LILAC Housing: Site Management Plan

Prepared by: Joe Atkinson. Date: 30/10/2011 Version 1.0

Relevant Legislation & Policy

Conservation Regulations 1994, 2007, 2009, 2010

Wildlife & Countryside Act 1981; Countryside and Rights of Way act 2000; Natural Environment and Rural Communities Act 2006

Planning Policy Statement 9 – Biodiversity & Geological Conservation / ODPM 06/2005

UK Biodiversity Action Plan 1995

Relevant Planning Condition

"No development shall take place until a plan, schedule and specification for landscape management has been submitted to, and approved in writing, by the Local Planning Authority.

This shall include reference to planting and hard landscaped areas, including paving, fencing and other features.

The schedule shall identify the frequency of operations for each type of landscape asset and reflect the enhanced maintenance requirement of planted areas during the establishment period. It shall provide for an annual inspection during late summer for any areas of failed tree or shrub planting, and the identification of the replacements required in the autumn planting season."

Related Documents		
Produced By	Document/Drawing #	Title
White Design	6188 D 7301	Planting Plan
White Design	6188 D 7201	Landscape Boundaries
White Design	6188 D 7202	Hard Landscape Plan
White Design	6188 D 7405	Pond Setting Out Detail
Andrew McCarthy Associates	A24.03440.00001	CSH Ecological Assessment, Victoria Park Avenue, Leeds
Leeds City Council	11/00811/FU	Delegation Report: Report of the Chief Planning Officer

NOTES:

Habitat Feature/Landscape Asset classes referred to in this document are defined in drawing 6188 D 7301 "Planting Plan".

All planting operations shall be carried out in accordance with drawing 6188 D 7301, Notes 2.1 & 2.2.

This schedule covers the first 5 years of the project including establishment & maintenance. Operations detailed in year 5 (2016) can be assumed to be the ongoing maintenance plan and shall be continued indefinitely.

	Pond / Wetland / Bog Garden										
Habitat	Legislation/	License	Notes on			Work Programme	9				
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years			
Pond/Wetland, Bog Garden planting mix & Wetland Grass mix	Ponds are UK and local Biodiversity Action Plan priority areas	No invasive alien species to be planted in pond. Plants used should be native species. Some amphibians and reptiles are protected species. Care is required when working in the pond. At least 17 aquatic, emergent & marginal species to be introduced to meet CSH ecological assessment key recommendation 1	Ponds are best cleaned out in the late autumn. Although there is active pond life at all times of the year, this is the least damaging period to maintain pond vegetation. Recommended maintenance period is October-November	Creation of pond in accordance with White Design Specifications. Install rockery for amphibian hibernacula & insect house close to pond to meet Additional CSH recommendation Remove dead wood & litter in early autumn using rakes. Monitor growth of submergent vegetation. Carry out clearance operations if required Monitor pond, bog & wetland for invasive species and remove if found	Remove dead wood & litter in early autumn using rakes. Maintain emergent vegetation to pond edges, maintain open water. Cut back any overhanging trees and bushes in autumn to increase light reaching the water Monitor pond, bog & wetland for invasive species and remove if found	Remove dead wood & litter in early autumn using rakes. Maintain emergent vegetation to pond edges, maintain open water. Cut back any overhanging trees and bushes in autumn to increase light reaching the water Monitor pond, bog & wetland for invasive species and remove if found	Remove dead wood & litter in early autumn using rakes. Maintain emergent vegetation to pond edges, maintain open water. Cut back any overhanging trees and bushes in autumn to increase light reaching the water Monitor pond, bog & wetland for invasive species and remove if found	Remove dead wood & litter in early autumn using rakes. Maintain emergent vegetation to pond edges, maintain open water. Cut back any overhanging trees and bushes in autumn to increase light reaching the water Monitor pond, bog & wetland for invasive species and remove if found			

Habitat	Legislation/	License	Notes on			Work Programme)	
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years
Asset Pond dipping platform	-	constraints	operations Safety check to be carried out in spring & recorded	Creation of pond dipping platform and access in accordance with White Design specifications		Check platform for safety, assess condition and recommend action if necessary	Check platform for safety, assess condition and recommend action if necessary	

			7	Trees & Hedge	s			
Habitat	Legislation/	License	Notes on			Work Programme	•	
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years
Native Structure Mix (Hedgerow)	Wildlife & Countryside Act, 1981.	It is an offence to intentionally destroy the nest of any wild bird while it is in use or being built, for example by knowingly trimming a hedge containing a nest.	Hedge inspection to take place in late summer, prior to ordering replacements for winter delivery & planting. Hedge trimming to take place outside of main bird breeding season (March – August). Fruitbearing species (e.g. Crataegus monogyna) to be trimmed in late winter, after birds have taken berries. Application of mulch & fertilizer in spring. Manual weeding throughout the main growing season on a monthly basis or as necessary.	Plant hedging plants in accordance with White Design specifications. See drawing 6188 D 7301 Note 2.6 for details Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants. Trimming: remove > 50% of top growth to encourage side shoots & a bushy habit. Perform additional watering during hot & dry weather	Inspect hedges & order replacements for failures. Plant replacements. Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants. Trimming: remove > 50% of new top growth to encourage side shoots & a bushy habit. Perform additional watering during hot & dry weather	Inspect hedges & order replacements for failures. Plant replacements. Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants. Trimming: remove > 50% of new top growth to encourage side shoots & a bushy habit. Select any strong shoots as potential standards (to increase wildlife value of hedge) and allow leaders to develop.	Inspect hedges & order replacements for failures. Plant replacements. Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants. Trimming: remove > 50% of new growth to encourage side shoots & a bushy habit. Trim laterals from standards' leaders and allow to grow to desired height	Inspect hedges & order replacements for failures. Plant replacements. Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants if required. Trimming: leave 50% of new growth to enable flowering & fruiting on previous year's wood. Remove apical meristem from lead shoots of any standards' leaders that have reached desired height, to encourage crown formation.

Habitat	Legislation/	License	Notes on			Work Programme	•	
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years
Semi- Evergreeen Hedging	As above	As above	Hedge inspection to take place in late summer, to allow time to order bare-root replacements in time for winter delivery & planting. Hedge trimming to take place outside of main bird breeding season (March – August). Application of fertilizer & mulch to be performed in spring. Manual weeding throughout the main growing season on a monthly basis or as necessary.	Plant hedging plants in accordance with White Design specifications. See drawing 6188 D 7301 Note 2.6 for details Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants. Trimming: remove > 50% of top growth to encourage side shoots & a bushy habit. Perform additional watering during hot & dry weather	Inspect hedges & order replacements for failures. Plant replacements. Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants. Trimming: remove > 50% of new top growth to encourage side shoots & a bushy habit. Perform additional watering during hot & dry weather	Inspect hedges & order replacements for failures. Plant replacements. Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants. Trimming: remove > 50% of new top growth to encourage side shoots & a bushy habit. Perform additional watering during hot & dry weather.	Inspect hedges & order replacements for failures. Plant replacements. Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants. Trimming: remove > 50% of new top growth to encourage side shoots & a bushy habit. Perform additional watering during hot & dry weather if plants exhibit symptoms of water stress.	Inspect hedges & order replacements for failures. Plant replacements. Water, apply a general-purpose organic fertilizer & mulch. Manually weed between plants if required. Trimming: leave 50% of new growth to enable flowering & fruiting on previous year's wood. Perform additional watering during hot & dry weather if plants exhibit symptoms of water stress.

Habitat	Legislation/	License	Notes on			Work Programme	•	
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years
Typical Tree Selection	Wildlife & Countryside Act, 1981.	It is an offence to intentionally destroy the nest of any wild bird while it is in use or being built, for example by knowingly removing tree branches containing a bird's nest.	Tree inspection to take place in late summer, to allow time to order bare-root replacements for winter planting. Pruning should be preformed in winter when deciduous species are dormant & evergreens are less active. Application of mulch & compost in spring. Manual weeding throughout the main growing season on a monthly basis or as necessary.	Plant trees in accordance with White Design specifications. See drawing 6188 D 7301, Note 2.3 for details. Perform additional watering during hot & dry weather	Inspect trees & order replacements for failures. Plant replacements. Perform formative & maintenance pruning as required. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather	Inspect trees & order replacements for failures. Plant replacements. Perform formative & maintenance pruning as required. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather	Inspect trees & order replacements for failures. Plant replacements. Perform formative & maintenance pruning as required. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather	Inspect trees & order replacements for failures. Plant replacements. Perform formative & maintenance pruning as required. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather
Living Willow Fence				Install temporary post & wire fence. Plant Willow rods along fence line at 0.2m intervals	Weave willow to form a fence; remove 50% of top growth to promote bushy habit	Weave willow into fence; remove 50% of top growth to promote bushy habit	Weave willow into fence; remove 50% of top growth to promote bushy habit	Weave willow into fence; remove top growth as required

		Herbaceous	Perennial & H	erb Garden; O	rnamental & E	dible Shrubs		
Habitat	Legislation/	License	Notes on			Work Programme	9	
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years
Herbaceous Perennials		New plants should be native or otherwise beneficial (i.e. nectar-rich or fruiting) species.	Apply a general-purpose organic fertilizer in spring. Seed heads should be left in situ to provide habitat for insects and food & nest materials for birds. Dead growth should be removed & composted spring. Manual weeding throughout the main growing season on a monthly basis or as necessary.	Remove weeds, incorporate organic compost into soil & plant perennials. Spot mulch. Perform additional watering during hot & dry weather	Remove dead growth. Apply fertilizer & spot mulch. Manually weed herbaceous perennial beds as & when required Perform additional watering during hot & dry weather	Remove dead growth. Apply fertilizer & spot mulch. Manually weed herbaceous perennial beds as & when required Perform additional watering during hot & dry weather	Remove dead growth. Apply fertilizer & spot mulch. Manually weed herbaceous perennial beds as & when required Perform additional watering during hot & dry weather if plants exhibit symptoms of water stress. Lift & divide crowns of congested plants in autumn.	Remove dead growth. Apply fertilizer & spot mulch. Manually weed herbaceous perennial beds as & when required Perform additional watering during hot & dry weather if plants exhibit symptoms of water stress. Lift & divide crowns of congested plants in autumn.

Landscape Asset Other constraints Prune shrubby perennials in spring. Ensure soil is weed-free; incorporate low-fertility organic matter (e.g. leaf from shrubby herbs after Prune shrubby perennials in spring. Remove flowering stems from shrubby herbs after	Habitat	Legislation/	License	Notes on			Work Programme	e	
perennials in spring. weed-free; incorporate low-fertility organic Remove flowering stems from shrubby herbs after perennials in weed-free; incorporate low-fertility organic matter (e.g. leaf mould) into the soil. perennials in spring. perennials in spring. perennials in spring. perennials in spring. Remove flowering stems flowering stems from shrubby herbs after perennials in spring. Remove flowering stems flowering stems from shrubby herbs after herbs after perennials in spring.	_	policy			2012	2013	2014	2015	2016 & subsequent years
summer. Manual weeding throughout the main growing season on a monthly basis or as necessary. Summer. Summer. Summer. Summer. Summer. Summer. Summer. Summer. Manually weed regularly regu			-	Prune shrubby perennials in spring. Remove flowering stems from shrubby herbs after flowering in late summer. Manual weeding throughout the main growing season on a monthly basis or as necessary. Sow annual herbs' seeds in	weed-free; incorporate low-fertility organic matter (e.g. leaf mould) into the soil. Plant herbs in accordance with White Design specification. Restrict roots of potentially invasive herbs (e.g. Mentha spp.). Remove flowering stems from shrubby herbs after flowering in late	perennials in spring. Remove flowering stems from shrubby herbs after flowering in late summer. Manually weed regularly Perform additional watering during hot & dry weather Replace any failures as and when they occur; sow	perennials in spring. Remove flowering stems from shrubby herbs after flowering in late summer. Manually weed regularly Perform additional watering during hot & dry	perennials in spring. Remove flowering stems from shrubby herbs after flowering in late summer. Manually weed regularly Perform additional watering during hot & dry	Prune shrubby perennials in spring. Remove flowering stems from shrubby herbs after flowering in late summer. Manually weed regularly Perform additional watering during hot & dry

Habitat	Legislation/	License	Notes on			Work Programme)	
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years
Ornamental Shrubs	Wildlife & Countryside Act, 1981.	It is an offence to intentionally destroy the nest of any wild bird while it is in use or being built, for example by knowingly pruning a shrub containing a bird's nest.	Shrub inspection to take place in late summer, prior to ordering replacements for winter planting. Pruning should be preformed in winter when deciduous species are dormant & evergreens are less active. Fruit-bearing species (e.g. Berberis Darwinii) to be trimmed in late winter, after birds have taken berries. Application of mulch & compost to be performed in spring. Manual weeding throughout the main growing season on a monthly basis or as necessary.	Plant trees in accordance with White Design specifications. See drawing 6188 D 7301, Note 2.4 for details. Perform additional watering during hot & dry weather	Inspect shrubs & order replacements for failures. Plant replacements. Perform formative & maintenance pruning as appropriate to species. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather	Inspect shrubs & order replacements for failures. Plant replacements. Perform formative & maintenance pruning as appropriate to species. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather	Inspect shrubs & order replacements for failures. Plant replacements. Perform formative & maintenance pruning as appropriate to species. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather if trees exhibit symptoms of water stress.	order

Habitat	Legislation/	License	Notes on			Work Programme)	
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years
Edible Plants	Wildlife & Countryside Act, 1981.	It is an offence to intentionally destroy the nest of any wild bird while it is in use or being built, for example by knowingly removing a tree branch containing a bird's nest.	Trees & shrub inspection to take place in late summer, prior to ordering replacements for winter delivery & planting. Pruning should be preformed in winter when deciduous species are dormant. Application of mulch & compost to be performed in spring. Manual weeding throughout the main growing season on a monthly basis or as necessary.	Plant trees & bushes in accordance with White Design specifications. See drawing 6188 D 7301, Note 2.3 for details. Perform additional watering during hot & dry weather	Inspect trees & bushes; order replacements for failures. Plant replacements. Perform formative & maintenance pruning as required. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather	Inspect trees &bushes order replacements for failures. Plant replacements. Perform formative & maintenance pruning as required. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather	Inspect trees & bushes; order replacements for failures. Plant replacements. Perform formative & maintenance pruning as required. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather.	Inspect trees & bushes; order replacements for failures. Plant replacements. Perform formative & maintenance pruning as required. Water, apply a general purpose organic fertilizer and spot mulch. Manually Weed around base if necessary. Perform additional watering during hot & dry weather.

	Grassed Areas & Lawns										
Habitat	Legislation/	License	Notes on			Work Programme	•				
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years			
Turf – Hardwearing Variety			Scarify to remove moss & thatch, trim edges, feed with organic lawn fertilizer (high in Nitrogen) and mow with blades set high in spring. Continue mowing in summer. Feed if necessary. Remove leaves, aerate compacted areas and top-dress if necessary in Autumn. Continue removing leaves in Winter.	Turfing to be carried out in accordance with White Design specification. See drawing 6188 D 7301 Note 2.7 Perform additional watering during hot & dry weather	Scarify to remove moss & thatch, trim edges, feed with organic lawn fertilizer (high in Nitrogen) and mow with blades set high in spring. Continue mowing in summer. Feed if necessary. Remove leaves, aerate compacted areas and top-dress if necessary in Autumn. Continue removing leaves in Winter.	Scarify to remove moss & thatch, trim edges, feed with organic lawn fertilizer (high in Nitrogen) and mow with blades set high in spring. Continue mowing in summer. Feed if necessary. Remove leaves, aerate compacted areas and top-dress if necessary in Autumn. Continue removing leaves in Winter.	Scarify to remove moss & thatch, trim edges, feed with organic lawn fertilizer (high in Nitrogen) and mow with blades set high in spring. Continue mowing in summer. Feed if necessary. Remove leaves, aerate compacted areas and top-dress if necessary in Autumn. Continue removing leaves in Winter.	Scarify to remove moss & thatch, trim edges, feed with organic lawn fertilizer (high in Nitrogen) and mow with blades set high in spring. Continue mowing in summer. Feed if necessary. Remove leaves, aerate compacted areas and top-dress if necessary in Autumn. Continue removing leaves in Winter.			

Habitat	Legislation/	License	Notes on			Work Programme)	
Feature/ Landscape Asset	policy	requirements/ other constraints	management/ timing of operations	2012	2013	2014	2015	2016 & subsequent years
Hard Wearing Grass Mix		-	As above	Seeding to be carried out in accordance with White Design specification. See drawing 6188 D 7301 Note 2.8 Perform additional watering during hot & dry weather	As above	As above	As above	As above
Wildflower Meadow Grass Mix	-	-	Site must be weed-free prior to sowing. Rake soil to a fine tilth. Do NOT add fertility. Sow seed mix in (ideally) spring or autumn. Mow repeatedly in spring with blades set high (10cm if possible) and again in autumn required.	Seeding to be carried out in accordance with White Design specification. See drawing 6188 D 7301 Note 2.8	Remove any invasive species and self-seeded seedlings. Mow as described	Remove any invasive species and self-seeded seedlings. Mow as described	Remove any invasive species and self-seeded seedlings. Mow as described	Remove any invasive species and self-seeded seedlings. Mow as described
Lawn Mix				Private gardens of	only – out of scope			

Native Woodland									
Habitat Feature/ Landscape Asset	Legislation/ policy	License requirements/ other constraints	Notes on management/ timing of operations	Work Programme					
				2012	2013	2014	2015	2016 & subsequent years	
Existing Native Woodland and Biodiverse understory	Wildlife & Countryside Act, 1981. Wild Mammals Protection Act 1996 Natural Environment & Rural Communities Act 2006. Conservation of Habitats & Species Regulations 2010.	In Britain all bat species and their roosts are legally protected, by both domestic and international legislation. It is an offence to: 1) Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats 2) Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time) 3) Intentionally or recklessly obstruct access to a bat roost	Tree inspection to take place in late summer so that remediation works can take place during the following winter. Any scrub clearance works shall take place outside of the bird breeding season (March-August)	Install bat boxes & log piles as per CSH Ecological Assessment report additional recommendation (P13). Inspect trees for disease, pest infestation or other problems. Take appropriate action	Inspect trees for disease, pest infestation or other problems. Take appropriate action	Inspect trees for disease, pest infestation or other problems. Take appropriate action	Inspect trees for disease, pest infestation or other problems. Take appropriate action	Inspect trees for disease, pest infestation or other problems. Take appropriate action	

Habitat Feature/ Landscape Asset	Legislation/ policy	License requirements/ other constraints	Notes on management/ timing of operations	Work Programme					
				2012	2013	2014	2015	2016 & subsequent years	
Native Woodland Edge Matrix	As above	As above, also: Implement Woodland Enhancement Planting CSH Ecological Assessment recommendation 2 by including the following species: Viburnum Opulus, Cornus Sanguinea, Ulmus procera & Fagus sylvatica	As above, also: Sow wildflower seed mix in spring. Manual weeding throughout the main growing season on a monthly basis or as necessary.	Pit plant trees & shrubs in accordance with White Design specification. See drawing 6188 D 7301 Notes 2.3 & 2.4	Inspect trees & shrubs; order replacements for failures. Plant replacements. Remove any invasive species as and when required.	Inspect trees & shrubs; order replacements for failures. Plant replacements. Remove any invasive species as and when required.	Inspect trees & shrubs; order replacements for failures. Plant replacements. Remove any invasive species as and when required.	Inspect trees & shrubs; order replacements for failures. Plant replacements. Remove any invasive species as and when required.	

Hard Landscaping									
Habitat Feature/ Landscape Asset	Legislation/ policy	License requirements/ other constraints	Notes on management/ timing of operations	Work Programme					
				2012	2013	2014	2015	2016 & subsequent years	
Paths, Steps & Hard-standing Areas	-	-	Annual inspection to be performed in spring. Manual weeding throughout the main growing season on a monthly basis or as necessary. Remove moss & any soil build-up in autumn	Installation by building contractor in accordance with White Design specification. Manually weed Remove moss & soil build-up in autumn	Perform Annual inspection. Remedial works to be carried out as necessary Manually weed Manually Remove any moss & soil build-up	Perform Annual inspection. Remedial works to be carried out as necessary Manually weed Manually Remove any moss & soil build-up	Perform Annual inspection. Remedial works to be carried out as necessary Manually weed Manually Remove any moss & soil build-up	Perform Annual inspection. Remedial works to be carried out as necessary Manually weed Manually Remove any moss & soil build-up	
Fences & Gates	-	-	Annual inspection to be performed in spring	Installation by building contractor in accordance with White Design specification.	Perform Annual inspection. Remedial works to be carried out as necessary	Perform Annual inspection. Remedial works to be carried out as necessary	Perform Annual inspection. Remedial works to be carried out as necessary	Perform Annual inspection. Remedial works to be carried out as necessary	