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Phase 3, Axis J9, Bicester Landscape Management Plan

Contents

A. Introduction

B. Design intent

C. Maintenance operations

01 Notes and conditions

02 Schedules

Appendices

Appendix 1 Planting strategy

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 10 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.

A plan of the soft landscape works is included at Appendix 1.

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. It is proposed that this boundary will be augmented with a belt of native woodland planting over a bund, helping to elevate it and increase the screening effect for properties immediately east of Howes Lane. Standard tree planting along this boundary will help to break up built form to this edge, becoming ever more effective as it matures. Additional hedgerow planting will reinforce the existing hedgerow, and strengthen the green infrastructure value of the boundary.

The existing hedgerow to the north of the site will also be retained, except where its removal is necessary for the implementation of the strategic link road. 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 come forward.

Within the site planting is proposed to create new green infrastructure along the strategic link road, to separate vehicle and pedestrian movement and create pleasant, walkable routes, and to create attractive areas around the drainage ponds 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.

C Maintenance operations

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.

C Maintenance operations

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

C Maintenance operations

Notes and conditions

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.

Maintenance operations generally are scheduled in the following pages. For locations of elements to be maintained, refer to Appendix 1.

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.

Litter Collection

- The contractor shall at all times keep the site clean, tidy and free from litter and carry out a litter collection at each maintenance visit.
- 'Fly tipping': large items such as discarded furniture that require two or more people to lift or are in excess of 0.5m³ will be treated as fly tipping and not litter. The contractor should provide a cost for removal and depositing for fly tipping on each and every occasion.

C Maintenance operations

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 (having checked for nesting birds. Carry out operations at a later date should nesting birds be present).		1										
1.3	Top up mulch to base of trees in soft areas. Mulch depth of 75mm to be maintained.			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			

2.0	Additional work to newly planted trees (Years 1-5)												
2.1	Prune trees to maintain a desirable shape in the first three years after planting. Check for nesting birds. Carry out operations at a later date should nesting birds be present.			1									
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 as necessary, in accordance with BS 8545 2014 Trees: from nursery to independence in the landscape. This is dependent on weather conditions, and the frequency may increase during spells of hot weather or drought.	As required											
2.4	To reduce excessive competition, retain a weed free area around all trees to a diameter of 1m around the base of the trees using hand weeding or mulching. Newly planted trees will require re-firming as required during the first three years.			1		1		1		1			
2.5	Re-firm Trees and Shrubs after strong winds, frost heave and other disturbances. To re-firm the 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											

C Maintenance operations

Schedules - Soft landscape

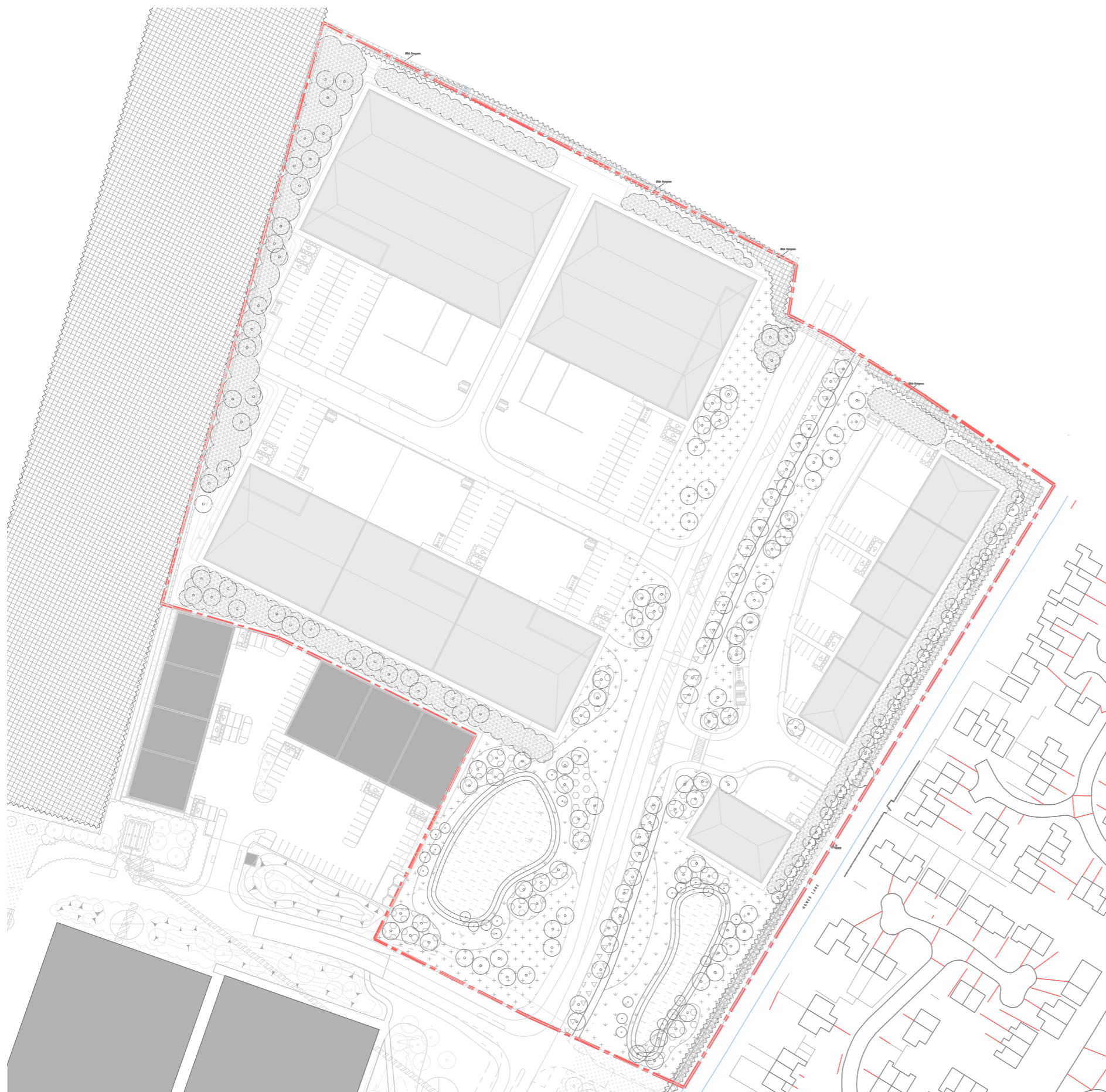
Item	Description	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
3.0	Native woodland, understorey and native hedge planting												
3.1	Check for general health in line with good horticultural practice. Any signs of disease or decreasing health to be reported to site management.	1	1	1	1	1	1	1	1	1	1	1	1
3.2	Years 1-2: Water as required to ensure good establishment.	As required											
3.3	Thereafter: Water as required during growing season.	As required											
3.4	Inspect stakes, ties and guards and adjust/remove if required to ensure continued growth and health				1			1					
3.5	Top up mulch to maintain settled depth of 75mm.			1									
3.6	Hedges: cut previous year's growth to reduce growth by one half and ensure individual plants bush out. Continue until hedge matches height, breadth and batter of surrounding existing hedge. It is the responsibility of the maintenance contractor to ensure that no nests are disturbed, as required by the Wildlife and Countryside Act 1981.									1			
3.7	Fencing to hedges. Maintain fencing until hedge is established, then remove if possible.			1									
3.8	Native woodland planting - thinning: From year 3, check trees to ensure healthy growth, removing any that are failing. Year 7-10 - thin out vigorous species to allow slower growing species (<i>Quercus</i> , <i>Prunus avium</i> , <i>Pinus sylvestris</i> , <i>Acer campestre</i>) to mature.			1									
4.0	Existing hedges												
4.1	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
4.2	Maintain hedge base: remove weeds, litter, debris and any other deleterious matter.	1	1	1	1	1	1	1	1	1	1	1	1
4.3	Cut to maintain a height of 3m. It is the responsibility of the maintenance contractor to ensure that no nests are disturbed, as required by the Wildlife and Countryside Act 1981.									1			
5.0	Amenity planting												
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		
5.2	Years 1 - establishment: Water each visit, if there has been no rainfall for previous 7 days. Water at a rate of 15 litres/m ² .	As required											
5.3	Watering: water as necessary to ensure health of planting.	As required											
5.4	Hand weed to remove. Remove arisings from site.			1	1	1	1	1	1	1	1		
5.5	Apply slow release fertiliser at manufacturer's recommended rate			1									
5.6	Pruning: Escallonia and Photinia - lightly trim to maintain bushy, even form. Remove arisings from site.				1								
5.7	Miscanthus - cut back to 75mm from ground to remove dead foliage		1										
5.8	Cornus - Year 3 onwards - cut back to 75mm of ground or last year's stubs, whichever is higher				1								
5.9	Top up mulch as required to maintain settled depth of 75mm			1						1			















C Maintenance operations

Schedules - Soft landscape

Item	Description	Month											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
6.0	Species rich tall meadow grass												
6.1	Year One - Mow regularly throughout the first year of establishment to a height of 40-60mm, removing cuttings if dense. Mowing to control annual weeds and help maintain balance between faster growing grasses and slower developing wild flowers.				1	1	1	1	1	1	1		
6.2	Thereafter Short meadow - Spring and autumn: cut back to 60mm and remove arisings. Summer "hay cut": adjust timing as necessary to follow flowering and setting of seed, and to precede spell of fine weather. Cut to 50mm, leaving "hay" to dry and shed seed for 7 days. Remove arisings from site after this period.				1				1		1		
6.3	Long meadow - Adjust timing of "hay cut" to follow flowering and setting of seed of majority of species. Cut, leaving arisings for min. 3 days, then remove.									1			
6.4	Remove any young scrub. Chip any material cut and leave on site in a compost area. Directly treat stems to prevent regrowth.									1			
6.5	Spot treat noxious weeds such as docks, thistles, ragwort and willowherb with an approved selective herbicide.			1							1		
6.6	Cultivate and re-seed areas of bare ground if necessary using same seed mix as original sowing.			1	1								
7.0	Swale meadow grass												
7.1	Watering: where irrigation system exists, fill reservoir												
7.2	Feeding: refer to feeding regime advised by supplier of growing substrate.												

Appendix 1 Landscape strategy - location of planting typologies



- Key
-  Planning application boundary
 -  Proposed building
 -  Existing building
 -  Contours / landform
 -  Existing vegetation to be protected and retained
 -  Native hedgerow planting
 -  Native woodland planting
 -  Swale meadow grass (seasonally wet)
 -  Tall meadow grass (through management)
 -  Short meadow grass (through management)
 -  Native understorey mix
 -  Amenity shrub planting
 -  Proposed tree in soft landscape
 -  Existing trees to be retained

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