



Landscape Management Plan for Bicester Technical Site To discharge planning condition 21

**For:
Bicester Motion**

Date: 17 April 2020

Prepared by:
Anthony Stiff BSc MA CMLI

Checked by
Carolyn Place

Issue: P2
Issue date: 25-06-20

ASA Landscape Architects
68i Innovation Drive
Milton Park
Abingdon
Oxon OX14 4RQ
01235 832800
info@asalandscapearchitects.co.uk

This page is intentionally blank



Contents

1.0 Background 4

2.0 Site information 4

3.0 Purpose of this management plan 4

4.0 Site location and description 5

5.0 Management prescriptions – Minimum 5 years post completion 6

6.0 Constraints 9

Appendix 1 – Planting Proposals Plan ASA-561-DR-001 P7 10

Appendix 2 Indicative Landscape Maintenance Schedule 10

1.0 Background

The requirement is for a Landscape Management Plan (LMP) required to discharge the Planning Condition 21 which states:

“Prior to the first use of the development hereby approved, a schedule of landscape maintenance and a landscape management plan for a minimum period of 5 years, to include the timing of the implementation of the schedule, management responsibilities, maintenance schedules, details of the future management, and procedures for the replacement of failed planting shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, the landscape maintenance shall be carried out in accordance with the approved schedule.”

This document sets out those objectives and should provide the Local Planning Authority with the assurance that the management of the completed planting works will be carried out in accordance with good practice.

2.0 Site information

Site name:	Bicester Technical Site, Skimmingdish Lane, Bicester
Brief description:	New native trees, new native thicket planting, new native boundary hedging and internal site planting plus new species rich grassland habitat and marginal water habitat.
Area hectares:	1.6 hectares
Management plan start date:	Post completion
Management plan end date:	Post completion plus 5 years
Land tenure:	The site is owned by the applicant and will be managed by a managing agent contractor working on behalf of the client.
Access and rights of way:	There is no public access or right of way over the site
Designations:	The site is not designated for any nature conservation purposes However the Local Bicester Airfield Wildlife Site designation does apply immediately adjacent to the east of the site and wraps around the majority of the periphery of the flying field.

3.0 Purpose of this management plan

This management plan provides management prescriptions to achieve successful establishment of the landscape planting. It also includes prescriptions for monitoring to ensure that the objectives are being achieved. It is to be used by those responsible for delivering the plan and those responsible for monitoring its implementation.

The management plan includes prescriptions for the first five years after completion. It will thereafter be reviewed and if necessary updated.

4.0 Site location and description

The site is located to the north of A4421 (Skimmingdish Lane), Bicester, near to the junction with the A421 Aylesbury Road. The development will comprise 8 plots for commercial development. The site is enclosed by existing hedging and trees on its south west flanks located within the highway corridor. Access is to be obtained from Skimmingdish Lane.

The proposed development layout is presented in Drawing ASA-561-DR-001 P7 Appendix 1 reproduced at small scale below.



5.0 Management prescriptions – Minimum 5 years post completion

Refer to ASA Landscape Architect’s Drawing ASA-561-DR-001 P7 – Appendix 1.

Landscape management prescriptions

Ecological Solutions have prepared a comprehensive ecological assessment of the site (ref: 7884.EcoAss.vf July 2018). Mitigation measures, including the provision and future management of areas of grassland and tree and shrub planting, will appropriately mitigate for any losses to the habitats supported within the site, post development. The scattered trees and young woodland offers nesting and foraging opportunities for birds, and also offers limited suitable foraging and navigational resources for bats. The conclusions reached by the Ecological Solutions Ecology Report were that: *..... it is considered that the proposals offer enhancements for biodiversity over the existing situation. The proposals therefore fully accord with current legislation and policy pertinent to ecology and nature conservation.*

An indicative schedule of operations and frequencies has been prepared (Appendix 2) to describe the typical work that will be required annually in the first 5 years of establishment.

General

1a	<p><u>Plant protection</u></p> <p>Any broken or missing canes or stakes used for taller plants, or damaged shrub guards will be replaced; periodic inspections will check and address any guards that are rubbing or otherwise restricting plant development.</p> <p>Individual plant supports or protection will be removed in Year 3.</p> <p><u>BS 8545:2014 Trees: from nursery to independence in the landscape</u></p> <p>Adhere generally to guidelines in Chapter 11 Post planting management and maintenance.</p> <p><u>Firming up</u></p> <p>Any leaning or wind-loosened plants will be straightened and re-firmed, including after frost heave.</p> <p><u>Establishment watering</u></p> <p>For the first two years after planting, watering will be undertaken as necessary using irrigation pipe to ensure successful establishment; watering is to be thorough to encourage deep root growth. Thereafter, watering as necessary during drought periods only. Timing and frequency to take account of prevailing weather conditions, soil moisture release, response of the tree species to water deficits or prolonged soil saturation.</p> <p>The holding capacity of the soil should be assessed.</p> <p>The amount of water available to the tree to be assessed. An irrigation plan will be necessary as part of the management programme supplied by the contractor.</p> <p>Monitoring is recommended when 10 consecutive days at 25 degrees is recorded during the growing</p>
----	---

	<p>season. Water should only be added if the probe / tensiometer values indicate that it would be appropriate to do so.</p> <p><u>Mulching and weed control</u></p> <p>Planting bed will be thoroughly mulched with approved composted bark to a depth of min 50mm. Depth of mulch to be checked twice per year and maintained at 50mm depth until such a time as plant growth excludes weeds. Mulch surface to be kept free from grass and weeds by hand-weeding.</p> <p>Health and Safety/Risk Assessments and PPE</p> <p><u>The term ‘appropriate personnel’ should include trained and experienced operatives in respect of COSHH regulations (application of pesticides/herbicides). Contractor’s risk assessments should be implemented prior to the works. Appropriate operatives’ PPE should also be used, and social distancing measures observed as per Government Guidelines in relation to the COVID 19 pandemic.</u></p> <p><u>Periodic inspection</u></p> <p>New trees will be incorporated into the site-wide Tree Safety Management Policy.</p> <p>After 5 years, all new specimen trees will be incorporated into the site’s regular health and safety monitoring inspections, under a Tree Safety Management Policy which will include Tree Safety Management surveys carried out every two years. Also see 2d.</p> <p><u>Replacement of failures</u></p> <p>Any plants that die within the first 5 years will be replaced on a one for one basis between November and March, following the established planting specification.</p>
--	---

Planted Trees

2a.	Newly planted trees should be managed via appropriate protection through the establishment phase, including tree guards as necessary and also removal at the appropriate time (Normally Year 3).
2b	Formative Pruning to BS 3998: to prevent co-dominant stems (increases failure potential); aggressive branches develop low on the stem and when removed result in larger ugly stem wounds; vigorous branches grow long on the lower part of the stem and break off.
2c.	Trees to be maintained in the first years via regular weeding and watering (see establishment watering above) to promote establishment. (Likely to need weekly watering for first few weeks and through any dry spells – weeding every two months in first growing season). Mulched circles 800mm diameter are to be maintained around each tree in grass areas.
2d	<p>Tree health</p> <p>A formal assessment of tree health and development carried out annually, foliar appearance assessment necessary (lack of leaf chlorosis and/or necrosis), leaf size and leaf canopy density, extension growth and incremental girth development</p>

Hedgerows

3a	Existing Hedgerows
	Existing hedgerows are to be maintained via regular formative trimming to maintain shape and to control height to a maximum height of 3m. The aim shall be to encourage thickening of the base of the hedge and initially to remove dead wood. Hedges to be kept weed free by spraying strip along base of hedge.
3b	New Hedgerows and Thicket Planting
	<p>New hedgerows and thicket planting, as shown in the locations on the landscape plans to be maintained in the first 2 years establishment via regular weeding and watering to promote establishment as above. Thereafter control of weeds by strimming will still be required. The thicket mix is the same as the hedge mix. The hedge is that section along the southern boundary opposite Building Units 139 to 148.</p> <p>Thereafter - hedgerows to be managed wherever possible by trimming annually in autumn / winter. (By alternating management of sections native hedges a source of winter berries will always be available for birds). Hedgerows to be kept between 1.5 and 2.5 metres in height in order to maintain their biodiversity and or amenity value.</p> <p>Thickets are to be thinned as appropriate to achieve a density of plants of approximately 1/3m² to be reviewed in year 5 retaining the proportions of the original planting mix. This will allow light for the tree species to develop and mature to their full stature. Further thinning will be required in years 5-10 to further this aim. Thicket planting can be left to achieve its natural height.</p>
	Note all hedge pruning and thinning shall be outside the bird nesting season February to August.

Ground cover

4a	Areas of Vinca major provide shade tolerant ground cover along the southern margin of the site between the buildings and the boundary hedging. This is planted at a density of 7/m ² and should form a good ground cover to suppress weeds after the first season. Hand pulling or careful spot treatment of weeds will be required as necessary.
-----------	--

Grassland

5a.	<p>Amenity and shade tolerant lawns will be mown on a regular basis as per agreed programme/indicative schedule of operations provided in Appendix 2.</p> <p>Subsequent management in terms of frequency of cutting will vary according to soil conditions, micro-climate etc.</p>
5b	Species rich grass mixes shall be kept weed free during the first two growing seasons by hand pulling or spot treatment with approved herbicide. Bare patches or a thin sward are to be expected during establishment. These areas should be cut after flowering species have set seed – Late July/August. Cut material should be left for 5-7 days in situ to allow for seeds to shed on the ground surface before being raked off and removed from site. Dried seed heads should be shaken/riddled over bare areas

	to provide overseeding.
--	-------------------------

Retention Lagoons

6a	Check for invasive species and silt build up as per agreed schedule/indicative schedule of operations. The removal (timeframe/phasing) of invasive vegetation and de-silting is to be implemented under the guidance of an ecologist. No chemical spray to be applied within the vicinity of the waterbody.
-----------	---

Hard Landscaping

7a	Maintain all areas of hard standing and paths in a weed free condition. Areas of grasscrete shall be mown as necessary and otherwise kept weed free. Check the condition of boundary fences periodically.
-----------	---

Long Term Management

8a.	<p>Ensure that appropriate personnel are able to oversee management and ensure allocation of resources. See Risk Assessments above.</p> <p>Revise and renew the management plan for the site every five years, to ensure continuity of management in the longer term.</p>
------------	---

6.0 Constraints

There are no identified constraints to implementing this management plan.

Appendix 1 – Planting Proposals Plan ASA-561-DR-001 P7



LEGEND & QUANTITIES

- STANDARD TREES QUANTITY: 2360
- SCREENING FASTIGIATE TREES QUANTITY: 3160
- THICKET MIX QUANTITY: 456m²
- VINCA MAJOR QUANTITY: 2920m²
- MARGINAL PLANTING QUANTITY: 2120m²
- A6 (SUPREME SHADE) SEED MIX QUANTITY: 840m²
- POLLINATOR WF19 (POLLINATOR PARADISE) SEED MIX QUANTITY: 2243m²
- WATER MEADOW SEED MIX QUANTITY: 542m²

PLANTING SCHEDULE

No	Code	Plant Species	Common Name	Percentage Mix	Size	Location & Planting	
Grass / Meadow Mixes From Germinat Seeds - Sown as recommended by Germinat Seeds. (01522 888714)							
GM1		Shade Seed Mix A6		As supplied	Seeds	Areas of seed mix in proximity to hedgerow and tree planting	
GM2		Pollinator Seed Mix WF19		As supplied	Seeds	All general open areas of grass seeding	
GM3		Water Meadow Seed Mix RE3		As supplied	Seeds	5 metres of meadow around the perimeter of the infiltration basins.	
GM4		Hard Wearing Mix A24		As supplied	Seeds	General amenity and grasscrete areas.	
Groundcover							
254		Vinca major	Greater Periwinkle	As per plan	2. oct	Planted along pathway at a density of 7/m ²	
Marginal Planting							
138		Carex nigra	Common Sedge	20%	2. oct	Infiltration basin - plants to be planted at density of 3/m ²	
138		Carex pendula	Pendulous Sedge	20%	2. oct		
36		Lythrum virgatum	Yellow Loosestrife	5%	2. oct		
64		Monarda aquatica	Watermint	5%	2. oct		
64		Myosotis scorpioides	Spotted Watercress	5%	2. oct		
36		Ranunculus flammula	Lesser Spontanoff	5%	2. oct		
64		Veronica beccabunga	Brodiaea	5%	2. oct		
Thicket							
47		Acro: ampesto	Fold Mead	5%	Barroot 05-100:cm	Planted along perimeter of site	
23		Cornus sanguinea	Dogwood	5%	Barroot 05-100:cm		
23		Corylus avellana	Hazel	5%	Barroot 05-100:cm		
23		Cotoneaster integerrimus	Hawthorn	20%	Barroot 05-100:cm		
23		Cotoneaster lucidus	Midland Hawthorn	5%	Barroot 05-100:cm		
23		E. caryocarpus	Spindle	5%	Barroot 05-100:cm		
23		Ilex aquifolium	Holly	5%	Barroot 05-100:cm		
23		Ligustrum vulgare	Wild Privet	20%	Barroot 05-100:cm		
23		Viburnum opulus	Sour Rose	5%	Barroot 05-100:cm		
23		Sambucus racemosa	Red Elderberry	20%	Barroot 05-100:cm		
Standard Trees							
5	Ag	Alnus glutinosa	Black Alder	As per plan	14-16cm Star-cards		Planted along perimeter of site
5	Qp	Quercus palustris	Pin Oak	As per plan	14-16cm Star-cards		
5	Tc	Tilia cordata	Small-leaved Lime	As per plan	14-16cm Star-cards		
Screening Trees							
7	Ac	Acro: ampesto	Fold Mead	As per plan	15% - Standard 15-12cm girth	Planted along perimeter of site	
6	Bp	Betula pendula	Silver Birch	As per plan	50% - whips		
1	Cb	Carpinus betulus	Hornbeam	As per plan			
6	Fs-D	Fagus sylvatica	European Beech	As per plan			
5	Sa	Sorbus aucuparia	Mountain Ash	As per plan			
5	S	Sorbus torminalis	Wild Service Tree	As per plan			

GENERAL NOTES:

- Drawing for planning purposes and Employers Requirements.
- Existing trees to be retained on or adjacent to the site to be protected in accordance with BS 5837:2012 trees in relation to design, demolition and construction. To be undertaken throughout construction to the point of completion.
- All excavated areas to be backfilled with site-won subsoil and topsoil the contractor shall test the subsoil and topsoil to be used at an appropriate soil testing laboratory/ specialist to provide evidence of its suitability for amenity use. Any recommendations for remediation of its structure or nutrient status shall be acted upon. Subsoil to BS8601:2013 specifications for subsoil and requirements for use shall otherwise apply. All overlaid - imported topsoil to BS3882:2015 specification for topsoil BS 3882: general purpose grade. All topsoiled areas to be cleared of rocks and rubble larger than 50mm diameter and any other debris that may interfere with the establishment of plants. Shrub areas to be a minimum depth of 400mm topsoil. Grass mixes A6 and A24 to have a minimum depth of 150mm. grass mixes RE3 and WF19 to have low fertility soil prepared to a medium till. If the subsoil is suitable no additional topsoil should be used. Tree pit soil depth/volume in accordance with BS8545:2014 trees: from Nursery to Independence in the Landscape.
- Grasscrete. Soil to comprise 70:30 Sand:Soil approved root zone mix or suitable mix equivalent from site won topsoil. Grass seed shall be mixed into final top dressing fill.
- All plants to be supplied in accordance with horticultural trade association's National Plant Specification from an HTA certified nursery. Delivery and backfilling of all plant material to be in accordance with BS4428/JCLI/CPSE code of practice for handling and establishing landscape plants, parts i, ii, iii.
- All specimen shrubs and groundcover shrubs to be planted in accordance with BS3936 specification for nursery stock.
- All trees to be supplied and planted in accordance with BS8545:2014. All tree planting to be undertaken in informal groupings with no formal lines. Densities, sizes and species as per planting schedule.
- Tree planting: all standard trees to be planted in min.500x500x400mm tree pits as per detail. Trees to be tall staked with 2 tall stakes and protected with tree guards. Base of pit broken up to depth of 150mm. backfilled with 80% approved topsoil and 20% compost mix with granular fertiliser applied to manufacturer recommendations. All feathered trees to be planted with bamboo canes and rabbit guards and well healed into pit.
- Hedge planting: all plants to be planted in trenches 600mm wide and 300mm deep to accommodate full roots spread, backfilled with approved mix of topsoil, compost, and granular fertiliser. Native hedge to be planted in species blocks of 3's and 5's. Planted in a double staggered row. All plants to be supported with bamboo canes and protected with approved rabbit guards or plant shelter. All beds to be mulched with a min. 50mm approved bark mulch.
- Root barriers to be used (reroot 1000 or equivalent) adjacent to buildings and services where necessary.
- All planting and grass establishment/ maintenance operations to be in accordance with BS4428:1989 code of practice for general landscape operations (excluding hard surfaces). With special measures taken to spray all perennial weeds prior to sowing and allowing for oversowing of all wildflower areas to aid the establishment of a continuous sward. Trees to be established and maintained in accordance with BS8545. Watering to be undertaken to field capacity during drought conditions.
- All soft works to have 12 months contract maintenance and defects / replacement guarantee. As part of the tender, the contractor shall submit a detailed programme of maintenance operations.

Revision description	No.	By	Date
P7 LANDSCAPE OFFICER COMMENTS KWD	30.01.20		
P6 TREE LOCATIONS	VF 02.01.20		
T1 TENDER ISSUE	CP 30.11.18		
P5 FIFTH ISSUE	RS 26.11.18		
P4 FOURTH ISSUE	AM 23.11.18		
P3 THIRD ISSUE	AM 22.11.18		
P2 SECOND ISSUE	RS 21.11.18		
P1 FIRST ISSUE	CP 20.07.18		



Status
FOR PLANNING

Project
BICESTER HERITAGE - NEW TECHNICAL SITE

Description
PLANTING PROPOSALS

Scale(s)	1:500 @ A2	Date	23.11.18
Drawn By	VF	Checked By	AS
Drg. No. ASA-561-DR-001		Rev.	P7
		Draft	

Levels and dimensions to be checked on site prior to commencement of work.
All discrepancies to be reported to the landscape architect immediately.
© Copyright Anthony Stiff Associates

Appendix 2 Indicative Landscape Maintenance Schedule

INDICATIVE LANDSCAPE MAINTENANCE SCHEDULE

The following schedule is indicative of the operations and frequency of visits that should be expected of any future maintenance contractor, based on the landscape drawing no. ASA-561-DR-001 P7. The schedule is broken down into tasks that relate to the different landscape categories.

Description	Associated maintenance and monitoring items	Minimum Frequency per annum
General	Allow for compliance with Preliminaries and Conditions of Contract Health and Safety requirements and government guidelines, and otherwise descriptions of work and operations contained within this Landscape Management Plan.	
Replacement of Failures	At the end of the growing season for the first 5 years.	1
Amenity Grass areas	Generally	
	Mowing amenity close mown grass	As required
	Weed Control - :approved selective herbicide and spot treatment with Glyphosate	As required
	Spring fertiliser surface application to grass areas	1
	Autumn fertiliser surface application to grass areas	1
	Clear all leaf accumulation from grass areas	As required
	Topdressing, Spiking, Scarifying, Firming, Levelling	1
	Defective grass and reinstatement	As required
Reform grass edges	Reforming grass edges generally and to tree circles	2
Species rich Grass	Hand weeding, targeted spot treatment with glyphosate before weeds seed. If this is not possible they must be hand pulled.	As required
	Annual cut late July/August after seed has set. Leave cutting on surface for 5-7 days before raking off and shaking/riddle seed heads to populate bare areas	1
General Tree maintenance	Maintenance of existing Trees to inc pruning, hand weeding	6
	Checking Tree Guards, Tubes, Ties and Guys	6
	Watering as required in first 2 seasons	As required
	Firming up	As required
	Mulching	2
Native Thicket / Hedges	Seasonal Pruning	1
	Formative pruning: alternate areas every two years to maintain food sources for birds aiming to only prune half in any one year	1 or as required
	Weeding by herbicide for first 2 years and thereafter control by strimming down vegetation.	4
	Firming up	As required
Ground cover	Maintenance of bark mulch (only if required) to include topping up	1
	Clear all leaf accumulation from ground cover areas	As required
	Hand pulling or careful spot treatment of weeds will be required as necessary.	As required
Retention lagoons	Monitor silt build up and remove as agreed Monitor invasive species and remove as instructed	1
Hard Landscaping	Maintain all areas of hard standing and paths in a weed free condition. Areas of grasscrete shall be mown as necessary and otherwise kept weed free. Check the condition of boundary fences periodically.	As required

MANAGEMENT WORK PROGRAMME - YEAR 1- 5**YEARS 1-5**

Numbers relate to the seasons in which

operations should be carried out.

Seasons – 1 Spring, 2 Summer, 3 Autumn, 4 Winter, 5 All Seasons

No	Project Title	1	2	3	4	5
1	General items are guided by schedule below					
	Trees					
2a	Check tree guards	1-3	1-3	1-3	1-3	1-3
2b	Formative Pruning	4	4	4	4	4
2c	Maintain in first year by weeding, checking of guards etc Watering as required	1-3	1-3	1-3	1-3	1-3
2d	Monitor tree health	2	2	2	2	2
	Thickets and Hedgerows					
3a	Existing hedges pruning	4	4	4	4	4
3b	New hedges and thickets - Maintain in first year by weeding Watering as required	4	4	4	4	4
	Manage native hedgerows by trimming 50% annually each year.	4	4	4	4	4
	Preliminary thinning of thickets only as required to be reviewed in Year 5	4	4	4	4	4
4a	Ground Cover					
	Remove weeds as required	1-3	1-3	1-3	1-3	1-3
	Grassland					
5a	Amenity grass mow as required	1-3	1-3	1-3	1-3	1-3
5b	Species Rich grass mow annually after seed has set	2	2	2	2	2
	Retention Lagoons					
6a	Monitor silt build up and remove as agreed	4	4	4	4	4
	Monitor invasive species and remove as instructed	4	4	4	4	4
7a	Hard Landscaping	5	5	5	5	5
8a	Oversee plan implementation	5	5	5	5	5