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Ongoing & long term maintenance of all soft landscape

Project	JKL Waste Treatment Project, Kings Business Park, Prescot, L34 1PJ
Client	Alfred H Knight International Ltd.
Project Ref.	R199_001 revision P03 • P01 first issue • P02 add H&S information on working on contaminated land • P03 add maintenance schedule and amendments to text • P04 minor changes to text

Ongoing & long term maintenance of all soft landscape

This report accompanies the existing onsite management, inspections and surveys. It should sit side by side with current maintenance requirements. Any omissions / inconsistencies within the current regime should be rectified and introduced for the site wide management (for example keeping SuDS drainage system clear of self-sown shrubs and trees.) However please note the focus of this report is the ongoing care of the proposed planting area (Drawing by Sally Bower Landscape Design reference number D199_001) so may not cover all existing commitments which should be continued.

All maintenance to be in accordance with BS 7370:1993. Grounds Maintenance. Refer to drawing D199_001 for location of different planting areas and Ecological Impact Assessment by Enzygo Ltd. (report ref CRM.958.001.EC.R.001). Long term management should follow existing principles for the business park.

Defects liability period: 5 years

For a period of at least 5 years - any plants/trees/ shrubs that has failed to thrive / become seriously damaged or disease replace to match size of adjacent or nearby plants of same species or match original specification, whichever is the greater. Timing of making good: unless otherwise instructed they must be replaced in the next appropriate planting season.

Protected species

Birds - All work to trees and shrubs should be outside the bird nesting season 1st March to 31 August. Where this is not possible an inspection should be made of all trees / scrub, prior to management, by a suitably qualified person to establish whether nesting birds are present. Refer to Ecological Impact Survey for details of other protected species. Prior to work on trees all personnel working with or in the trees should be vigilant and mindful of the possible presence of roosting bats, nesting birds and other protected species. The biodiversity could be strengthen through the introduction of bat roosting and bird nesting boxes, insect shelters, log piles which could be reviewed annually within the ongoing maintenance

Frequency of maintenance tasks and monitoring / reviews required

For details of when ongoing tasks should be completed refer to schedules at end of report.

Working on Contaminated land - Health and Safety Risks:

Refer to PHASE II GEOENVIRONMENTAL REPORT by CC GEOTECHNICAL LIMITED (report reference CCG-C-25-15523).

'Contractors are advised that disturbance of the ground may uncover unanticipated features which may give rise to considerations of contamination as far as the exposed conditions may have the potential to impact on receptors including inter alia humans, animals, controlled waters, and/or the fabric of buildings. Any such encounters will require the contractor to halt work, isolate the risk area, and summon CCG to site to determine the nature of the exposure and to determine an appropriate course of action. Any such incidents will be fully documented in a detailed site Remediation Report.'

'It is recommended that all new areas of soft landscaping receive as a minimum 300mm of clean imported topsoil to assist plant establishment. It is further recommended that all imported topsoil be placed under a strict validation regime comprising 1nr analyses per 50m³, with a minimum of 4nr analyses per material source.'

Existing trees and scrub

- Location: Existing trees and scrub are beyond site boundary fence, there are also two trees within drainage basin which are to be removed as part of the works.
- Aim - Minimum work to be carried out to ensure safety of trees and that they do not pose safety issues. To be kept healthy, free from disease, damaged or broken stems/branches, dead wood etc.
- Inspect existing every three years by an Arboricultural Consultant to ensure the safety and condition of the trees. Change inspection frequency if recommended by Arboricultural Consultant.
- ~~Willow within the SuDS attenuation basin can be coppiced to manage size if deemed necessary.~~ Existing willow in SuDS attenuation basin to be removed as part of landscape works.
- Carry out tree work to BS 3998 and Health & Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'.
- Dead, dying or diseased branches to be removed where a specific risk is identified.
- Treat for pest or disease infestations, as required.

Proposed trees

- Location Trees are proposed in level area within safety barrier.
- Aim - Develop a canopy form with central leader, which is healthy and typical of the species and remains free from pests and diseases.
- Weed control – Keep the base of each tree free of weed growth by hand weeding.
- Top up mulch - Maintain, after settlement, a minimum depth of 75mm mulch;
- Irrigation - The newly planted trees to be irrigated once the leaf canopy has fully opened for at least first 5 years and be responsive to climatic conditions. Watering should be reduced in year 2 to 4 and only in very extreme dry conditions in year 5. Watering to be undertaken by a person with horticultural knowledge.
- Pruning – Carefully remove dead or dying wood and carry out ongoing shaping of canopies to ensure canopy form (with central leader or as a multi stemmed specimen). Dead/damaged wood shall be removed immediately and canopies shall be well presented at all times.
- Inspection of accessories – Inspect stakes, ties and watering tube caps on a quarterly basis. Remove stakes and ties in year 3-5 providing tree is judged stable.
- Replacement planting - Replace all tree failures within the first 5 years to original specification.

Existing modified grassland – mown

- Location grass area between the path and safety barrier
- Aim – to maintain a healthy sward of mown grass and lawn wildflowers. Carry out 'refurbishment works' such as cultivating, reseeding and de-compaction if deemed necessary at appropriate times.
- First cut (in the season): When grass sward reaches 100mm high. Cut back to 50mm high. Remove arisings after cutting and compost on site.
- Subsequent cuts: to be to 50-100mm high. Trim all edges. Remove arisings after cutting and compost on site. Frequency - To be mown as required (every fortnight), subject to weather conditions, to maintain a closely knit, continuous ground cover, height and colour.
- 'Refurbishment works' such as cultivating, reseeding to occur in March / April, and de-compaction to occur in late September / October.
- Watering: Existing mown grass should not be irrigated, can review in periods of extreme drought although note that grass will naturally regenerate once it has rained again.
- Stones brought to the surface: remove regularly for stones exceeding size 25mm.
- Pesticides and fertiliser application: Do not use.

Existing neutral rough grassland including swale and drainage basin

- Location area of neutral grassland within safety barrier
- Aim – to maintain a healthy sward of long grass and wildflowers in area.
- At least one annual cut - Cut one or two times at the end of the season to maintain diversity, support biodiversity and provide interest. Meadow grassland is not cut from spring through to late July/August to give the sown species an opportunity to flower and set seed. After flowering and setting seed in July or August make a 'hay cut': cut back with a scythe, petrol trimmer to c150mm. Annual cut can be delayed, for the benefit of biodiversity, to autumn / winter if recommended by ecologist. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site to compost. Mow the re-growth through to late autumn/winter to c 50mm and again in spring if required.
- Weed control - Inspect yearly and remove any subsequent self-sown seedlings shrubs, such as willow.
- Other management – irrigation should not be carried out, likewise do not apply pesticides nor fertiliser.
- SuDS – inspect monthly to assess bank stability, water quality, signs of rubbish and debris, and drainage including conditions of the inlet and outlet structures.

Maintenance schedules including Inspections, Surveys and Cleansing

Activity	Frequency per Annum	Years	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
Inspections / Health and Safety														
Undertake a formal inspection to review hazards identified by original assessment. Monitor for invasive non-native species.	12	All years	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Instruct a trained arboriculturist to undertake a tree hazard and condition survey of mature trees.	0.3	Every 3 years	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cleansing														
Cleanse the open space fortnightly.	26	All years	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Remove fly-tipping and graffiti as soon as possible.	As required	All years	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tree Maintenance														
Top up mulch to maintain a depth of 75mm around the base of all trees.	1	All years									✓	✓		
Re-firm newly planted trees as required.	1	1 to 5	✓	✓							✓	✓	✓	✓
Check stakes and ties and underground guys quarterly, adjust twice annually or as necessary.	4	1 to 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Replace any damaged or missing stakes and ties.	1	1 to 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Remove stakes and ties.	1	Year 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Formative prune to maintain health and vigour.	1	1 to 3	✓	✓							✓	✓	✓	✓
Crown prune to remove any deadwood and maintain health and vigour. Remove any epicormic growth.	1	3 to 10	✓	✓							✓	✓	✓	✓
Replace failed or damaged deciduous species.	1	1 to 5	✓	✓	✓								✓	✓
Replace failed or damaged coniferous or evergreen species.	1	1 to 5	✓	✓	✓	✓					✓	✓	✓	✓
Water new planting.	As required	1 to 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Assessment of condition and structure of new tree planting.	1	All years	□	□	□	□	□	□	□	□	□	□	□	□
Inspect the tree pits to assess effectiveness of drainage.	1	All years											✓	
Existing Grass														
Cut (50mm) fortnightly during the growing season and remove arisings from the Site where grass growth has exceeded 50mm.	16	All years				✓	✓	✓	✓	✓	✓	✓		
Cultivate and re-seed as required.	As required	1 to 5								✓	✓	✓		
Weed control.	1	All years				✓	✓	✓	✓	✓	✓			
Existing Neutral Rough Grassland														
Cut (50mm) once / twice a year, remove arising immediately and after 4 days respectively.	1 / 2	All years				✓						✓		
Cultivate and re-seed as required.	As required	1 to 5								✓	✓	✓		
Weed control.	1	All years				✓	✓	✓	✓	✓	✓			
Inspect wildflower planting and carry out plug planting as required.	2	Year 4+					✓							
Sustainable Urban Drainage System														
Inspect the SUDS monthly to assess bank stability, water quality, signs of rubbish and debris, and drainage including conditions of the inlet and outlet structures.	12	All years	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Remove litter and debris as part of the monthly inspections.	12	All years	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1x yearly strim (150mm) to 1/3 of the banks and marginal planting with arisings used sustainably elsewhere on site. Strim sections on annual rotation. Remove all self-sown shrub and tree seedlings.	1	All years										✓		
Cultivate and re-seed as required.	As required	1 to 5								✓	✓	✓		
Weed control.	1	All years				✓	✓	✓	✓	✓	✓			
De-silt basins.	As required	As required	✓										✓	✓
Monitoring and Review														
Formal site inspections by managing organisation	4	All years			✓			✓			✓			✓
Formal review of management plan and maintenance operations.	0.2	Every 5 years											✓	

Key

Works to be carried out in these months



Works not to be carried out in these months