

STAR RADCLIFFE ACADEMY BURY



LANDSCAPE AND ECOLOGY MANAGEMENT PLAN [LEMP]

This document has been prepared by Ares Landscape Architects to define the long term management and maintenance requirements for the landscape, including the soft, hard and biodiversity enhancement habitat types and features [bird and bat boxes etc] associated with Star Radcliffe Academy Bury.

The purpose of the Maintenance Plan is to guide the establishment and maintenance of the landscape works for a period of 5 years following completion, as well as to provide a framework for maintenance beyond this establishment period for a period of 30 years.

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Document No: FS1013-ALA-EX-ZZ-T-L-0003

Status: Stage 4
Rev: P02
Issued: 04.04.2024

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This document is being provided by Ares Landscape Architects in accordance with British Standards BS42020:2013

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Figure 1. Whole Site Masterplan

1.1 INTRODUCTION

This document has been produced to accompany the development proposals for Star Radcliffe Academy, Bury. The purpose of this document is to guide the maintenance and management of the newly installed hard and soft landscape works which will be delivered as part of the construction of Star Radcliffe Academy, Bury.

The intention is two fold:

- To aid the efficient and effective management of the site for the first 5 years following practical completion in order to achieve successful establishment of planting stock.
- To provide a basic framework and standard for maintenance beyond the first 5 years

To achieve this, the document sets out long term management aims and objectives as well as specific proposals for maintenance operations.

1.2 LONG TERM DESIGN OBJECTIVES

- Create an attractive environment for the development,
- Provide a safe and secure external space,
- Provide an easily maintained and managed landscape,
- Successful establishment of all planting.

1.3 SITE AREA

This document sets out the long term maintenance objectives for the entire school site, as shown in Figure 1.

This Maintenance Plan should be read in conjunction with the following drawings:

Ares - Landscape Architect:

- FS1013-ALA-EX-ZZ-D-L-0001 Whole Site Plan
- FS1013-ALA-EX-ZZ-D-L-0010 Planting Plan
- FS1013-ALA-EX-ZZ-D-L-0029 Hazard Identification
- FS1013-ALA-EX-ZZ-D-L-0040 Urban Greening Factor
- FS1013-ALA-EX-ZZ-D-L-0042 Planting Character Typologies

Amenity Tree - Ecologist:

- FS1013-ATC-XX-XX-T-O-0006 Preliminary Bat Roost Assessment Report
- FS1013-ATC-XX-XX-T-O-0009 Assessment of Biodiversity [BNG]
- FS1013-ATC-XX-XX-T-O-0010 Ecological Enhancements
- FS1013-ATC-XX-XX-T-O-0011 Arboricultural Impact Assessment [AIA]

1.4 MANAGEMENT RESPONSIBILITIES

It is understood that the installing contractor will be responsible for the management and maintenance of the landscape during the defects liability period (12 months) in line with the operations set out in this document.

On completion of the rectification period, it is assumed that Star Radcliffe Academy Bury will invite tenders for a landscape maintenance contract in line with the operations set out in this document.

Prior to any maintenance or management contracts being entered into, a detailed method statement must be submitted in accordance with the School's own health and safety policy.

1.4 RESTRICTIONS

Use of mechanical equipment is not permitted outside the hours confirmed by the school management team.

1.5 CLIMATE CHANGE AND BIODIVERSITY

In this Landscape maintenance and management plan we aim to demonstrate how carbon emissions will be reduced and bio-diversity enhanced. Frequency variations will be incorporated into general grass mowing regimes, this will create visual interest and will encourage flowering and biodiversity. This will also lower the carbon footprint for maintenance. The variation in frequency of mowing will also allow for habitats to survive and thrive within the amenity grassed areas.

1.6 HEALTH AND SAFETY PLAN

Construction Health and Safety Plan is being provided by the Contractor and is available for inspection.

1.7 RESPONSIVE VERSES ROUTINE OPERATIONS

The following schedule of maintenance operations is divided between hard landscape and soft landscape. The tasks are defined as either routine maintenance including regular (assumed weekly) site inspections, monitoring and responsive maintenance activities, which needs to be implemented on an 'as required' basis in response to specific site events. Where maintenance activities for planting are essential to ensure establishment.

When reference is made to seasons, this is meant by:

- Winter – Mid November to Mid-March – 17 weeks
- Spring – Mid-March to Early May – 8 weeks
- Summer – May to Late September – 20 Weeks
- Autumn – October to Mid-November – 7 weeks

2.1 RETENTION AND PROTECTION OF EXISTING TREES

The implementation of retained tree protection measures shall mean the retention of the arboriculture assets located on the site as shown on the Arboricultural Impact Assessment [AIA]. The retention of these trees shall be managed by the following means:

- A site visit shall be carried out by the arboricultural clerk of works to delineate the actual RPA in accordance with BS5837:2012.
- The position of the RPA shall become the Construction Exclusion Zone and be fenced off with hears fencing securely staked to the ground.
- The clerk shall receive digital images to demonstrate the CEZ is fit for purpose prior to any other work commencing on site.
- All works shall conform to the approved Arboricultural Impact Assessment and Method Statement

3.1 FAUNA, BATS AND BIRDS

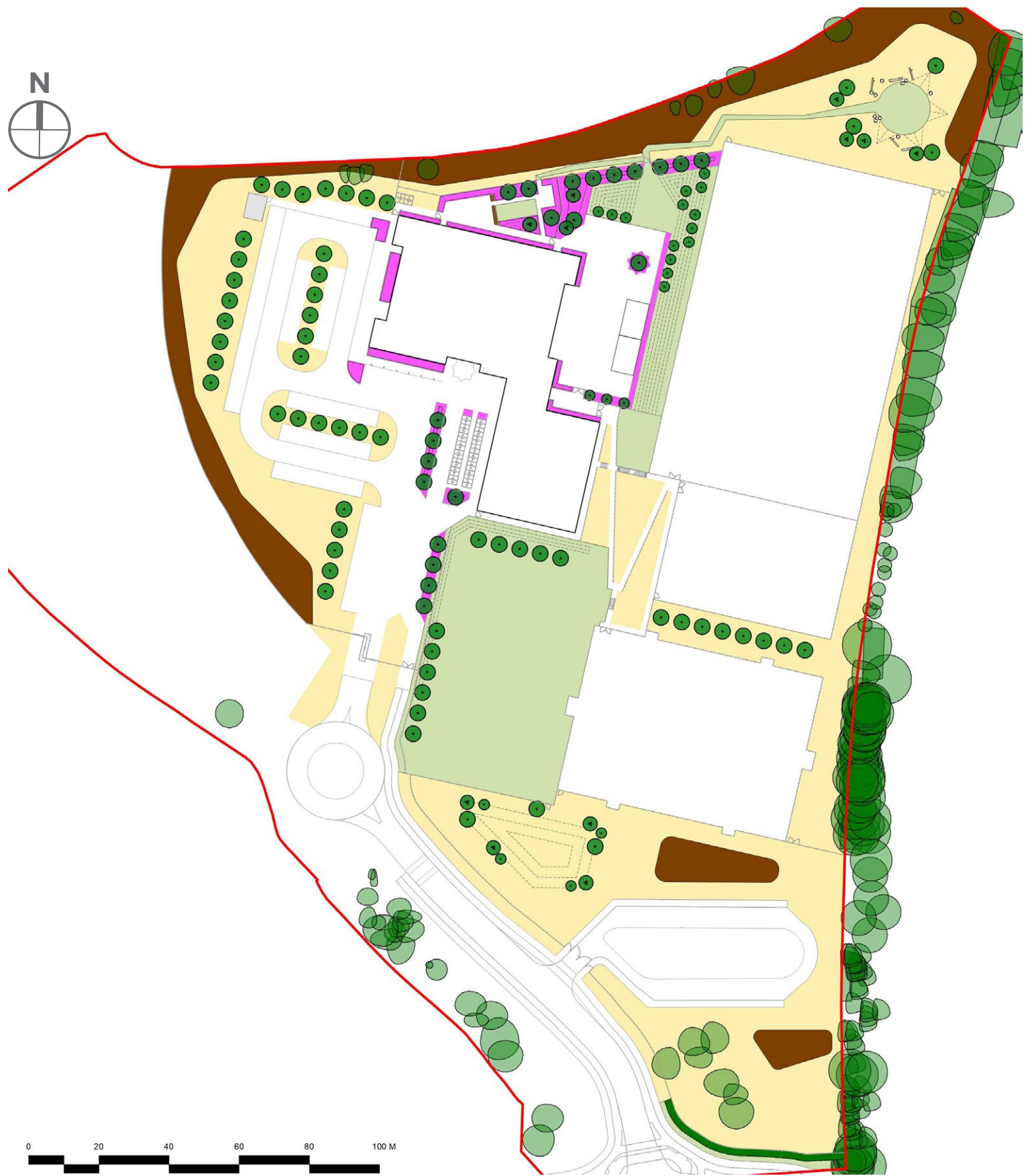
Breeding bird habitat shall be provided using ground shrubs and trees within the development but also the buffer between development and greenscape.

The following shall be fitted to properties:

- Ibstock Swift boxes
- House Sparrow terraces (1 SP Schwegler)

The provision of artificial roosting opportunities within buildings under suitable lighting provision will be central to the maintenance of a healthy bat population. Bat species utilise a variety of roosting opportunities and do use many different roost sites throughout the year depending on the time of year. Roost purposes can range from simple day roosts to roosting positions used in the night-time for short periods and therefore the provision of different artificial roosts using different thermal properties will best suit the bats annual cycle and therefore create conditions for the sustainable development of a bat population.

Bat roosts have been confirmed and a mitigation plan for roosting bats is already in place, please see the Preliminary Bat Roost Assessment Report.



4.1 PLANTING CHARACTER TYPOLOGIES

- Amenity Grassland**
The grass lawns will provide areas for formal and informal recreation and resting. Regular cuts will be required during the growing season to maintain a healthy sward and provide a nurtured appearance throughout the year. A programme of scarification and aeration will be required during spring and autumn respectively as well as irrigation during hot summer periods.
- Meadow Planting**
Designed to provide amenity space, seasonal interest and enhance wildlife value on site. Once established the grassland should require minimal maintenance, however, the timing of cuts is of utmost importance and a differential mowing regime is proposed. The mowing regime relates to the site topography, but in all cases, there is a 1.2 metre mown strip to the perimeter of the area which forms a tidy edge against hard paved surfaces.
- Shrub and Herbaceous Planting**
These species composed predominantly of ornamental grasses and perennial forbs have been selected for their attractiveness, year round structure and seasonal interest. This planting is located in areas with the highest visual amenity, such as around the building, and will typically require a higher input of maintenance resource than other character types.
- Woodland Planting**
Areas of woodland planting are running along the north and eastern edges of the site and near the drop off loop, breaking down the apparent mass of the development and providing a positive visual connection to the open countryside.
- Hedgerows**
New hedgerows are situated to the south. These will require trimming at certain points in the year.
- Tree Planting**
The trees are an integral part of the landscape infrastructure and contribute to defining key spaces, framing views and way finding. As most proposed trees are sited in grassed areas, maintenance contractors will need to extend due care and diligence when mowing to avoid tree girdling.

Figure 2. Planting Character Typologies

5.0 SCHEDULE OF MAINTENANCE OPERATIONS - PLANTING

5.1 ALL PLANTING CHARACTER TYPES

	Item	Relevant area/type	Operation	Timing	Frequency	Notes
Maintenance [0-year 5years] For first 12 months following practical completion these activities are undertaken by installing contractor	Fertilising	All soft landscape	Apply general purpose NPK fertiliser such as Growmore or similar to manufacturers recommendations	Spring + Autumn	Twice a year	
	Watering	All soft landscape	Water regularly particularly during first year of establishment	As necessary	As necessary	The requirement is to water to ensure establishment and continued thriving for the duration of defects liability period. Once established the plants should not need any water beyond natural precipitation apart from in unusually prolonged hot, dry conditions.
	Mulch coverings	All soft landscape areas, hedges, trees	Top up mulches [as required] to the depth specified in the NBS	As necessary	As necessary	Ensure minimum 75mm depth / 1500mm diameter mulch around each tree at all times
	Replacement planting / pruning	All soft landscape areas	All plant death of new landscape planting should be replaced as soon as practically possible. Ensure planting is clear from path edges, lighting, CCTV, fencing, gates, drainage channels etc.	As necessary	As necessary	If any planting areas or single plants (trees / herbaceous / shrubs etc.) fail within 5 Years since planting, then the plants must be replaced immediately. Ensure trees are cut coppiced as needed to ensure sightlines are maintained for clear cctv supervision & prevent climbing risk. work to be carried out outside of nesting bird season [march - september [inclusive]
	Compacted planting areas	All soft landscape area	Any areas of compaction should be cultivated as per the NBS specification, lift and replant plants as required.	As necessary	As necessary	
	Monitoring	All soft landscape	Monitoring planting for death, damage and disease	As necessary	Monthly	Planting is to be monitored and replaced or treated as necessary. Ecological survey undertaken by a suitably qualified ecologist and monitoring reports produced. Surveys and reports to be undertaken in years 1,2,3,5,10,15,20,25 and 30
	Litter removal	All soft landscape	Removing all litter and debris from all planting beds, turf area, tree pits and tree branches. Areas should be regularly inspected. Ensure the site is in a clean and tidy condition	As necessary	Fortnightly	
5+ Years	Review of Operations & Maintenance Plan	Management Plan	Review management plan to ensure that it is compliant with current legislation, specifications and methods.	As necessary	Every 5 years	

MAINTENANCE SCHEDULE ** N = As Neccessary

Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Fertilisation				1					1			
Watering				N	N	N	N	N	N			
Mulch	N	N	N	N	N	N	N	N	N	N	N	N
Replacement	N	N	N	N	N	N	N	N	N	N	N	N
Compaction	N	N	N	N	N	N	N	N	N	N	N	N
Monitoring	1	1	1	1	1	1	1	1	1	1	1	1
Litter Removal	2	2	2	2	2	2	2	2	2	2	2	2

5.2 AMENITY GRASSLAND

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Monitoring	Amenity Grassland	Year one: - When grass is 40mm high cut back to 30mm - Scarify with lawn scarifier Years 2+ : -mow to 30mm high -Scarify with lawn scarifier	Autumn End of February - End of August	As necessary As necessary	Assumes spring sowing in the event of infestation of unwanted weeds i.e. docks, thistles, bristly ox tongue etc. Spot spray with Roundup or similar in late April/ early May. Note: Scarifying mimics the action of pasturing animals. (Note: For first 12 months following practical completion this is activity undertaken by installing contractor) Seeded embankments may require periodic re-seeding. Any failed grass will require overseeding.
Watering	Amenity Grassland	Ensure full wetted depth of topsoil	As necessary	As necessary	Areas should be watered as required during sustained periods of dry weather. (Note: For first 12 months following practical completion this is activity undertaken by installing contractor)
Fertiliser	Amenity Grassland	Apply organic fertilizer at recommended rate	Spring and Autumn	Twice a year	
Litter	Amenity Grassland	Grassland areas should be checked regularly for plastic bags, especially after strong winds, and removed	As necessary	Weekly	Essential prior to cutting.
Cutting	Amenity Grassland	- First cut: Mow to top grass (75mm) and leave arisings in situ - Spring cut: (75mm) - Summer cut: (30mm) - Late summer cut: (75mm) - Autumn cut: (75mm)	- Once during March - Four times during September - Twice during October	Once a year - Once every 10-14 days or as required to maintain a sward height between 50-75mm. - Weekly - Once every two weeks	Do not cut over winter unless temperatures are unusually mild - then a single cut would suffice - as growth becomes dormant below 6°C. See Page 11 for Differential Mowing Regime (Note: For first 12 months following practical completion this is activity undertaken by installing contractor)
Top dressing	Amenity Grassland	Apply to a depth of 5-6mm	November	Once a year	
Scarifying	Amenity Grassland	To a depth of 25mm	October to November	Once a year	
Spiking	Amenity Grassland	To a depth of 75mm	February to March	Once a year	
Rolling	Amenity Grassland	Consolidate grass and reduce frost heave	February to March	Once a year	
Hollows / bumps	Amenity Grassland	Level to BS 7370-3	February to March	Once a year	

Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Monitoring	1	1	1	1	1	1	1	1	1	1	1	1
Watering	N	N	N	N	N	N	N	N	N	N	N	N
Fertiliser			1							1		
Cutting			1						4	2		
Top Dressing											1	
Scarifying											1	
Spiking		1										
Rolling		1										
Litter Check	2	2	2	2	2	2	2	2	2	2	2	2

MAINTENANCE SCHEDULE ** N = As Necessary

5.3 MEADOW PLANTING

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Cutting	All seeded areas	Year 1: - Cut to 40-70mm if the sward is 100mm or above. If not, allow to continue growing. - Cut to 40-70mm - Cut to 40-70mm after flowering, ideally when the plants have set and shed their seeds. If a large area, cut sequentially to allow for any fauna to migrate to uncut area. Allow some regrowth before cutting other area. Alternative the area cut early between seasons as this will assist in the development of species diversity. Remove cut material to avoid introducing additional nutrients into the soil. Ongoing maintenance: - Cut to 40-70mm -Cut to 40-70mm after flowering... as per note above	6 weeks after sowing April/ May August/ September. No later than first week of October. April August/ September. No later than first week of October.		Assumes spring sown. Cutting in sections ensures all habitat is not changed in one go and it establishes a varied sward height. In the event of infestation of unwanted weeds i.e. docks, thistles, bristly ox tongue etc. Spot spray with Roundup or similar in late summer. Seeded embankments may require periodic re-seeding. Frequency variations should be incorporated into general meadow mowing regimes to create visual interest and to encourage flowering and biodiversity. This will also lower the maintenance carbon footprint.
Litter	All seeded areas	Grassland areas should be checked regularly for plastic bags, especially after strong winds, and removed	As necessary	Weekly	
Re-seeding	All seeded areas				Inaccordance with supplier information

MAINTENANCE SCHEDULE ** N = As Neccessary

Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Cut Back [First Year]				1					1			
Cut Back				1					1			

5.4 SHRUB AND HERBACEOUS PLANTING

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Pruning	Shrubs in planting beds	Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.	Autumn and spring	2 x per year	In accordance with good horticultural and arboricultural practice. (Note: For first 12 months following practical completion this is activity undertaken by installing contractor)
Herbaceous In general	Planting beds	Year three Lift, divide and replant	March/ April	1 x per 3 years	
Herbaceous		Various subject to species type: trim seed heads and tidy, trim tattered leaves before flowers appear, Trim tattered leaves, cut to 75mm above the ground.	February/ March	1 x per year	Do not cut down in Autumn as it removes overwintering habitat and removes the potential for frost bleached stems and structural seed heads. (Note: For first 12 months following practical completion this is activity undertaken by installing contractor)
Watering		Water regularly for first 12 months after planting.	As necessary	As necessary	The requirement to water is to ensure establishment and continued thriving for the duration of rectification period. Once established, watering needs should not exceed that gained naturally from precipitation, except during unusually prolonged hot or dry periods. (Note: For first 12 months following practical completion this is activity undertaken by installing contractor)
Mulching		Top up or renew mulch to a depth of at least 50mm immediately after herbaceous material is cut back	February/ March	1 x per year	(Note: For first 12 months following practical completion this is activity undertaken by installing contractor)
Weeding		Planting areas shall be kept free of grass and weed growth, and kept tidy by hand weeding		1 x per 3months	(Note: For first 12 months following practical completion this is activity undertaken by installing contractor)
Litter		The branches should be checked regularly for plastic bags, especially after strong winds, and removed.	As necessary	Weekly	

MAINTENANCE SCHEDULE ** N = As Necessary

Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Pruning			1						1			
Herbaceous General			1									
Herbaceous			1									
Watering	N	N	N	N	N	N	N	N	N	N	N	N
Mulching			1									
Weeding			1			1			1			1
Litter	N	N	N	N	N	N	N	N	N	N	N	N

NOTE: SUDS Health and Safety

As per Ciria RP992 'SuDS Manual Update':

"Safe working practices The risk of contaminated, stagnant water occurring in well designed SuDS components / schemes is very low, and the subsequent risk of a resultant health issue then occurring is even lower. Those most likely to be at risk will be maintenance staff, and safe systems of work should be observed to mitigate any remaining risk. Checking for open cuts and the use of nitrile gloves, waterproof plasters, or other skin coverings should be considered wherever working in or near any open water body, including SuDS.

For maintenance operatives, employers have a duty to employees to inform them about the risks of their work environment and to decrease the risk as far as is reasonably practicable. This includes personal protective equipment (PPE) provision and policy implementation based on risk assessment. Employees that work near water should be provided with a worker's card that can be presented to their doctor if symptoms that relate to waterbody exposure appear. This means they can be diagnosed and treated quickly, reducing the severity of infection."

BULB PLANTING

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Lifting and dividing	All Planting	Lift, divide and replant over large bulbs	As per species	1 x per 3 years	To start in year 3
Removal of dead foliage		Varies subject to species type: trim seed heads and tidy, trim tattered leaves before flowers appear Trim tattered leaves, cut to the ground etc. Note: Only cut back foliage once it has started to yellow to ensure that the bulb is replenished	Autumn or Spring	1 x per year	

5.5 HEDGES

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Cutting	All hedged areas	Trim to specified heights. Remove diseased, damaged, congested and crossing shoots. (1.2 is absolute minimum height at which hedges can be cut)	Autumn	1 x per year	New hedges will be first cut six years after planting and then every three years.
Thinning	All hedged areas	Thinning out 1/3 to 1/4 of the oldest branches	Autumn and Spring	Every 3 years	
Litter	All hedged areas	The branches shall be checked regularly for plastic bags, especially after strong winds, and removed.	As necessary	Weekly	
Monitoring	All hedged areas	Monitor hedgerow composition and species composition.	Autumn and Spring	As necessary	
Fertiliser	All hedged areas	Apply Organic fertilizer at recommended rate	Spring/Autumn	Twice a year	
Monitoring/ Inspection/Review	All hedged areas	Monitoring planting for death, damage and disease. Making good any losses with replacement planting stock. Re-plant any failed stock or re-specify any failed areas. Re-balance of growth, remove any over-rigorous species. Inspection for pests, vermin & plant diseases and remedial actions.	As necessary	Monthly	Planting is to be monitored and replaced or treated as necessary
Mulching	All hedged areas	Top up or renew mulch to a depth of at least 50mm	March/April	1 x per year	Mulch replenishment until close cover achieved
Management	All hedged areas	Management of the understorey at 5 and 10 + years onwards.	As necessary	1 x every 5 years	

MAINTENANCE SCHEDULE ** N = As Necessary, 1 = Single Occurance, 4 = Four Occurrences

Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Cutting										1		
Thinning			1						1			
Litter	4	4	4	4	4	4	4	4	4	4	4	4
Monitoring/Inspection	N	N	N	N	N	N	N	N	N	N	N	N
Mulching			1									
Management	N	N	N	N	N	N	N	N	N	N	N	N

5.6 TREE PLANTING

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Trees	All new trees	Year one inspection: -Cut back broken/diseased branches -Check for general health Years three to five inspection: -Cut back broken/diseased branches -Check for general health -Stakes to be replaced where necessary	August - February August - February	2 x per year 1 x per year As necessary	Removal of remaining stakes and shelters subject to monitoring at end of year 4
Watering	Newly planted trees	Water regularly for first 12 months after planting.		As necessary	
Litter	All trees	The branches should be checked regularly for plastic bags, especially after strong winds, and removed.	As necessary	Monthly	
Replacement	All trees	Replace as necessary.	November - March	As necessary	
Weeding	Newly planted trees	A circle 1500mm radius from the base of each tree shall be kept free of grass and weed growth.		As necessary	Herbicide with glyphosate is strictly prohibited
Arboricultural report	All Trees	It is recommended that all site trees are inspected by a qualified Arboriculturalist, and a recommendation report obtained every 5 years, to identify any health problems and arboricultural work requirements.	August	Year 5+	
Mulch	All Trees in grass	Maintain 1500mm diameter circle of mulch around each tree	As required		Ensure no sprawling grass growth into mulch area and keep mulch topped up as required. Ensure minimum 75mm depth / 1500mm diameter mulch around each tree at all times

MAINTENANCE SCHEDULE ** N = As Necessary

Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Inspection			1					1				
Watering			N	N	N	N	N	N	N	N		
Tree Replacement	N	N	N								N	N
Litter	N	N	N	N	N	N	N	N	N	N	N	N
Weeding	N	N	N	N	N	N	N	N	N	N	N	N
Arboricultural Reporting									1			
Mulch	N	N	N	N	N	N	N	N	N	N	N	N

6.1 General items

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Litter collection	Bins and all surfaces	Empty the bins and remove litter from paved and planted areas.	All year round	Weekly	Ensuring all recyclable waste is put into recycling bins
Bin cleaning		Wash and clean bins.	All year round	Once per month	
Fly tipping	Whole area	Check the site for fly tipping and depending on size of items bag and remove or arrange for removal to skip	All year round	Weekly	Target must be removed within 36 hours
Leaf collection	Under trees and windblown in the area	Sweep up leaf fall	All year round	Weekly	Adjust frequency to reflect leaf fall at different times of year or in spells of windy or frosty weather.
Detritus removal	Paving	Sweep to remove all dust and debris	All year round	As required	
Weed removal	Between paving and around base of trees	Hand weed areas of weed growth	March - November	As required	Herbicide with glyphosate is strictly prohibited

MAINTENANCE SCHEDULE ** N = As Necessary

Item	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Litter collection	4	4	4	4	4	4	4	4	4	4	4	4
Bin cleaning	1	1	1	1	1	1	1	1	1	1	1	1
Fly tipping	4	4	4	4	4	4	4	4	4	4	4	4
Leaf collection	1	1	1	1	1	1	1	1	1	1	1	1
Detritus removal	N	N	N	N	N	N	N	N	N	N	N	N
Weed removal			N	N	N	N	N	N	N	N	N	

6.2 HARD SURFACES

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Initial Maintenance	Flexibly laid paving	'top up' sand joints	All year round	Weekly	Top up until joints become semi impervious and the build up of surface detritus sets seals.
Initial Maintenance	Flexibly laid paving	Brush by hand	All year round	Weekly	Until joints become semi impervious. Mechanical sweepers, and in particular sweepers with high suction forces, should not be used as there is a real risk of further loss of jointing sand.
Cleaning	Flexibly laid paving	Clean all paving by hand. Do not vacuum machine due to sand bedding of paving units	All year round	Monthly	If detritus reduces the intensity of the colour of the material then this can be re-established by scrubbing with a biodegradable mild detergent e.g. washing up liquid, and hot water. Run off cleansing solution to be prevented from entering planted areas.
Cleaning – cont.	All paving	Attend to spillages and other arisings efficiently, adopting current H&S procedures regarding warning signs etc. Any surface contamination caused by spilt liquids (Coca-Cola, tea, coffee) should be removed using a neutral biodegradable detergent and thoroughly rinsed afterwards.	As necessary	Check weekly	Run off cleansing solution to be prevented from entering planted areas.
De-icing	All areas of pedestrian and vehicle traffic	Application of rocksalt and/or de-icing agents (e.g. urea, brine)	November - March	Check twice weekly	Run off rocksalt to be prevented from entering planted areas. All salt to be stored off site
Moss, lichens and algae	All areas of pedestrian and vehicle traffic	Treat with a proprietary weed or moss killer used in accordance with the manufacturers' instructions.	March - September	Check quarterly	Apply during a spell of dry weather. The washes work best if any thick growths are scraped off first and the wash is well brushed in. Ensure product suitable for site specific conditions and will not result in staining. Run off cleansing solution to be prevented from entering planted areas.
Rust Stains			All year round	Check weekly	Run off cleansing solution to be prevented from entering planted areas.
Oil Stains	All areas of pedestrian and vehicle traffic	Remove immediately with an absorbent material e.g. paper towels, cloth or absorbing granules. Do not attempt to wipe the stain as this will drive the oil into the surface of the units and spread it over a wider area. If the stain persists then an emulsifying degreaser should be employed. Brush the cleaner onto the affected area, leave for a period of time according to the manufacturer's instructions and then wash the emulsified oil away with plenty of clean water. Alternatively the surface can be scrubbed with a biodegradable detergent and hot water taking care to ensure that the strength of the detergent is not detrimental to the appearance of the paving.	All year round	Check weekly	For persistent oil staining, steam cleaning may have to be considered. Run off cleansing solution to be prevented from entering planted areas.

6.2 HARD SURFACES continued

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Bitumen Stains	All paving	Allow fresh bitumen to cool down before removing it with a paint scraper or similar. If it is particularly resistant, the use of ice to make the bitumen brittle may be required prior to scraping it from the paving. Any residue should be removed with an abrasive powder and finally the whole area rinsed with clean water.	All year round	Check weekly	
Fouling	All paving	Use deodorisers and digesters to deal with fouling.	As necessary	Check weekly	
Fly posting	All surfaces	Check for and remove posting.	As necessary	Check weekly	
Chewing gum	All paving	Remove chewing gum from all public areas so that none is evident. Newly discarded gum can be scraped off by using a mechanical scraper but hardened to be removed by both freezing the gum and chiselling it from the surface of the paving or utilising a hot water/steam cleaner.	March - September	Six monthly	For specific advice on chewing gum removal it is recommended that specialist contract cleaning companies be contacted directly for further details
Graffiti & Paint stains	All surfaces	Check for and remove graffiti from around the site. Fresh wet paint should be soaked up with an absorbent material without wiping the paint, as this will spread the stain. It should then be treated with a suitable solvent such as white spirit and then the area washed with a degreasing agent taking care in the disposal of the run-off material. Dried paint should be scraped off as far as possible and then an appropriate paint remover applied.	As necessary	Check weekly	Paint manufacturers may often be able to give more detailed advice on the removal of paint and graffiti. Therefore they should be consulted directly for specific recommendations.
Obstruction	Drainage channels and paved areas	Check for obstructions and remove. Clean drainage channels	All year round	Check weekly, clean every 6mths	
Epoxy & Polyester Stains	All surfaces	Areas of solidified epoxy or polyester resin can be removed by carefully burning off the area with a blowtorch. Care must be taken not to inhale any fumes given off. If, after burning, a black stain remains, this can be removed by scrubbing with detergent and hot water. For larger areas grit blasting may have to be considered, however the effect of such treatment on the micro texture of the surface should be carefully considered. It is advised that a small area be tested before any large-scale operations are undertaken.	As necessary	Check weekly	
Smoke, Fire and Tobacco Stains	All paved areas	Scrub with a biodegradable detergent and hot water.	As necessary	Check weekly	If the stain is persistent, hose with compressed air/water.

6.2 HARD SURFACES continued

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Beverage Stains	All paved areas	Removed by scrubbing the stain with detergent and hot water.	As necessary	Check weekly	If the stain is persistent, hose with compressed air/water.
Scuff Marks from Vehicle Tyres	All paved areas	Scrub area with detergent and hot water or steam clean.	As necessary	Check weekly	
Cement and Lime staining	All paved areas	Cement and lime deposits are generally insoluble and therefore require treatment by a suitable acid cleaner to fully remove them.	As necessary	Check monthly	Refer to H&S section of this document for guidance on the safe use of chemical treatments.
Damage	All paved areas	Inspected for any movement or deterioration and defects reported to the management	AYR	Monthly	

6.3 Street Furniture and Lighting

Item	Relevant areas/type	Operation	Timing	Frequency	Notes
Street furniture	Seating, Bollards, Door Hoops, Litter Bins, Canopies and Fencing	Check condition of and report any damage to the management.	All year round	Weekly	
Lighting	Columns	Clean if necessary to ensure optimum illumination. Replace bulbs as and when required	All year round	As necessary	Refer to H&S section of this document for methods of safe access and maintenance.
Cleaning	Timber items	Wash with soap or mild detergent and warm water followed by a clear water rinse. For stubborn stains apply a non-bleach cream (e.g. Cif*) with a paint brush and rub with a clean cloth or a soft plastic brush (car wash type) then rinse thoroughly with clean cold water.	All year round	As necessary	

7.1 MONITORING/REVIEW REGIME OVER THE 30 YEAR PERIOD

Monitoring reports to be submitted to the LPA in years 1, 2, 5, 10, 15, 20, 25 and 30 alongside results of monitoring utilising habitat condition criteria outlined below.

The enhancement of modified grassland and the creation of new modified grassland to reach a good condition (termed flowering lawn) shall be monitored to reach a good target value condition via use of the condition assessment criteria below.

Condition Assessment Criteria		Condition Achieved (Y/N)
1	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type. NB - this criterion is essential for achieving moderate condition.	
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	
4	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	
5	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	
6	Cover of bracken less than 20%.	
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	
Essential criterion 1 achieved (Y/N)		
Condition Assessment Result		Number of criteria passed Score Achieved x/□
Passes 6 or 7 of 7 criteria including passing essential criterion 1		Good (3)
Passes 4 or 5 of 7 criteria; OR Passes 4 or 5 of 7 criteria including passing essential criterion 1		Moderate (2)
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion 1		Poor (1)

Other neutral grassland would be created (wildflower area) and managed to reach moderate condition via use of the condition assessment criteria below

Condition Assessment Criteria		Condition Achieved (Y/N)	Notes/Justification
1	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. NB - This criterion is essential for achieving moderate condition for non-acid grassland types only.		
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.		
3	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.		
4	Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%.		
5	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.		
Additional Group (Non-acid types only)			
6	There are greater than 9 species per metre squared. NB - This criterion is essential for achieving good condition (non-acid grassland types only).		
Criterion 1 Achieved (Essential for good condition for non-acid grassland) (Y/N)			
Condition Assessment Result		Number of criteria passed Score Achieved x/□	
Passes 5 of 5 criteria		Good (3)	
Passes 3 or 4 of 5 criteria		Moderate (2)	
Passes 0, 1 or 2 of 5 criteria		Poor (1)	
Non-acid grassland Types			
Passes 5 of 6 criteria, including essential criterion 1		Good (3)	
Passes 3 or 4 of 6 criteria, including essential criterion 1.		Moderate (2)	
Passes 0, 1, 2 criteria of 6 criteria; OR Passes 3 or 4 criteria excluding criterion 1 and 6		Poor (1)	

The new native hedgerow shall reach a good condition by use of the criteria below.

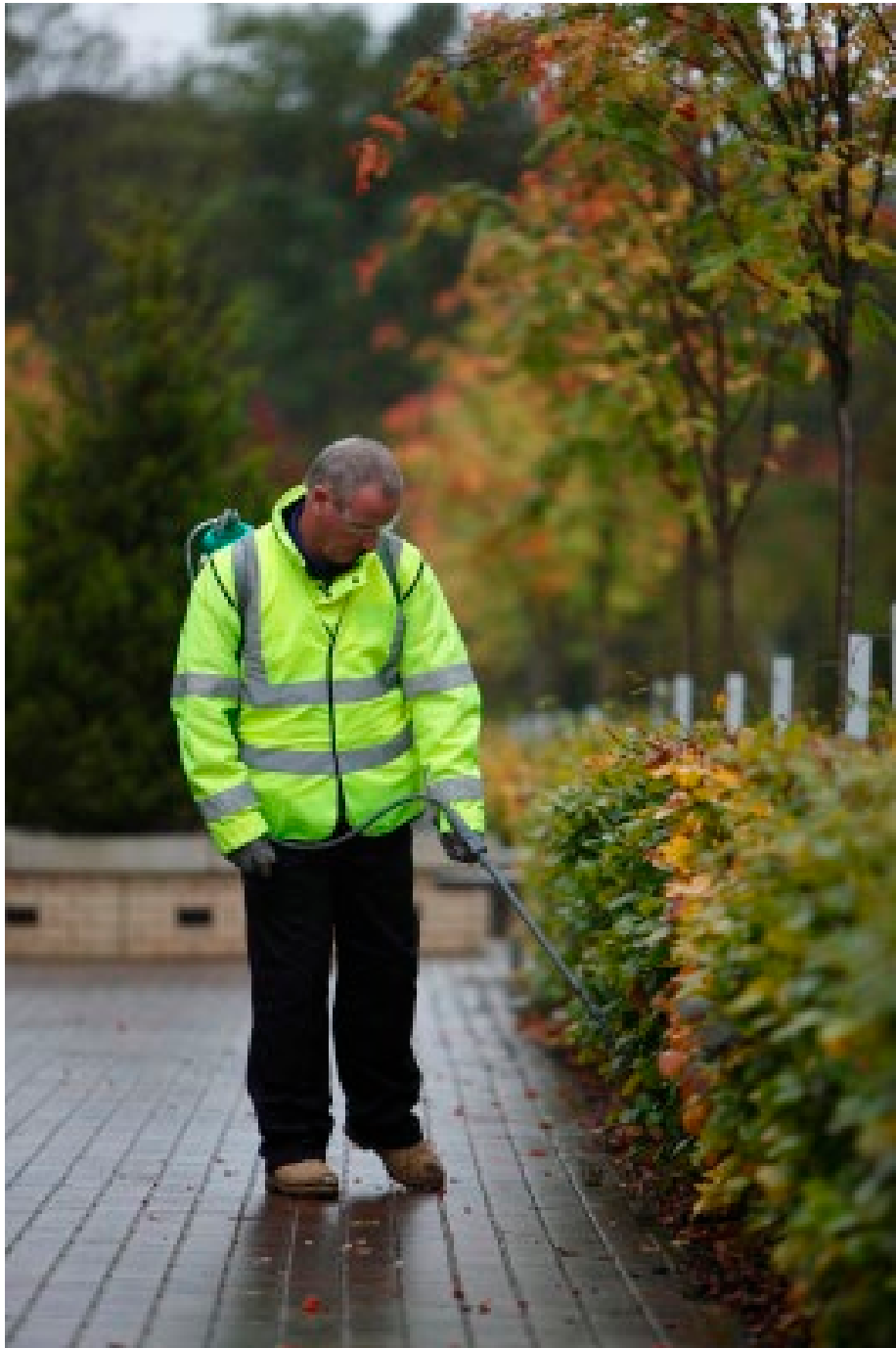
Condition Assessment Criteria				
A series of ten attributes, representing key physical characteristics, are used for this assessment. The attributes, and the minimum criteria for achieving a favourable condition in each, are defined. The attributes use similar favourable condition criteria to the Hedgerow Survey Handbook and the handbook is the recommended source of reference for assessing individual hedgerow attributes.				
Hedgerow favourable condition attributes				
Attributes and functional groupings (A, B, C, D & E)	Criteria (the minimum requirements for 'favourable condition'	Description	Condition Achieved (Y/N)	Notes/Justification
Core groups - applicable to all hedgerow types				
A1. Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).		
A2. Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice").		
B1. Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).		
B2. Gap - hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness, but are not subject to the >5 m criterion (as this is the typical size of a gate).		
C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least)	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedge. This criterion recognises the value of the hedge base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.		
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (Urtica spp.), cleavers (Galium aparine) and docks (Rumex spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.		
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.		
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).		
Additional group - applicable to hedgerows with trees only				
E1. Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	This criterion addresses if there are sufficient mature trees (within the scope of planning timescales) which are of higher value to biodiversity.		
E2. Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.		
Each attribute is assigned to one of five functional groups (A – E), as indicated in Table TS1-2 and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria according to the approach set out in Table TS1-3.				
The hedgerow condition assessment generates a weighting (score) ranging from 1-3, which is used within the biodiversity metric 3.1. The scores for each are set out in tables TS1-3 and TS1-4 below.				
TABLE TS1-3: Hedgerow condition assessment and weighting				
Condition categories for hedgerows without trees				
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2	Weighting (score)		
Good	No more than 2 failures in total; AND No more than 1 in any functional group.	3		
Moderate	No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & C2 = Moderate condition).	2		
Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 & B2 = Poor condition).	1		
Score achieved:				

The new tree planting shall reach a moderate condition by use of the criteria below

Condition Assessment Criteria		Condition Achieved (Y/N)
1	The tree is a native species(or more than 70% within the block are native species).	
2	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	
3	The tree is mature ² or veteran ³ (or more than 50% within the block are mature ² or veteran ³).	
4	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	
5	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark	
6	More than 20% of the tree canopy area is oversailing vegetation beneath.	
Number of criteria passed		
Condition Assessment Result	Condition Assessment Score	Score Achieved x/□
Passes 5 or 6 of 6 criteria	Good (3)	
Passes 3 or 4 of 6 criteria	Moderate (2)	
Passes 0, 1 or 2 of 6 criteria	Poor (1)	

7.1 POTENTIAL CONTINGENCIES

- Should a proposed habitat and/or target condition be concluded to be unachievable during the monitoring period the following shall occur.
- A detailed report shall be compiled to determine the reasons for the lack of achievability by the ecologist. It shall address the root causes of the issue and provide recommendations as to how the root causes could be altered.
 - The roost causes shall be addressed by all parties and a further attempt shall be made to achieve condition within the term period of 30 years.
 - This activity shall be fully reported upon by the appointed ecologist annually until target condition can be reversed.
 - Alternative areas for habitat creation will be examined and considered for feasibility.
 - If after these factors have been exhausted the LPA will be informed and if considered necessary by all parties off site mitigation will be required to the satisfaction of the LPA.



8.1 HEALTH & SAFETY

Certain cleaning methods described involve the use of chemicals. Therefore it is important that any safety warnings issued by the chemical suppliers should be carefully read and strictly adhered to at all times. In general the following precautions should be taken:

- Prior to maintenance/cleaning being undertaken a site specific risk assessment is to be carried out.
- Prior to any chemicals being used a COSHH assessment is to be undertaken.
- When using chemicals, protective clothing such as gloves, goggles, boots and overalls should be worn.
- Adequate ventilation is required when using chemicals in confined spaces.
- When using flammable materials cigarettes, naked flames and other sources of ignition should be carefully controlled.
- When diluting acids, ALWAYS add acid to water and not water to acid.
- Any clothing that is contaminated with chemicals should be disposed of safely.
- When using any chemicals, care must be taken not to damage, contaminate or stain any adjoining materials, landscaping or finishes.
- Care must be taken to protect personnel operating in the area of the cleaning from any injury or hazard created by the cleaning. The appropriate First Aid must be available on-site.

Before undertaking any cleaning operation a trial should be carried out on a small, preferably inconspicuous area, to determine the effect of the chemicals before treating a large area.

8.2 SAFE ACCESS AND MAINTENANCE

- Prior to any maintenance activities on site all contractors must submit a detailed method statement to the school for approval.
- All method statements must be written in line with the School's own Health & Safety Policy.