

Appendix B - Recommended Management and Monitoring Programme

Recommended Management and Monitoring Programme

Habitat/Feature	Objective	Proposed Management	Proposed Monitoring	Performance Indicators		Remedial Actions
				Poor	Good	
Shrub and Ornamental Planting	Ensure satisfactory establishment and growth of new planting	Plant species listed in Section 3.1.4., adhering to planting guidance within the same section	Monitor successful establishment of individual plants	Poor growth of individual plants	Healthy plants with good habitat structure	Replace any plants that die within the first five years with the same species. Ecologist to undertake condition assessment at regular intervals (years 1, 2, 5 and 10) to ensure the continued effectiveness of management activities and updates the management plan to reflect any changes
		A waterpoint should be installed to meet the local Water Authority requirements, with 25 mm coupling set 300 mm above ground level within a lockable galvanised metal box on a concrete foundation, separated from the water supply by break valves. All new plants should be watered to field capacity immediately after planting. Watering to field capacity should continue on a regular basis as considered necessary. Additional watering should be undertaken in the summer months and/or periods of drought	Monitor health of individual plants	Wilting plants with poor growth	Healthy plants with expected growth rate	Review frequency of watering
	Maintain planting in a healthy and attractive condition, to	Complete hand weeding or spot treatment using an appropriate herbicide as necessary	Monitor growth of competitive weeds around individual plants	Excessive weed growth competing for resources	Lack of weed growth around new plants	Review intensity of weed treatment and increase/decrease as appropriate

	retain their contribution to the landscape structure, biodiversity, food source to wildlife, and amenity value	General pruning completed as necessary to remove damaged vegetation. Limited to maintain the natural shape of the plant. Selective thinning of vegetation will be completed to allow best establishment and to maintain species distribution	Monitor health and distribution of individual plants	Poor growth and structure	Desired structure and distribution	Review frequency and method of cutting. Re-plant any gaps that establish due to poor specimens
		Remove litter and debris from shrub beds	Monitor presence and extent of litter	Excessive litter impacting on health and amenity of planting	Litter free, healthy and attractive planting	Review frequency of litter management and remedial matters such as provision of bins
Tree Planting	Ensure satisfactory establishment and growth of new planting	Plant species listed in Section 3.2.4., adhering to planting guidance within the same section	Trees to be inspected annually by a qualified arboriculturist for the successful establishment and health of individual plants	Poor growth of individual trees	Healthy growth of individual trees	Replace any trees which die, are removed, seriously damaged or diseased within the first five years with the same species. Carry out any required remedial work to meet the objectives set out in accordance with BS3998:2010
		All new plants should be watered to field capacity immediately after planting. Watering to field capacity should continue on a regular basis as considered necessary. Additional watering should be undertaken in the summer months and/or periods of drought	Monitor health of individual plants	Wilting plants with poor growth	Healthy plants with expected growth rate	Review frequency of watering
	Maintain new planting in a healthy and attractive condition, to retain their contribution to	Remove dead wood and suckers as required to ensure development of a main leader	Monitor presence of dead wood and suckers, and associated health and establishment of plant	Poorly developed plant	Well established plants	Review frequency of monitoring and management practices

	the landscape structure, biodiversity, food source to wildlife, and amenity value	Check tree ties/stakes	Monitor efficiency of ties during each maintenance visit	Poorly supported or damaged trees	Well established trees	Stakes/ties adjusted or replaced as necessary to prevent damage to the tree. After the second-year stakes and ties are to be removed if trees are self-supporting
		Undertake formative pruning as outlined in BS8545, avoiding the main nesting bird season	Monitor health of individual trees	Wilting plants with poor growth	Healthy plants with expected growth rate	Review frequency of pruning
		Complete hand weeding or spot treatment using an appropriate herbicide as necessary	Monitor growth of competitive weeds around individual plants	Excessive weed growth competing for resources	Lack of weed growth around new plants	Review intensity of weed treatment and increase/decrease as appropriate
		Remove litter from areas of tree planting	Monitor presence and extent of litter	Excessive litter impacting on health and amenity of planting	Litter free, healthy and attractive planting	Review frequency of litter management and remedial matters such as provision of bins
Amenity Grassland Planting	Ensure satisfactory establishment of the grass sward	Plant species listed in Section 3.3.4., adhering to planting guidance within the same section	Monitor successful establishment of sward	Patchy areas where growth is poor	Grassland which is uniform in height	Re-seed/re-turf any areas which fail within the first five years. Ecologist to undertake condition assessment at regular intervals (years 1, 2, 5 and 10) to ensure the continued effectiveness of management activities and updates the management plan to reflect any changes
		Water grassland to field capacity immediately after planting. Watering to field capacity should continue on a regular basis as considered necessary. Additional watering should be undertaken in the summer months and/or periods of drought	Monitor health of grass sward	Wilting sward with poor growth	Healthy sward with expected growth rate	Review frequency of watering

	Maintain healthy and biodiverse sward, cut appropriate to its function and use	Once the grassland reaches a height of 75 mm, cut using a cylindrical mower to a height of 50 mm, and spread arisings evenly over area. Following this, maintain the grassland at a height of 35 mm, disposing of all arisings off-Site.	Monitor the growth rate of the grassland	Plants which are too long, too short or are not growing at all	Plants which are a desired height throughout the year	Review cutting regime and increase/decrease as appropriate
		Apply a pre-emergent herbicide immediately after seeding/turfing then keep grassland clear of weeds by hand pulling or spot treatment using an appropriate herbicide	Monitor growth of competitive weeds	Excessive weed growth competing for resources	Lack of weed growth	Review intensity of weed treatment. Increase/decrease as appropriate
		Remove litter from grassland	Monitor presence and extent of litter	Excessive litter impacting on health and amenity of planting	Litter free, healthy and attractive planting	Review frequency of litter management and remedial matters such as provision of bins
Neutral Grassland Planting	Enhance ecological value of the Site	Plant species listed in Section 4.5.4 and 4.6.4, adhering to planting guidance within the same section	Monitor successful establishment of individual plants	Poor growth of individual plants	Healthy plants with expected growth rate	Re-seed/re-plant any areas which fail. Ecologist to undertake condition assessment every five years and update management plan as required
		All noxious weeds to be spot sprayed until meadow grassland is fully established	Monitor growth of competitive weeds	Excessive weed growth competing for resources	Lack of weed growth	Review intensity of weed treatment. Increase/decrease as appropriate
	Maintain healthy and biodiverse swards, cut appropriate to their function and use	Grassland will be cut between mid-July to September, with all arisings removed and disposed of off Site If required, light mowing to a height of 70-100 mm is to be undertaken as required through the winter months until March	Monitor health and distribution of grassland sward and individual species	Poor sward structure, species distribution and diversity	Healthy sward and good species distribution and diversity	Review cutting regime and increase/decrease as appropriate

		Areas should be watered as required during sustained periods of dry weather, to ensure full wetted depth of topsoil	Monitor health of individual plants	Wilting plants with poor growth	Healthy plants with expected growth rate	Review frequency of watering
		Remove litter from grassland	Monitor presence and extent of litter	Excessive litter impacting on health and amenity of planting	Litter free, healthy and attractive planting	Review frequency of litter management and remedial matters such as provision of bins
SuDS Planting	Ensure the feature is maintained litter, undesirable weed, and debris free	Rubbish, debris and surface leaf litter is to be removed	Monitor litter and debris accumulation	Extensive litter affecting the functionality and biodiversity of the SuDS	No/limited litter	Review frequency of litter management and remedial measures e.g. provision of bins
	Control balance of species distribution to maintain biodiversity value and ensure vegetation does not impede the functionality of the features	Plant species listed in Section 3.5.4.	Monitor successful establishment of individual plants	Poor establishment of plants and species distribution	Healthy plants and good species distribution	Poor establishment of vegetation will be re-planted in the next available season. Plant types are to be reviewed and altered, where necessary, to better suit the conditions
		Selective thinning of wetland vegetation	Monitor structure of health of plants and association with SuDS functionality	Plants with poor structure and impeding the functionality of the SuDS feature	Healthy plant structure, functional and biodiverse SuDS	Review management technique and frequency
Bird and Bat Boxes	Create additional habitat for birds and bats	Install bird and bat boxes described in Section 4.0	Annual monitoring of boxes for damage (licensed bat surveyor to check bat boxes)	Damaged boxes not utilised by wildlife	Intact boxes used by intended species	Repair/modify where required. Relocate to different area in year six if showing no signs of use

Appendix C – Recommended 10 Year Management Programme

Recommended 10 Year Management Programme

General	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10
Litter picking	All litter cleared during each maintenance visit, and in response to any reported litter/fly-tipping. All litter disposed of appropriately					

Shrub Planting	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10
Shrub Planting	Inspect annually and replace dead plants in the next available planting season					
	Ecologist to undertake condition assessment at regular intervals (years 1, 2, 5 and 10) to ensure the continued effectiveness of management activities and updates the management plan to reflect any changes					
	Hand weed or spot treat using an appropriate herbicide as necessary					
	Carry out general pruning to remove dead or damaged vegetation, but limit to the minimum necessary to retain the natural shape of the plant. Selectively thin vegetation to allow best establishment and species distribution					
	Water to field capacity immediately after planting. Following this, water to field capacity on a regular basis as considered necessary. Undertake additional watering in the summer months and/or periods of drought					

Tree Planting	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10
Tree Planting	Water to field capacity immediately after planting. Following this, water to field capacity on a regular basis as considered necessary. Undertake additional watering in the summer months and/or periods of drought					
	Hand weed or spot treat using an appropriate herbicide as necessary					
	Undertake ongoing formative pruning as outlined in BS8545. Any trimming works should avoid the main bird nesting season (March – August inclusive) as far as possible, alternatively, non-mechanical hand tools should be used					
	Annual inspection by a qualified arboriculturist for disease, damage and potential problems – remedial work to be carried out as required in accordance with BS3998:2010					

	Check stakes and ties during each maintenance visit and adjust or replace as necessary	Remove stakes and ties if trees are self-supporting
	Remove dead wood and suckers where necessary	

Amenity Grassland Planting	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10
Amenity Grassland Planting	Cut grassland to a height of 50 mm once it reaches a height of 75 mm, spreading all arisings over the cut area	Maintain grassland at a height of 35 mm, disposing of all arisings off-Site				
	Apply a pre-emergent herbicide immediately after planting. Following this, hand weed or spot treat using an appropriate herbicide as necessary					
	Water to field capacity immediately after planting. Following this, water to field capacity on a regular basis as considered necessary. Undertake additional watering in the summer months and/or periods of drought					
	Undertake monitoring as part of general Site maintenance. If germination of grassland species is poor, this should be reviewed and re-seeded/re-turfed in the next available planting season					
	Ecologist to undertake condition assessment at regular intervals (years 1, 2, 5 and 10) to ensure the continued effectiveness of management activities and updates the management plan to reflect any changes					

Neutral Grassland Planting	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10
Neutral Grassland Planting	In the first year of establishment, mow newly sown meadows regularly to a height of 40-60mm. Ensure cuttings are removed.	Carry out a main summer cut to 50mm after flowering in July or August. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow the re-growth through to late autumn/winter to 50mm and again in spring if needed.				

	Undertake light mowing, if required, to a height of 70-100 mm through the winter months until March	
	Spot spray all noxious weeds until grassland is fully established	
	Water areas as required during sustained periods of dry weather	
	All planting areas to be maintained weed free and watered at appropriate and/or necessary periods during establishment of plants. If within a period of five years from the date of the planting of the grassland, or any replacement, is destroyed or dies, or becomes, in the opinion of the Local Planning Authority, seriously damaged or defective, the grassland will be reseeded in the same location as soon as reasonably possible and no later than the first available planting season, unless otherwise agreed in writing by the Local Planning Authority.	Ecologist to undertake condition assessment of shrub every five years and review management plan as required

SUDs	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10
SuDS	Remove litter, leaf fall, undesirable weeds, and debris monthly. Dispose off-Site					
	Selectively thin vegetation as required to establish and maintain plant distribution and diversity. Vegetation to be cut in autumn with arising left on the bank					
	Cut wetland vegetation as described above					
	Re-plant areas of poor vegetation growth in next available season. Amend plant type to better suit conditions if required					

Bird and Bat Boxes	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10
Bird and Bat Boxes	Check annually between November and February, inclusive, and undertake any repairs or modifications. Licensed bat surveyor to check bat boxes.					
						Relocate to a different area of the Site in year six if they are showing no signs of use