

Landscape Management Plan

Ty Dysgu School, Merthyr

11th October 2023

Report Number. LB398/R01a



Report No:	Date	Revision	Author	Checked
LB398_R01	21.08.23	-	Andrew Laird (CMLI)	David Bailey (CMLI)
LB398_R01a	11.10.23	A		

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Section 1: Introduction

Purpose

- 1.1. This Landscape Management Plan (LMP) has been prepared by Laird Bailey Landscape Architects (LBLE) on behalf of cwf Architects for Ty Dysgu Primary School, Merthyr (hereafter referred to as the 'site'). The site is centred on OS grid reference SO069079.
- 1.2. The purpose of the LMP is to provide details of measures to ensure the successful establishment and ongoing maintenance of the soft and hard landscape elements of the development proposals for a period of up to 25 years.
- 1.3. This LMP should be read in conjunction with drawings LB398_D01 Soft Landscape Proposals (Sheets 1-2).

Scope of the Landscape Management Plan

- 1.4. This Landscape Management Plan is set out as follows:
 - Section 2 sets out relevant standards and legislation;
 - Section 3 describes the site, and provides an overview of the existing landscape and its condition;
 - Section 4 describes the proposed soft landscaping typologies;
 - Section 5 describes the proposed hard landscaping typologies;
 - Section 6 sets out the long-term design objectives;
 - Section 7 sets out the management regimes and responsibilities;
 - Section 8 sets out the maintenance operations for all the soft landscape areas; and
 - Section 9 sets out the maintenance operations for all the hard landscape areas.



Section 2: Technical and Environmental Considerations

- 2.1. The contractor shall familiarise themselves and their operatives with all British Standards and regulations, as referred to in this document, and any subsequent revisions thereof. All chemical weed control must be carried out by suitably trained staff in accordance with the manufacturers recommendations and the legislation set out below. It should also be noted that the use of pesticides should not be permitted during school hours/ when children and staff are present or unless adequate precautions have been taken to restrict areas for use until safe to do so.
- 2.2. The Contractor must only use chemicals specifically approved for the purpose for which it is intended as dictated by the Control of Pesticides Regulations 1986 and the conditions of approval for the chemicals and any relevant code of practice issued by DEFRA. The Contractor will consider in every instance whether the use of chemicals is strictly necessary before application.

Relevant Standards and Legislation	
ISO 7851	Classification scheme for fertilizers and soil conditioners
BS4428	Code of practice for general landscape operations
BS 8545: 2014	Trees: from nursery to independence in the landscape - Recommendations
BS 5837	Trees in relation to design, demolition and construction - Recommendations
3882:2015	Topsoil
The Food and Environment Protection Act (1985)	
The Control of Pesticides Regulations 1986 (COPR) (as amended 1997)	
The Control of Substances Hazardous to Health Regulations (2002)	
The Environment Protection Act (1990)	



Section 3: Site Overview of Existing Landscape and its Condition

Site Context

- 3.1. The site is located off Market Street, Dowlais in Merthyr Tydfil. The site is proposed for a single storey classroom building with associated landscaping and sustainable drainage features.
- 3.2. The site currently comprises of amenity grassland, scrub, scattered trees, predominantly deciduous (Prunus, Sorbus and Birch) with two conifers. There is a single external classroom at the western end of the site with two picnic benches. There are three raised planting beds scattered throughout the amenity space with groups of bulbs located along the boundary. The northern boundary wraps round the site to the east and west and comprises a tall stone wall, this in part features dense climbers Hedera helix (ivy) and Rubus (Blackberry) sprawling down the face of the wall from neighbouring land. The southern boundary is partially open to the car parking area and also features the main school building (existing).
- 3.3. The character of the site is urban with built development visible from within the site and beyond the sites boundaries.



Section 4: Proposed Soft Landscaping

- 4.1. This LMP is to read in conjunction with details of proposed soft landscaping (see LBLA Drawing No. LB398_D01 - Soft Landscape Proposals (Sheets 1-2).
- 4.2. Soft landscaping within the site is designed to:
- Create an attractive and appropriate setting for the new classroom building, providing all year-round interest and colour;
 - Create a strong soft landscape framework with planting to the perimeter of the site including trees, selected to maximise biodiversity and interest;
 - Create a safe and open play space for children; and
 - Ensure all planting is managed appropriately to promote the growth of flowers, berries and general 'form' offering the maximum benefit of amenity/habitat for birds, small mammals, and insects.
- 4.3. Proposed soft landscaping elements and planting consists of the following.

Trees

- 4.4. A selection of native trees, planted at appropriate sizes will feature across the scheme.

Shrubs

- 4.5. Native specimen shrubs have been proposed around the infiltration basin and are to be retained where considered to be of good health and pose no H&S risk to children along the boundary wall.

Sustainable Urban Drainage Planting (SUDS)

- 4.6. An infiltration basin is to be implemented within the western area of the site. This area is to consist of a shallow depression with gently sloping sides, which will be dry throughout the year but for periods of heavy rainfall. The proposed drainage basin will feature a range of wildflowers, herbaceous plants, shrubs and grasses.
- 4.7. Additionally, a rain garden is proposed to the north-east of the new classroom building, these planted features will help reduce the infiltration rate of water permeating into the ground. Planting within the proposed SUDS features will be tolerant of a range of moisture levels within the soil and standing water.

Amenity Grass Mix

- 4.8. Grass areas will be retained and proposed around the existing and new buildings.



Section 5: Proposed Hard Landscaping

5.1. This LMP is to read in conjunction with details of proposed hard landscaping (see relevant cwf Architects drawings).

5.1 Hard landscaping within the site is designed to:

- Create an attractive and appropriate setting for the new classroom building providing hard landscape, which is fit for purpose, durable and robust;
- Indicate change in use, identifiable from other hard surfaced areas; and
- To provide a pallet of materials which are aesthetically and visually appropriate for the setting and use of the development; and
- To minimise risk of injury and incorporate adequate safety measures such as post and rail fence with gate around infiltration feature.

Concrete Block Paving to Circulation and Footpaths

5.2 Footpaths are to be laid to concrete blocks differentiating these spaces from the parking area to the south-west within the site. All concrete block surfaces will be edged accordingly to maintain crisp lines and ensure the structural integrity of the surface build-up.



Section 6: Long-term Design Objectives

- 6.1 The landscape management plan has been produced to ensure that the new and existing planting on site will be managed effectively, ensuring landscape features establish and thrive in perpetuity whilst maintaining a safe environment for children.

Existing Trees and Shrubs

- 6.2 Management and select thinning/shaping of existing trees and shrubs seeks to secure the current retained landscape elements without compromising other important aims of the development.
- 6.3 Specific objectives include:
- Maintaining long-term health of existing trees and shrubs that contribute to on-site amenity;
 - To extend the life of mature trees through sound arboricultural management;
 - Creating a healthy tree and shrub understorey to knit into the proposed soft landscaping proposals, offering a series of mature/interconnected habitats; and
 - Create a safe space for children to play.
- 6.4 Any tree works such as the removal of hazardous branches or the felling of mature trees will be completed outside of the active period for breeding birds (generally understood as March to August inclusive but some bird species may nest all year round). Should any management be required within the bird breeding period, checks for nesting birds by a suitably trained ecologist will take place prior to any works commencing to ensure that no breeding birds are present. Should a nest be present then a suitable buffer would be installed until the nest is confirmed as being inactive.

Proposed Tree Planting

- 6.5 The long-term design and management objectives of proposed tree planting is to ensure that on-site trees thrive and contribute to an attractive and habitable environment. Trees shall be managed to develop a healthy and even form. Stems should only be removed to retain the natural appearance of the individual plant species or to remove broken or badly damaged branches and dead wood. Tree surgery such as crown lifting should be carried out as required by a suitably qualified individual to prevent restriction to site users.
- 6.6 Watering operations will be carried out as specified in this management plan and in conjunction with drawing LB398_D01 (Sheet 2).
- 6.7 Irrigation timing and frequency will take into account the prevailing weather conditions, soil moisture release, response of the tree species to water deficits or prolonged soil saturation. The holding capacity of the soil and amount of water available to the tree to be assessed at



each visit. Frequency of watering is more important than the volume and should be undertaken as required. Monitoring is recommended when 5 consecutive days at 25 degrees is recorded during the growing season. Water should only be added if the probe / tensiometer values indicate that it would be appropriate to do so.

- 6.8 All trees to be in compliance with BS8545: 2014 Trees: from Nursery to independence in the landscape – Recommendations. Staked trees will be inspected at each maintenance visit, and any trees which have died or are excessively damaged will be removed from site, complete with the stake, and replaced according to the original planting specification.
- 6.9 Mulched areas around trees will be maintained to an acceptable standard (75mm in 1m circumference around stem).

Existing and Proposed Amenity Planting

- 6.10 The long-term design objective of the amenity planting is to ensure the plants thrive to create foliage for amenity value, contribution to drainage features and habitat for wildlife. Planting will be managed to achieve a maximum height commensurate with their location and surrounding features. Pruning should be undertaken to promote flowering and fruiting in accordance with the species and age of the plant. Species and cultivars are to be pruned particularly to maximise flowering and berrying for amenity and wildlife.
- 6.11 As such, any management will take place at the end of the winter months to avoid the active period for most wildlife, providing the plants with time to produce flowers, seeds and berries. Should any management be required within the breeding bird season (March to August inclusive), checks for nesting birds will take place prior to any works commencing by a suitably qualified ecologist. Should a nest be present then a suitable buffer would be installed until the nest is confirmed as being inactive. Any vegetation management will have consideration for the potential presence of breeding birds as per the management considerations stated above.

Infiltration Basin

- 6.12 Once the infiltration basin is created, it is important to maintain some open margins and access to the outlet headwall. If the margins become overgrown with plants, access to the central area of the basin will be limited and a range of habitat shall not be created.
- 6.13 It is intended that planting will be regularly managed annually by mowing/strimming and thinning by hand. Small proportions of longer marginal vegetation and specimen shrub planting will also be provided for additional habitat variety, which will benefit invertebrates.
- 6.14 The infiltration basin on site will aim to provide a unique habitat for hundreds of species of aquatic and terrestrial plants and animals. Equally, the infiltration basin will assist with water quality improvement as well as providing valuable aesthetically pleasing resource. This would be cut back once a year in late August or early September, left for a minimum of 3 days before the removal of arisings, thus allowing the majority of the grassland plants to bloom and set seed and any aquatic life to re-enter the water body.



Existing and Proposed Amenity Grass Mix

- 6.15 Management aims to provide a safe and open playing space for children meeting their amenity requirements. The management objectives are as follows:
- 6.16 Provide a change in structure varying from regularly mown amenity grassland and grass edges cut on less frequent mowing rotations along the walled boundary; and
- 6.17 Amenity grass will be cut to a height of 35mm monthly during the growing season with arisings removed.

Vegetation for Removal

- 6.18 Along with trees proposed for removal, ivy encroaching onto the site from neighbouring land should be managed and 'cut back' out of the reach of children. Ivy is toxic to humans and can be used to climb up.
- 6.19 Areas of scrub which include nettles, blackberry and various defunct shrubs are to be retained for ecological habitat and learning opportunities.



Section 7: Management Regimes and Responsibilities

- 7.1. The landscaping works will receive post installation maintenance for a one-year Defects Liability Period (DLP). All defects resulting from plant loss, disease, or failure will be replaced on a like for like basis. A visit every month, or more frequently should watering be required, is recommended during the DLP. Subsequently a minimum of 12 maintenance visits per annum is recommended with this LMP covering a period of 25 years. Following the Defects and Liability Period all plants shall be replaced by the site owner up to a period of 5 years post DLP.
- 7.2. Maintenance and management activities are set out below (which covers a minimum period of 25 years) to ensure the soft landscaping is managed effectively beyond the time limits of the implementation and establishment works. The responsibility for this management and maintenance is to be agreed. LBLA's recommendation is for the landscape contractor that undertakes the planting works to be engaged to carry out the one-year establishment maintenance.
- 7.3. Management and maintenance operations will be monitored and reviewed annually on an on-going basis and modified where required; if the operations and frequencies set out do not deliver the required results or meet the specific aims and objectives.
- 7.4. As a minimum, maintenance visits should be undertaken to inspect and monitor as well as to carry out routine operations, including weeding and litter picking, with other specific operations being undertaken as scheduled below.
- 7.5. The appointed Contractor must provide details of all necessary insurances and certification to carry-out the works specified in this management plan. It is the responsibility of the appointing authority to ensure that all submitted insurances and certificates are up to date and provide the appropriate level of cover for the specified works.
- 7.6. Defects in the landscape are to be identified early and addressed promptly.



Section 8: Soft Landscape Maintenance Work Schedule

Component	Task	Time of Year	Frequency
<i>Visits every month throughout the one-year defects and liability period, more frequently if required due to prologued dry weather conditions and the need for watering.</i> <i>Subsequently management and maintenance operations will be monitored and reviewed annually for the first five years and then every five years by the appointed management company. If operations and frequencies set out do not deliver the required results or meet the specific aims and objectives, these should be modified accordingly.</i>			
Existing and Proposed Tree Planting	Inspect, prune and repair wounds in accordance with good horticultural and arboricultural practice.	Oct-Feb	As required (annually).
	Check tree ties regularly for rubbing and adjust if necessary. Constriction of the stem by ties happens very quickly, so fast-growing trees need frequent checking. After bad weather, check for abrasion and snapped stakes or ties. Re-firm tree by adjusting tree ties and ensuring soil is re-firmed around the base.	All year round and especially after strong winds, frost heave and other disturbances.	As required (annually).
	Hand weed mulched areas around trees.	Mar-Sep	Every visit.
	Control weeds by hand or mechanical tools only.	Mar/Oct	Only if required.
	Replace any failed specimens.	Oct-Mar	As required during the one-year DLP and 5 years post DLP (next available planting season).
	Remove debris/litter	Throughout	Every visit.
	Top up bark mulch around bases of trees to full depth of 75mm.	Mar/Apr	As required during the DLP.
	Newly planted trees will be watered throughout May-August months after any period of four weeks without significant rain to thoroughly wet the top 150mm of soil around the tree roots.	Throughout	As required – or at least once after a period of four weeks without significant rainfall (see monitoring in proposed tree section).



Component	Task	Time of Year	Frequency
	Trimming and selective thinning of the canopy. Trim back growth overhanging adjacent footpaths when required.	Oct-Mar	Annually if required.
	In year 2, remove staking if tree has established well.	Any	As required.
Amenity Planting	Trimming, pruning and reshaping to encourage healthy bushy growth, flowering and fruiting. Trim back growth overhanging adjacent footpaths when required.	Oct-Mar	Annually if required.
	Hand weed.	Throughout	Every visit.
	Control weeds to by hand or mechanically.	Apr-Sep	Only if required.
	Remove debris/litter.	Throughout	Every visit.
	Replace any failed specimens.	Oct to March	Within the DLP, as required (next available planting season).
	Top up bark mulch around bases of shrubs to full depth of 75mm.	Throughout	As required.
	Watering of newly established shrubs.	Throughout	As required to ensure successful establishment and longevity.
Infiltration Basin Meadow Grass	During the first year allow annual weeds to establish to protect seed stock. Cut, compost, and remove in August. In subsequent years mow basin margins to 50mm.	August	Once per year. Leave hay cuttings to drop seed for minimum of 3 days (up to 7) before removing.



Component	Task	Time of Year	Frequency
	Plant management/thinning	August to October	Plant thinning should be carried out on a 2-year cycle to halt the natural succession process and ensure an open body for water is maintained. Cuttings should be left for a minimum of 3 days to allow any aquatic life displaced during operations to re-enter the water body.
	Clearance of debris/ rubbish	Throughout	The basin is to be regularly checked for rubbish or other detritus material. Any rubbish to be cleared by hand and removed from site.
	Mowing/strimming	October to March	Mow/strim wet meadow grassland. Cuttings must be left for a minimum period of 3 days before being raked up and removed, to allow wildflowers to bloom and disperse seeds.
	Weed control.	Mar-Sep	Invasive weeds to removed by hand or mechanically.



Component	Task	Time of Year	Frequency
	Re-seeding (if required).	Sep	Any bare patches of ground where seed has failed to germinate should be re-seeded as per the original specification.
Amenity Grass Mix	Mowing and removal of arisings. Allow 4 weeks for establishment. Before the first cut lightly roll or tread newly seeded areas, after a few days once the grass has picked up again the lawn shall be ready for its first cut (Do not roll however if the ground is saturated with water).	Mar-Oct	Monthly/every visit. Grass should be mown regularly to aid with establishment to a height of 50mm after a full, thick sward has established. Roll the grass area
	Clearance of debris/rubbish.	Throughout	Area to be regularly checked for rubbish or other detritus material. Any rubbish to be cleared by hand and removed from site.
Vegetation Encroachment	Cut back climbing plants (ivy) from boundary walls out of the reach of children.	Throughout	As required (Monthly).



Section 9: Hard Landscaping Maintenance Works Schedule

Component	Task	Time of Year	Frequency
<i>Visits every month throughout the one-year defects and liability period. Management and maintenance operations will be monitored and reviewed annually on an on-going basis and where required modified if the operations and frequencies set out do not deliver the required results or meet the specific aims and objectives.</i>			
Hard landscape surfaces	Weeding/litter picking/sweeping.	Throughout	Hard surfaces within external areas should be maintained in a clean and tidy appearance free from weeds and litter. This will include general sweeping, weeding and occasional spray of surfaces as required.
	Repairs to cracked or worn surfaces.	Throughout/weather permitting	Hard landscape footways should be checked quarterly; any areas of wear that may become a safety concern should be assessed and repaired immediately.
	Cleaning/pressure washing	As required	Hard surfaces should be pressure washed periodically to prevent the build-up of surface algae/moss. Special care should be given to the replenishment of kiln dried



Component	Task	Time of Year	Frequency
			sand which may have washed out in block paved areas.
Street Furniture	Check/assessment of street furniture.	Throughout	Undertake regular checks, maintenance, and repairs as necessary to ensure furniture and boundary treatment remains safe, in a usable condition and in a good state of repair. Empty litter bins at intervals appropriate to level of use.
	Litter collection.	Throughout	Empty litter and dog bins at intervals appropriate to level of use.



Plans:

LB398_D01a: Soft Landscape Proposals (Sheets 1-2)

