



Landscape & Biodiversity Enhancement Management Scheme

Removal of Modular Building & Erection of a Single Storey Building at:

Benwick Primary School, High Street, Benwick, March PE15 0XA 8^{th} January 2024

ENVIRONMENTAL AND SUSTAINABILITY CONSULTANTS



Document Control

Date of first Issue	Revision	Date of Revision	Issued By	Checked by
8 th January 2024	-	-	МЈВ	LB

Page | 2 January 2024

Contents

Exe	cutive Summary	4
	Introduction	
	Landscape Management Objectives	
	Maintenance Specification	
4	Programme of Implementation, Maintenance, Management & Responsibilities	16
7	Landscaping & Biodiversity Enhancement Scheme	22
8	Details of Bat & Bird Boxes and Hibernacula	23

Executive Summary

This Landscape & Biodiversity Enhancement Management Scheme (LBEMS) has been produced as part of the planning application for the removal of a modular building and the erection of a single storey building at Benwick Primary School, High Street, Benwick, March, Cambridgeshire, PE15 0XA.

This LBEMS has been produced in response to the local authority planning validation requirements.

The document corresponds directly to the Landscaping & Biodiversity Enhancement Scheme as detailed on the drawing appended to this document.

This document should also be read in conjunction with the Preliminary Ecological Appraisal prepared by Enzygo Environmental Consultants (see separate report for details).

The landscaping scheme incudes the creation of an inviting outdoor environment delivering effective, enjoyable education to build healthy lifestyles, experience nature and provide areas to play and learn. The landscaping scheme incorporates a range of native species of value to wildlife and the planting design focuses on complementing and contributing to the existing value of retained boundary trees and hedgerows.

As well as the retention of existing trees, hedges and grassed areas, the scheme includes a new wildflower grassland area, shrub planting and 1 new tree with an additional tree planted to replace a single pear tree removed to enable vehicle access during construction work. In addition, the scheme includes the erection of bird and bat boxes, the creation of deadwood hibernacula and a new rain garden for sustainable urban drainage and encourage biodiversity.

The aim of this report is to provide appropriate prescriptive management and recommendations to achieve the objective of enhanced biodiversity on site and on-going grounds maintenance.

This includes management actions and an annual work schedule to be rolled over for a minimum 5 year period, as per local authority requirements.

Page | 4 January 2024

1 Introduction

- 1.1 This LBEMS has been prepared as part of the planning application for works at Benwick Primary School, High Street, Benwick, March PE15 0XA.
- 1.2 This Management Scheme corresponds directly to the landscaping scheme as detailed on the drawing appended to this document.

1.3 Principles of the Management Plan

This plan sets out the principles and quality standards required for the ongoing maintenance of the planting and ecological enhancement for the long term management of the site

It includes:

- Aims of the management plan
- Management objectives
- Detailed maintenance specification
- Annual schedule of operations
- 1.4 This Plan should be read alongside the approved landscaping scheme and used by the School's maintenance team.
- 1.5 For the purposes of management and maintenance of the landscape and biodiversity there are eight main areas:
 - 1) Grass
 - 2) Shrubs
 - 3) Hedges
 - 4) Trees
 - 5) Wildflower and Grassland Areas
 - 6) Bird & Bat boxes
 - 7) Deadwood Hibernacula
 - 8) Rain Garden

Page | 5 January 2024

2 Landscape Management Objectives

2.1 Management Objectives for Soft Landscape

- apply good horticultural and ecological practice to all operations
- promote healthy growth and establishment of all plants and trees
- regularly cut grass areas to maintain a neat, short sward
- ensure consistent control of invasive weeds
- promote optimum display and flowering periods
- provide protection against pests and diseases
- promote wildlife value and species diversity
- ensure long term commitment to replacement of defective plant material
- review opportunities for introduction of new species or replacement of exhausted species, if necessary, in line with original design intentions.

Page | 6 January 2024

3 Maintenance Specification

3.1 Maintenance Details

3.2 Tree Planting: Planted as individual specimens

Specimen Tree Planting:

- Refer to the landscaping drawings appended to this document for species and planting locations.
- Ensure that good horticultural practice is employed to encourage long term health and vitality of trees
- Ensure well-balanced crowns and natural shape
- Remove rubber ties and supporting stakes once the trees are well established enough to support themselves

3.3 Shrub Planting:

Shrub Beds:

- Refer to the landscaping drawings appended to this document for species and planting locations.
- Ensure that good horticultural practice is employed to encourage long term health and vitality of all shrub planted areas to ensure they establish
- Allow shrubs to establish to provide a dense block of groundcover with a variety of species and various heights for biodiversity

3.4 Tree, Hedge & Shrub Maintenance:

Existing and Newly Planted Trees, Existing Hedges, Newly Planted Shrubs

Watering:

- All planting to receive watering for at least the first 3 growing seasons during the establishment phase
- All planting to receive watering beyond the establishment phase during periods of drought
- Ensure sufficient water is applied to maintain healthy growth; taking into account published meteorological data on rainfall for any given period, in

Page | 7 January 2024

particular in periods of spring drought (April, May & June) and through the summer months

Quantity:

- Standard trees: 10 gallons per tree per application
- Shrubs: Wet soil to full rooting depth

Weed control:

- All planting areas shall be kept clear of weed growth for the first 3 growing seasons during the establishment period
- After 3 years, a herb layer can be allowed to return to all planting except the ornamental planting which should be kept weed free
- Achieve by a combination of herbicide applications and hand-weeding/hoeing
- Ensure that the methods used will cause a minimum of damage to adjacent planted areas

Tree and plant stems:

- Do not allow nylon filament rotary cutters or other mechanical tools closer than
 200mm to the stem of any tree or plant
- Maintain a grass & weed-free area around the base of each tree, min diameter
 500mm during the first 3 growing seasons during the establishment period
- Carry out operations close to stems using hand tools

Herbicide application:

 A foliar acting translocated or contact herbicide shall be applied to emergent weeds

Hand weeding:

- Hoe and loosen the soil throughout the planting areas, taking care to avoid disturbance of roots of planted material
- Remove weeds entirely, including roots
- Remove the minimum of soil and minimise disturbance to plants, bulbs and mulched surfaces
- On completion, rake areas to a neat condition

Page | **8** January 2024

Mulch:

- Top up mulch to a minimum thickness of 75mm across all planting for trees, hedges and shrubs
- Mulch spill on adjacent surfaces to be removed
- Any weeds and debris to be taken out of the spilled mulch before returning to planted areas
- Melcourt 'Forest BioMulch' or similar approved to be used
- After 5 years any compost created on site should be used if possible

Re-firming, check/tidy:

- Trees and shrubs shall be maintained in a firm position in the ground and all stakes and ties shall be checked regularly, particularly after strong winds, frost heave and other disturbances
- Report any significant failures

Tree stakes and ties:

- Inspect all trees twice a year
- Adjust fixing to suit stem growth and provide correct and uniform tension
- If growth is sufficient for tree to be self-supporting, remove fixing and fill holes with lightly compacted soil
- Check stakes for looseness, breaks and decay and replace as necessary
- Remove stakes and ties once tree has established sufficiently to support itself or after 3 years establishment whichever is the sooner
- Remove spiral guards from hedge plants once established

Hedge Pruning:

- Generally to be carried out in accordance with good horticultural and arboricultural practice
- 50% of hedges are to be cut annually on a rotational basis, ie 50% cut in year 1, 50% left uncut and then alternated for year 2 and all subsequent years.
- Hedges to be cut to an A-frame shape
- Trim individual plant appropriate to species, location and season to leave a well-balanced natural shape
- All cutting to be done with appropriate clean sharp tools

Page | 9 January 2024

- Clean cuts back to sound wood
- Do not use growth retardants, fungicides or sealant unless instructed

Pruning of trees:

- During pruning protect adjacent structures, plants or trees
- Trees to be maintained with a well-balanced natural appearance
- Remove any suckers or basal growth
- Cut back level with source stem or root
- For any chain saw work, operatives must hold a certificate of competence

Timing:

- Prune between leaf fall and mid-winter
- After 3 years full growing seasons, selectively thin, re-space and crown raise trees

Pruning of shrubs:

- At the end of the growing season, check all shrubs and remove all dead foliage, dead wood and broken/damaged branches and stems
- Prunings to be retained on site and either composted or woodier cuttings to be utilised in the creation of habitat piles in un-obtrusive areas if possible
- Prune shrubs flowering between March and July immediately after the flowering period and shrubs flowering between July and October back to old wood in winter

Reinstatement:

• Remove dead plants as soon as possible and replace in the next dormant season (October to March)

Maintaining a safe, clean and secure environment:

- Litter to be collected as necessary to maintain a clean, litter-free environment
- Include clear signage against dog fouling and litter at entrances
- Report any fly tipping

Page | 10 January 2024

3.5 Existing Grass Areas

Watering and Feeding:

- Establish an annual programme of aeration and feeding
- Ensure sufficient water is applied to maintain healthy growth; taking into account published meteorological data on rainfall for any given period, in particular in periods of summer drought (June, July & August)
- Employ cultural techniques which use organic fertilisers and minimise the use of chemicals wherever possible

Mowing:

- All grass areas to be regularly mown to maintain the sward to create an optimum functional surface
- Grass verges are to be cut a minimum of 15 times during the growing season usually between March and October, depending on weather conditions
- Cut grass should be removed from paved areas at the time the grass is cut
- Strimming around obstacles such as trees or furniture to be carried out early in the growing season and then herbicide applied around the base of trees and obstacles in April/May and again in September/October to prevent weed or grass growth

3.6 Wildflower and Grassland Areas:

Fencing

- 1.2m high timber post and wire fencing and gates will be installed to protect the new wildflower area
- Fencing should be checked regularly for defects to ensure the wires remain fully tensioned

Watering

Grassland and wildflowers thrive in impoverished conditions and therefore no
watering is required unless seeding is done during a prolonged dry spell in which
case initial watering should be carried out to ensure sufficient moisture content
of the soil to enable germination to take place.

Page | 11 January 2024

Feeding:

 Grassland and wildflowers thrive in impoverished conditions and therefore no fertiliser should be applied.

Weed control:

- The grassland and wildflower seed mix contains a certain amount of plants which
 ordinarily would be considered as "weeds", however those plants form an
 important part of the overall mix and should be left to establish. Therefore, no
 weed control is necessary in the grassland areas.
- Regular inspections for any non-native invasive species and notifiable native weeds such as ragwort to be carried out and removed where identified.
- Any invasive species and notifiable weeds identified are to be removed by hand digging and disposal off site at a licenced receptor site and/or chemical weed killing, depending on which is the most appropriate for the type of invasive species.

Mowing:

- Grassland/wildflower areas are to be mown less frequently than the other grass
 areas on site to enable the flowers to establish and produce seeds before being
 cut and should only be cut twice a year in March to mid-April and then again
 August/September.
- No mowing during the spring and summer.
- Mown to a height of approximately 100-150mm from the ground with all grass arisings removed from site.
- After the autumn cut, the vegetation should be left on the ground for a few days
 to allow to set-seed before being raked and taken away to form compost heaps
 located away from the wildflower areas or removed off site.
- 20% of the wildflower grassland should remain uncut annually, on a rotational basis, in order to provide over-wintering habitat for invertebrates.

Year 1:

- For newly created grassland (for enhanced grassland skip to year 2)
- Provide temporary protection and water if required to ensure satisfactory establishment

Page | 12 January 2024

- Mow newly sown grass regularly to 40-60mm, reducing to <25mm from July to the end of the growing season to control annual weeds, removing all arisings.
- Control weeds by hand weeding or spot treatment of herbicide as required
- Stone rake on at least one occasion

Year 2:

- Grassland left to grow throughout spring and summer to allow to flower
- After flowering, a single 'hay' cut to 50mm in mid-July-August
- Arisings will be left for up to one week to dry and re-seed before removal
- Following the summer cut mow again to 40-75mm in October to leave the grass short through the winter, collecting and removing all arisings
- Control weeds by hand weeding or spot treatment of herbicide as required
- Monitor for scrub/bracken encroachment and reinstate damaged areas by changing the management regime, protecting areas of high wear or reseeding as appropriate

Subsequent Years:

- Repeat Year 2 for Years 3, 4 and 5, etc.
- **3.7 Rain Garden:** Areas of grass and wetland planting to be established

General Maintenance:

- Check for sedimentation, occasionally using a shovel to remove any excess
- Check for signs of erosion around the edge of the garden. Replace material that may be diverting the flow out of the garden. Add rocks or stones to break up the flow of the water if rills are appearing from the water entrance point. Build up the soil and add plants if there is erosion out of the rain garden

Weed control:

- Remove unwanted weeds from the garden by hand. Weeds should be pulled from the roots
- Eventually as the garden becomes established the rain garden plants will spread and out-compete unwanted weeds

Page | 13 January 2024

Watering:

- Water regularly during the first 3 months every day for the first week and then once a week unless there is substantial rainfall
- Ensure sufficient water is applied to maintain healthy growth

Pruning:

- Prune overgrown material in the garden annually when the plants are dormant
- Generally to be carried out in accordance with good horticultural and arboricultural practice
- In accordance with BS 7370.4, clauses 3.6.3 to 3.6.5
- Ensure that good horticultural practice is employed to encourage long term health and vitality of the planting
- Remove dead plant material but leave some dead flowerheads until the spring to provide food for wildlife

3.8 Bird and Bat Boxes

General maintenance:

- Bat boxes should be a 'self-cleaning' design which do not accumulate droppings and are less used by birds. These designs would require no ongoing management.
 Other designs should be checked in late autumn/winter period annually by a licensed bat-worker and cleared of any obstructions.
- Bird boxes would not require any specific management. However, if the bird boxes are regularly used it may be necessary to remove old nests from time-totime. This should be undertaken outside of the bird nesting season by an experienced ecologist or ornithologist.
- The nesting boxes are unlikely to become damaged but if for any reason they are
 no longer fit for purpose, they are to be replaced as soon as possible during the
 autumn/winter period.
- **3.9 Deadwood Hibernacula:** Informal deadwood hibernacula to be created at the site boundaries using woody arisings from tree/shrub clearance

Page | **14** January 2024

General maintenance:

 The piles should be left undisturbed and allowed to naturally decay to encourage insects to colonise them.

Page | 15 January 2024

4 Programme of Implementation, Maintenance, Management & Responsibilities

4.1 Schedule of Maintenance

The following is an indicative annual schedule of maintenance applicable for the first 5 years of establishment. This provides a reasonable frequency of the more common operations, and a good indication of the required level of intensity of management required but is not intended to be fully comprehensive or restrictive. It shall also include scheduled dates for:

- Infrequent operations such as re-spacing of plants, pruning, topping up of mulch,
 replacement of plants/restocking of beds etc
- Planting review and refurbishment
- Monitoring and review; the effectiveness of the management operations is to be closely and continually monitored and reviewed annually against the LBEMS, with any resulting changes incorporated into the subsequent years' programme.

4.2 Maintenance Responsibilities

All future maintenance beyond the 5th year post completion will remain the responsibility of the School including grass cutting, hedge pruning, weeding, fence repairs etc. During this period the new tree planting will be established and removal of any supporting stakes and rubber ties will be the responsibility of the School's grounds maintenance team.

4.3 Schedule of annual maintenance operations

The following schedules list the timings for key annual operations for the soft landscape areas as shown on the proposed landscaping plan:

Page | 16 January 2024

Schedule 1: General Maintenance

Month	Litter pick	Remove fall leaves	Bird & Bat Boxes
January	1 visit		
February	1 visit		
March	1 visit		
April	1 visit		
May	1 visit		
June	1 visit		
July	1 visit		
August	1 visit		
September	1 visit		
October	1 visit	1 visit	1 visit
November	1 visit		
December	1 visit	1 visit	

Schedule 2: Existing Trees and Vegetation

Month	Tree inspection	Weed control	Pruning
January			
February			
March			
April		1 visit	
May			
June			
July	1 visit	1 visit	
August			
September			
October		1 visit	
November	1 visit		
December			1 visit

Page | 17 January 2024

Schedule 3: Specimen Trees - Establishment Phase (first 3 years)

Month	Tree inspection	Replace dead	Weed control	Watering	Hedge cutting
January					
February					1 visit
March					
April			2 visits	2 visits	
May				4 visits	
June				4 visits	
July	1 visit		2 visits	4 visits	
August				4 visits	
September				4 visits	
October			2 visits	2 visits	
November					
December		1 visit			

Schedule 4: Specimen Trees- Continuing Maintenance after 3 years

Month	Tree inspection	Replace dead	Weed control	Watering	Hedge cutting
January					
February					1 visit
March					
April			1 visit	2 visits	
May				2 visits	
June				2 visits	
July	1 visit		1 visit	2 visits	
August				2 visits	
September				2 visits	
October			1 visit	2 visits	
November					
December		1 visit			

Page | 18 January 2024

Schedule 5: Ornamental Shrubs - Establishment Phase (first 3 years)

Month	Inspection for dead plants	Replace dead	Weed control	Watering	Deadhead flowering plants
January					
February					
March			1 visit		
April			1 visit	2 visits	1 visit
May			2 visits	4 visits	1 visit
June			2 visits	4 visits	1 visit
July			2 visits	4 visits	1 visit
August			2 visits	4 visits	1 visit
September	1 visit		1 visit	4 visits	1 visit
October		1 visit	1 visit	2 visits	
November					
December					

Schedule 6: Ornamental Shrubs - Continuing Maintenance after 3 years

Month	Inspection for dead plants	Replace dead	Weed control	Watering	Deadhead flowering plants
January					
February					
March			1 visit		
April			1 visit	2 visits	1 visit
May			1 visit	2 visits	1 visit
June			1 visit	2 visits	1 visit
July			1 visit	2 visits	1 visit
August			1 visit	2 visits	1 visit
September	1 visit		1 visit	2 visits	1 visit
October		1 visit	1 visit	2 visits	
November					
December					

Page | **19** January 2024

Schedule 7: Grass Verges & Open Spaces

Month	Weed control	Fertilizer	Mowing	Trim edges	Thatch removal	Watering
January						
February						
March			3 visits		1 visit	
April		1 visit	4 visits	2 visits		
May	1 visit		4 visits	2 visits		4 visits
June			4 visits	2 visits		4 visits
July			4 visits	2 visits		4 visits
August			4 visits	2 visits		4 visits
September	1 visit	1 visit	4 visits	2 visits		
October			3 visits	2 visits		
November						
December						

Schedule 8: Grassland/Wildflower Areas

Month	Weed control	Fertilizer	Mowing	Trim edges	Thatch removal
January					
February					
March					
April					
May					
June					
July					
August					
September			1 visit		
October			1 visit		
November					
December					

P a g e | **20** January 2024

Schedule 9: Rain Garden

Month	Erosion Control	Apply mulch	Pruning (if needed)	Weed control	Watering	Deadhead flowering plants
January						
February						
March			1 visit*	1 visit		
April		1 visit				1 visit
May					2 visits	1 visit
June				1 visit	2 visits	1 visit
July					2 visits	1 visit
August					2 visits	1 visit
September				1 visit	2 visits	1 visit
October	1 visit				2 visits	_
November		1 visit				
December						_

^{*1} visit during this period

P a g e | 21 January 2024

7 Landscaping & Biodiversity Enhancement Scheme

P a g e | **22** January 2024



8 Details of Bat & Bird Boxes and Hibernacula

Page | 23 January 2024

Bat boxes

Refer to Ecology Report for full details. See locations indicated on the Proposed Landscaping Plan.

Bird boxes

Refer to Ecology Report for full details. See locations indicated on the Proposed Landscaping Plan.

Log Piles

Log piles should be installed in a variety of aspects around the site as per the locations indicated on the drawing. Different designs should be used, which are suitable for a variety of insects. The existing trees to be removed to facilitate the construction of the development should be retained for use in creating a log pile habitat to attract insects, particularly beetles. Other log piles should be created, if there are sufficient logs, in a variety of forms.









Page | **24** January 2024