at normal mains pressure. The contractor is to include and state in his tender the cost of compliance with this clause so that the cost of visits can be deducted in whole or in part if not required to be used.

Drought Conditions

- Should emergency legislation restricting the use of water during drought conditions be imposed, the contractor will be required to ascertain - before operations - the availability and cost of, and arrange to collect and apply second class water by bowser or other means from an approved sewage works, deliver to site and apply as specified. When required by the Architect, the contractor shall arrange for tests of this water to be carried out in accordance with BS 6068:2000 Water Quality.

Pests and Diseases

- Maintenance shall include the control of insects, fungus and disease by spraying with an approved insecticide or fungicide.

Cleanliness

- At completion and at each visit, remove soil and other debris from all hard surfaces and grassed areas and leave the works in a clean and tidy condition.

Leaf Clearance:

- The contractor is responsible for the clearance of leaves, twigs, etc. from all areas of the grounds including planting beds, lawns, paths, channels, drains, car park steps and other areas specified by the Client, from leaf fall (normally October until end December). The Client will instruct the contractor when to begin.
- The clearance shall be carried out with hand raking or sweeping, or using machinery appropriate and approved by the Client.
- All collected leaves to be removed from site and should not be left in piles awaiting removal but cleared immediately. Leaves should not be left on ground for more than a week. The contractor shall schedule operations to achieve this standard

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Schedules - Soft landscape

This maintenance schedule details how and when maintenance work items are to be carried out. In each identified month, the number in the shaded box details the number of times per month when a work item is to be carried out. Where a number "1" is indicated, the maintenance work item must be carried out once a month at the beginning of the month. Where a number "4" is indicated, the maintenance work item must be carried out once per week during the month. Where a number "2" is indicated, the maintenance work item must be carried out once at the beginning of the month, and once halfway through the month.

This schedule is for guidance only, and site conditions should be considered when determining the number of visits required. In times of exceptionally warm weather, for example, watering may be required more than once weekly.

Item	Description	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1.0	All trees												
1.1	Check for general health in line with good horticultural practice. Any signs of disease or decreasing health to be reported to site management.	1	1	1	1	1	1	1	1	1	1	1	1
1.2	Cut back broken, diseased or dying branches.	1	1	1	1								
1.3	Top up barkmulch to base of trees in soft areas. Mulch depth of 50mm to be maintained.						1		1				
1.4	Check branches for litter, especially after strong winds, and remove.	1	1	1	1	1	1	1	1	1	1	1	1
1.5	All shoots or suckers emanating from roots or the root stock and all epicormic shoots arising from dormant or adventitious buds growing from the trunk should also be removed.	1	1	1	1	1	1	1	1	1	1	1	1

2.0	All new native tree & shrub areas including specimen trees woodland mixes and native hedgerow mixes (Years 1-5)												
2.1	Prune trees to maintain a desirable shape in the first three years after planting.	1	bird nesting										
2.2	Check stakes and ties monthly (assume they will need adjusting at least twice annually.) Any broken or damaged stakes will be replaced and ties re-fixed at a slightly lower position, allowing for growth since planting. Remove stakes at year 5.	1	1	1	1	1	1	1	1	1	1	1	1
2.3	Water trees during summer months as necessary, minimum 2 x per month during Years 1 and 2. This is dependent on weather conditions, and the frequency may increase during spells of hot weather or drought. Where tree irrigation system exists, fill reservoir.			1	1	2	2	2	2	2			
2.4	To reduce excessive competition, retain weed free to whole planting area using glyphosate spray twice a year. Newly planted trees will require re-firming as required during the first three years.			1							1		
2.5	Re-firming Trees and Shrubs after strong winds, frost heave and other disturbances (staked). To re-firm the Maintenance contractor should tread around the base until firmly bedded. Any collars in the soil at the base of tree stems, created by tree movement should be broken up by fork, avoiding damage to roots. The voids should be backfilled with topsoil and re-firmed.	As required											
2.6	Rebalancing/realignment of trees that have moved with wind or bad weather (underground guying). Tree anchor systems to be tightened on affected trees as necessary to ensure trees are stable and upright.	1	1	1	1	1	1	1	1	1	1	1	1
2.7	Top up bark mulch to all planting areas or replace any mulch mats. Mulch depth of 50mm to be maintained.						1						

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Schedules - Soft landscape

Item	Description	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
3.0	Ornamental planting												
3.1	Check for general health in line with good horticultural practice. Any signs of disease or decreasing health to be reported to site management.	1	1	1	1	1	1	1	1	1	1	1	1
3.2	Years 1-2: Water as required to ensure good establishment of planting.			2	2	4	4	4	4	4			
3.3	Watering (thereafter) as required to ensure ongoing health of planting. This is dependent on weather conditions, and the frequency may increase during spells of hot weather or drought.	As required											
3.4	Apply fertiliser as per NBS specification to manufacturer's recommendations.			1									
3.5	Weeding. Remove arisings from site.				1	1	1	1	1	1	1		
3.6	Cut back spent and dead foliage of herbaceous perennials and ornamental grasses, once risk of heavy frost has passed.			1	1								
3.7	Comb out dead foliage of semi-evergreen herbaceous perennials and ornamental grasses avoiding damage to new growth. Remove arisings from site.			1	1								
3.8	Top up bark mulch to all planting areas or replace any mulch mats. Mulch depth of 50mm to be maintained.						1						

4.0	Turfing												
4.1	Mow fortnightly through May - October to maintain a length of 35 - 50mm (12 visits)					2	2	2	2	2	2		
4.2	Year 1: water as required to ensure good establishment of lawn.												
4.3	Watering (thereafter) as required to ensure ongoing health of lawn. This is dependent on weather conditions and the frequency may increase during spells of hot weather or drought.	As required											
4.4	Feeding: refer to feeding regime advised by supplier of growing substrate.			1									
4.5	Re-cut edges of lawns with half-moon					1	1	1	1	1	1		
4.6	Re-turfing and re-seeding: cultivate and re-turf or re-seed areas of bare ground (as necessary during spring) using exact same turf / seed mix to that originally used.				1								

Item	Description	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
5.0	Rain garden areas												
5.1	Check for general health in line with good horticultural practice. Any signs of disease or decreasing health to be reported to site management.	1	1	1	1	1	1	1	1	1	1	1	1
5.2	Years 1-2: Water as required to ensure good establishment of planting.			2	2	4	4	4	4	4			

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Schedules - Soft landscape

5.3	Watering (thereafter) as required to ensure ongoing health of planting. This is dependent on weather conditions, and the frequency may increase during spells of hot weather or drought.	As required													
5.4	Weeding. Remove arisings from site.				1	1	1	1	1	1	1				
5.5	Cut back spent and dead foliage of herbaceous perennials and ornamental grasses, once risk of heavy frost has passed			1											
5.6	Comb out dead foliage of semi-evergreen herbaceous perennials and ornamental grasses avoiding damage to new growth. Remove arisings from site.			1	1										
5.7	Feeding: refer to feeding regime advised by supplier of growing substrate.			1	1										

Item	Description	Month													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		
6.0	General														
6.1	Leaf fall: sweep up all leaf fall and adjust frequency to reflect leaf fall at different times of year or in spell of windy or frosty weather.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6.2	Litter clearance: all areas shall be maintained clean and litter free. Litter may be gathered by hand, paper picker or mechanical means. Damage to soft and hard landscaped areas through collection operations shall be made good. Arisings to be removed upon completion.	4	4	4	4	4	4	4	4	4	4	4	4	4	4

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