

Landscape and Habitat Management Plan Animal Management, T-Level (4712-50B) Rev: B

Client: Seven Architecture

Prepared by



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Landscape and Habitat Management Plan

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1.0 Introduction

1.1 General

TPM Landscape were commissioned by Seven Architecture to produce a Landscape and Habitat Management Plan for the proposed educational development of Animal Management, T-Level. This landscape management report has been produced to ensure that future management objectives are achieved for the longevity of the project following practical completion. This document will form part of the planning application submission and any future discharge of condition applications for the proposed development and once approved will provide guidance for the establishment, maintenance and future management of all external landscaped areas, planting around the site and ecological features.

1.2 Aims of the report

This report has been developed to establish long-term management objectives and practices for all of the external areas associated with the proposed development. The report presumes that all of the external elements have been built per the latest approved planning drawings:

- 4712 101 Landscape Layout & Planting Plan
- 4712 301 Typical Tree Pit Details in Soft Landscape

This Management Plan should also be read in conjunction with additional documents which address landscape and ecology measures. This includes the following:

- Preliminary Ecological Appraisal, Hopwood Hall College, Animal Management. Prepared by SEED Arboriculture Ltd. Reference No. 1697A-PEA-V1-B. Dated 3rd July 2024.

The management report provides 12-month schedules, which are to be applied to 5-year guidance and actions. It is considered that these actions will continue beyond the 5-year period to a minimum of 30 year period unless identified within the text of the report.

A clear understanding of the design aims and intentions will help to ensure that the landscape reaches maturity in the form in which it has been designed.

1.2 Site Maintenance and Responsibility

The client has an estate management team and site maintenance takes place.

The client is required to appoint a Landscape Contractor, whether that is the original installation contractor or a separate, competent and appropriately certified contractor. It is recommended that the landscape contractor is BALI registered.

Objectives

The overall objectives for the maintenance of the landscape include the following;

- Maintain all grassed areas as healthy lawns;
- Ensure that proposed and retained trees maintain a healthy and safe condition and are allowed to reach their potential form and characteristics;
- Keep all hard surfaced areas and paths in a good state of repair and free from any potentially dangerous arisings that could cause a slip or trip hazard or reduce visual quality;
- Ensure that all ecological enhancement features are looked after and maintained in a good condition in line with ecologist recommendations to encourage wildlife;
- Ensure that retained on-site habitats and new habitat creation are maintained for ecological benefit and provide a gain to biodiversity within the site and local area; and
- Ensure monitoring of habitats is undertaken for a minimum period of 30 years to ensure habitat success.

2.0 General Description

2.1 Existing Context

The site is located at Hopwood Hall College, Rochdale Road, Middleton, Manchester, M24 6XH. Situated approximately 2.7 km northwest of Middleton town centre, it encompasses an active college campus that spans several areas. The site is well integrated with adjacent woodland and grassland habitats, through which Trub Brook meanders. These natural surroundings are expected to provide essential shelter and food sources for local flora and fauna, enhancing biodiversity in the region.

2.2 Site Proposals

The site proposals entail a series of building demolitions and reconstructions, along with refurbishments of existing structures. The landscaping plan includes the introduction of locally native and species-rich habitats to offset the minimal loss of vegetation associated with the development. Ecological enhancement features (bat and bird boxes) are proposed within the development to improve, where possible, the biodiversity of the site and to enhance the living environment for the benefit of wildlife inhabitants.

2.3 Existing On-site Habitats to be retained

Below is a list of existing on-site habitats as identified in Preliminary Ecological Appraisal, Hopwood Hall College, Animal Management. Prepared by SEED Arboriculture Ltd. Reference No. 1697A-PEA-V1-B. Dated 3rd July 2024.

The proposed development seeks to retain existing habitats. These are strengthened with new habitat areas throughout.

Modified Grassland

3.1.9. A series of parcels of modified grassland were present within the surveyed area.

*3.1.10. Parcel 3 and 4 were grazed grassland areas which were heavily disturbed by animals, with bare ground areas. Species recorded within these parcels included; creeping buttercup (*Ranunculus repens*), mosses and rough meadow grass (*Poa trivialis*).*

*3.1.11. Parcel 1 contained a strip of modified grassland with bare ground patches and managed via strimming. Similar species recorded in Parcel 3 and 4 were recorded with the addition of rush (*Juncus* sp.), creeping thistle (*Cirsium arvense*), common dandelion (*Taraxacum* agg.), common daisy (*Bellis perennis*) and ragwort (*Jacobaea vulgaris*).*

*3.1.12. Two parcels of grassland were recorded within Parcel 2. The central parcel of grassland was strimmed and cut to a short sward height. Similar species recorded in Parcel 1 were noted with the addition of perennial rye grass (*Lolium perenne*). The southern parcel was tussocky, with no evidence of management and species recorded include rough meadow grass, cock's foot (*Dactylis glomerata*), ribwort plantain (*Plantago lanceolata*), common daisy, common mouse ear (*Cerastium fontanum*), perennial rye grass, hard rush (*Juncus inflexus*), Fescue sp., common dandelion, ragwort, germander speedwell (*Veronica chamaedrys*), herb Robert (*Geranium robertianum*), ground ivy (*Glechoma hederacea*), bulbous buttercup (*Ranunculus bulbosus*) and creeping thistle.*

Broadleaved Woodland

3.1.14. A parcel of broadleaved woodland was located to the east of Parcel 2. It comprised a series of mature trees, species recorded included sycamore (*Acer pseudoplatanus*), common beech (*Fagus sylvatica*), common lime (*Tilia × europaea*), goat willow (*Salix caprea*) and common ash (*Fraxinus excelsior*). The understorey comprised of rhododendron (*Rhododendron ponticum*), bramble (*Rubus fruticosus* agg), holly (*Ilex aquifolium*), yew (*Taxus baccata*) and boxleaf honeysuckle (*Lonicera pileata*).

3.1.15. Ground flora included similar species as recorded within the tussocky grassland parcel, wood avens (*Geum urbanum*) and common ivy (*Hedera helix*).

Talls Forbs

3.1.16. Tall forbs were located to the north of Parcel 1 and included willowherb (*Epilobium* sp.), bramble, common nettle (*Urtica dioica*) and hard rush.

Introduced Shrub

3.1.17. Introduced shrub was located within Parcel 2 in association with an adjacent residential property, located offsite. Species recorded included holly, silver birch (*Betula pendula*), common lungwort (*Pulmonaria officinalis*), Darwin's barberry (*Berberis darwinii*), bramble, dogwood (*Cornus sanguinea*), common ivy, and willow (*Salix* sp.).

Individual Trees

3.1.19. A series of individual trees were recorded within the site. The trees have not been plotted on the Habitat Map, however, please refer to the associated Tree Constraints Plan, produced by Seed Arboriculture, drawing reference; 697a-TCP-001-A. Tree species recorded included; sycamore, common lime and pedunculate oak (*Quercus robur*).

Native Hedgerow

3.1.20. A single hedgerow boarded the north of Parcel 4 (referenced as H1 within the Tree Constraints Plan).

It comprised entirely of common beech with limited ground flora due to grazing.

2.4 Proposed Habitat Creation

An ecology area is proposed along the existing barn and Meerkat area, incorporating retained on-site habitats such as individual trees. New habitats will include native trees, and evergreen hedge around the existing barn, along with reseeded with grass seeds to restore the field area where structures are being demolished in the Meerkat area.

Ecological enhancement features (bat and bird boxes) are proposed within the development to improve, where possible, the biodiversity of the site and to enhance the living environment for the benefit of wildlife inhabitants.

3.0 Health and Safety

The following potential hazards have been identified within the proposed development site, which may have implications for maintenance operations:

- Contractors working on the site should make themselves aware of the location of underground services, defining the exact locations with the Statutory Authorities prior to commencing works below the surface;
- Working in areas used by visitors; on foot, on bicycles, in wheelchairs and vehicles; ensuring surfaces are kept clear at all times and potentially dangerous tools or machinery are not left lying around.
- The use of chemicals known to be hazardous to humans and animals;
- Working at elevated positions;
- Lifting heavy objects and working with heavy machinery;
- The use of chainsaws, working at height and with heavy objects during tree works;
- The possibility that hazardous material may be deposited in or inadvertently left in areas requiring cleaning (glass, etc.)

Methods for reducing the potential site risks are well established and are common practice of competent contractors. The contractor is expected to identify the hazards associated with any maintenance operations they proposed, together with an assessment of the risks involved and methods for reducing the risks. The Risk Assessment should be recorded and retained for reference in the future if necessary.

3.1 Site Operations

All operations on site are to be carried out by suitably qualified operatives with appropriate safety clothing and equipment. The maintenance contractor is to adhere to the latest guidance on safe working practice, including information from the recognised industry body, the local authority and the government Health and Safety Executive. The maintenance contractor is to carry out all operations with regard to the safety and welfare of the general public, private and public property, domestic and native flora and fauna and Statutory Services.

3.2 Disposal of materials from site

All, rubbish, leaves, grass and general arisings removed from the site are to be deposited at a licensed tip and recycling facility in the appropriate section.

4.0 Hard Elements

Maintenance operations are to be carried out in order to provide a clean, inviting and safe environment for all users of the site. For the purposes of this report, it is assumed that all the works required by the planning approval have been carried out in accordance with the approved drawings.

All hard works to be installed under the recommendations of the manufacturer's instructions. Hard works should not be carried out in undesirable weather conditions.

4.1 Pedestrian Surfaces and Roads

Maintenance objective

Pedestrian surfaces and roads are to be maintained in a safe and clean condition free from any defects or debris that could potentially cause injury, inaccessibility or damage to vehicles. Surfaces are to be level and free from trip or slip hazards.

Inspections

A formal visual inspection is to be carried out by the maintenance contractor at 6 monthly intervals or following reports from the client / public that surfaces require repairing, cleaning or clearing following inclement weather. A report of the inspections and rectified works should always be logged.

An annual inspection of the paving jointing and overall uniformity should be carried out to ensure the stability of the footways is maintained.

Contractors Maintenance Operations

Surfaces are to be kept free of litter, mud, arisings, deleterious material, algae, hazardous obstructions and fly tipping. Surfaces are to be uniform in appearance, a level surface and constructed from a homogenous material, free from ruts, grooves, cracks, hollows and potholes (holes greater than 75mm in diameter and 10mm depth).

Paved areas and rights of way including those with a hoggin surface are to be repaired within 1 week of a reported fault, unless the potential hazard is severe (trip hazard) in which case the area is to be cordoned off and repaired at the earliest available opportunity.

All surfaces and foundations are to be repaired to the original specification, unless otherwise agreed with the service provider.

One operation per month (within month / months specified) - **1**

Two operations per month (within month / months specified) - **2**

Four operation per month (within month / months specified) - **4**

As required - **a/r**

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Pedestrian Surfaces and Roads													
Visual inspection of footways, roadways and paving areas				1						1			Carry out 6 monthly inspections, report to be logged; any faults reported should be rectified as required.
General cleaning of paving	1	1	1	1	1	1	1	1	1	1	1	1	Keep surfaces free of litter, leaves, mud, arisings and any hazardous objects. Sweep and remove any arisings, keep all areas weed free. Any build up of moss or algae should be treated as required to ensure surfaces are not slippy or dangerous.
Clean paved areas annually by relevant washing techniques for varying materials e.g. granite/concrete						1							(acid and bleach should not be used)
Apply herbicide if required						1				1			Apply to weeds if appear between paving, when weeds have been suppressed hand hoe out and refill mortar joints
Repair	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	Repair surfaces when reported or inline with faults as identified in the inspections report. Repair to original specification. Check grouting to paving and reinstate where necessary
Ensure water is drained from footways to prevent pooling				1						1			When specified or as necessary after prolonged periods of wet weather
Clear snow from pathways and roads	a/r	a/r	a/r								a/r	a/r	Clear snow following adverse weather (a/r) and apply suitable grit to key vehicle and pedestrian access routes (avoid plant areas).

One operation per month (within month / months specified) - **1**

Two operations per month (within month / months specified) - **2**

Four operation per month (within month / months specified) - **4**

As required - **a/r**

<u>Operation</u>	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Litter and Fly tipping													
Visual inspection of site				1						1			Carry out 6 monthly inspections, report to be logged; any faults reported should be rectified as required.
General Cleaning and clearance across site	1	1	1	1	1	1	1	1	1	1	1	1	Keep surfaces free of litter, leaves, mud, arisings and any hazardous objects. Sweep and remove any arisings.
Bin Emptying	1	1	1	2	2	2	4	4	1	1	1	1	

5.0 Soft Elements

For the purposes of this report, it is assumed that all planting has been carried out inline with the approved planning drawings and any failed plants or trees replaced by the original contractor at the end of the 12 months Rectification Period;

5.1 Existing Individual Trees and Broadleaved Woodland

Objectives

Trees will play an important role in providing structure to the landscape proposals and will provide a valuable asset to the site, provide screening and contribute to the visual amenity of the local area. Therefore, it is important that they are given the best chance of successful establishment.

Ensure that the trees are maintained in a safe condition and do not cause any obstructions on site or pose any health and safety risk (same applies to the off-site trees overhanging into the site). Ensure that the trees continue to thrive and to provide visual amenity to the area.

Works to trees will be carried out in accordance with British Standard BS 5837: Tree Protection Measures.

The maintenance operations will be reduced to a minimum to preserve the existing conditions for the benefit of wildlife, while still ensuring an attractive and tidy appearance. This buffer will contribute to the green space within the proposed development.

Inspections

All retained trees should be subjected to sound arboricultural management as recommended within section 8.8.3 of BS5837 *Post Development Management of Existing Trees*, where there is a potential for public access in order to satisfy the landowner's duty of care. Additionally, inspections annually and following major storms should be carried out by an experienced arboriculturalist or arborist to identify any potential public safety risks and to agree remedial works as required.

Maintenance Operations

Any tree works should be carried out between September-February to avoid the bird nesting season. Avoid pruning scrub, when full of berries, to preserve its ecological value and valuable food source to wildlife. It is the contractor's responsibility to ascertain if any trees are covered by Tree Preservation Orders, and if so to gain the appropriate consent from the local authority.

Health and Safety - PPE to be worn by landscape contractor and good working practice to be implemented when working within water or adjacent to watercourse and on steep embankments. Slippery surfaces to be made safe or accessed with additional caution. Wet / slippery surfaces to be cordoned off.

As all birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest, site clearance, tree felling, arboricultural works and vegetation removal (including enabling works) are to take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible, a targeted breeding bird nest scoping survey should be conducted prior to the start on site or an ecological clerk of works appointed.

Care should be taken in use of herbicides in the proximity to watercourse. Herbicides to be used in accordance with manufacturer recommendation.

One operation per month (within month / months specified) - **1**
 Two operations per month (within month / months specified) - **2**
 Four operation per month (within month / months specified) – **4**
 As required - **a/r**

<u>Operation</u>	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Existing Trees													
Visual inspection of trees									1				Inspect trees for signs of disease, damage or as required following adverse weather. replant if necessary
Remove dead, diseased or damaged limbs to promote a healthy shape to the hedge										1			Avoid bird nesting season
Prune to retain shape										1			Avoid bird nesting season
Remove and dispose of accumulation of winter leaves.											1	1	Check leaves for mammals before disposal as mammals may be in hibernation.

5.2 Existing Modified Grassland

Modified grassland areas are retained within the site.

Objectives

To create and maintain a biodiverse and balanced grassland that is free from invasive weeds for the benefit of wildlife and visual amenity. Provide a mix of long and short grass as habitat for birds, insects and small mammals.

Inspection

Grassland areas in general can be inspected as part of the regular maintenance operations.

Maintenance Operations

To avoid damage to species-rich grassland, do not:

- plough or reseed
- apply fertiliser,
- change any drainage, other than cleaning and maintenance
- use pesticides
- use herbicides
- change the soil pH
- compact the soil by grazing or using machinery when the soil is too wet
- supplementary feed livestock

Existing grasslands to be maintained through controlled cutting. Controlled cutting means cutting grassland at different heights and at different times of the season.

Controlled cutting will create good mosaic of sub-habitats, including areas of short turf, bare ground and long grass. It will help to produce a grassland structure with a range of sward height and provide more nectar and pollen sources for longer throughout the season.

To create a range of cut and uncut sward heights across the total area of grassland cutting dates and height must be varied.

Vary the cutting height within each area to avoid leaving large blocks at a uniform height. Create a rotational cutting plan for each separate grassland site. Leave uncut strips at least 2 metres wide around the edges of fields as a refuge for displaced wildlife.

Extend the cutting plan to cover the whole summer season. Aim to leave at least half the total area of grassland uncut, left to flower and set seed each season.

Cut between late July and mid September (the later you leave it, the more plants will get a chance to set seed). Ensure all the cuttings are removed annually, or at least every two or three years.

Birds, nests and eggs are protected by law. You must check the site before starting work. If you see signs of nesting birds, delay cutting until birds fledge.

One operation per month (within month / months specified) – 1

Two operations per month (within month / months specified) - 2

As required - a/r

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Existing Modified Grassland													
Inspection				1									Carry out an inspection to identify any damaged areas, excessive weed growth, poor grass cover etc which may require remediation works over the coming year.
Cut							1	1	1				Management should aim to achieve a good mosaic of sub-habitats, including areas of short turf, bare ground, long grass and a limited amount of scrub. To achieve this cut different parts of the grassland at different times of the year to create a more interesting mosaic. Aim to leave at least half the total area of grassland uncut, left to flower and set seed each season.
Cut edges				1	2	2	2	2	2	1			Edges to paths and shrub beds to be cut with a neat edge avoiding damage to the shrubs and tree trunks and the arisings removed from the beds or swept off the paths and disposed of in a licensed tip.
Reform edges				1				1					Twice a year the soft grass edges should be redefined with a half moon spade to form neat straight edges and any grass encroaching onto footpaths taken back
Remove fallen leaves, debris and litter	1	1	1	1	1	1	1	1	1	1	1	1	Remove prior to cutting (do not blow or sweep into adjacent planting beds)

5.3 Proposed Individual Trees

Objectives

Trees will play an important role in providing structure to the landscape proposals and will provide a valuable asset to the site, provide screening and contribute to the visual amenity of the local area. Therefore, it is important that they are given the best chance of successful establishment.

Inspections

Inspect on an annual basis when the trees are in full leaf to ensure that the trees are thriving, and record defects requiring remedial works.

Maintenance Operations

Newly planted trees take some time to establish, and until this occurs, they are subject to competition from weeds. Any weeds should be removed by hand from the base of each tree and 75mm deep mulch maintained around the trunk. For woodland areas, weed growth may be removed by applying a herbicide spray to the base of saplings during autumn or early spring before trees are in leaf.

If the trees show signs of poor growth or reduced vigour an application of the appropriate fertiliser can be applied. If the trees do not respond to a treatment of fertiliser, further investigations should be carried out, including the ground conditions for signs of compaction, contamination, poor quality topsoil. Remediate any problems uncovered with the soil. Should the remediation works not resolve the problem a replacement tree may need to be planted to replace the dead/dying tree.

During establishment, trees will require regular watering particularly during prolonged dry periods. Mulch should also assist in retaining moisture within the soil. Water the trees minimum once a week during periods of limited rainfall over May-September (during the first full growing season) ensuring that the soil is fully saturated. Ensure all irrigation pipes are free from debris. Water shall be applied at 40litres per individual tree. Where water restrictions apply (hosepipe bans, drought orders) an alternative supply of water shall be used if possible.

Tree ties should be inspected twice annually as part of the general maintenance visits and adjusted accordingly. Damaged ties or stakes should be replaced. When the trees are established and can support themselves, the ties should be carefully removed and the stakes cut down to ground level. This operation is likely to be required after 3 to 5 years dependant on establishment rates, stability and growing conditions. Underground tree guys, tree stakes and tree ties should be inspected twice annually as part of the general maintenance visits and adjusted accordingly. Damaged guys/ties should be replaced. Guys/ties will require adjusting as it is likely to take 3 to 5 years for the trees to establish dependant on stability and growing conditions.

Formative pruning to be carried out as required in line with *BS 8545:2014 Trees: from nursery to independence in the landscape, section G3 – Formative Pruning*, this will include pruning of dead or diseased branches. In such cases the tree branch should be pruned back (using a sharp clean knife) to an outward facing bud whilst maintaining the natural shape of the tree.

Once established, mature trees will be left unmanaged unless otherwise dictated for reasons of public safety. If some limb removal or complete removal is required then the cut limbs will be stacked as dead woodpiles, adjacent to hedgerows or woodland edges.

These works will be the sole responsibility of the contractor and at all times trees should be maintained in good health and in a safe condition.

One operation per month (within month / months specified) – 1.

Four operation per month (within month / months specified) - 4

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Proposed Individual Trees													
Visual inspection of trees					1								Inspect trees for signs of disease, damage or as required following adverse weather. replant if necessary
Slow release fertiliser					1								Only when necessary
Weeding/ mulch				1	1	1	1	1	1				Remove weeds and top up mulch (mulch topped up once annually) to retain a weed free around the base of each tree
Tree stakes and ties				1					1				Check and adjust, replace or remove as required until the tree has established. Check and re-adjust after strong winds. Remove in year 3-5 or as required.
Tree guying				1					1				Repair and adjustment. Check and re-adjust after strong winds
Watering					4	4	4	4	4				Water once a week during the growing season and as necessary in periods of drought only during the first 2 years until the trees have established.
Formative pruning		1								1			Formative pruning to be carried out as required, in line with BS 8545:2014, to include removal of dead or diseased branches.
Remove and dispose of accumulations of winter leaves											1	1	To be carried out to reduce risk of slipping and to maintain a tidy environment
Tree Replacements	1	1									1	1	Any plants that have failed or are damaged, dying or missing should be replaced to the original specification and planted within the next planting season

5.4 Proposed Evergreen Hedge

Objectives

The hedges will help to define spaces, create division between spaces and will offer definition and boundary treatments.

Inspections

Inspect the hedges annually when they are in fully leaf to ensure that they are thriving and record any gaps that need filling with additional plants or that require pruning to encourage growth. Record if there are any areas of significant failure to thrive which may require remedial works to the soil. Ensure the shelter guards are intact, installed correctly and are not restricting growth.

Maintenance Operations

Do not trim the top of the hedges until they have achieved the desired height of 200cm. Until the desired height has been achieved trim the sides of hedges to promote dense growth. Trim on an annual basis during the spring to promote bushy growth during year 1-4.

After the hedges have established lightly trim annually back to the desired height. To prevent weed growth maintain a 75mm depth of bark mulch at the base of the hedge until the hedge has established, fertiliser application should be avoided unless there are specific localised areas of poor growth.

During establishment, hedges will require regular watering particularly during prolonged dry periods. Water the hedge a minimum of once a week during periods of limited rainfall during May - September (the first full growing season) ensuring that the soil is fully saturated. Water from rain water harvesting systems should be used (when available) using a flexible hose and attachment.

Watering is required in the first two years after planting, which will be the responsibility of the developer before handover to the management company.

These works will be the sole responsibility of the management company.

One operation per month - **1**

Two operations per month - **2**

Four operations every month – **4**

As required – a/r

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Proposed Ornamental Hedges													
Watering of newly planted hedges			2	2	4	4	4	4	4	2			Water once a week during prolonged dry periods for the first 2 years until the hedge has established
Visual Inspection of hedges				1			1			1			Inspect hedges through growing season for signs of disease or damage every 3 months. Replant if necessary.
Inspect hedges after strong winds (as required)	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	Inspect hedges for signs of damage as required following adverse weather. Replant if necessary.
Replace dead and dying hedge plants to original specification during the next planting season	1	1									1	1	Any hedge plants that have failed should be replaced to the original specification and planted within the next planting season.
Remove and dispose of accumulations of winter leaves.											1	1	To be carried out to reduce risk of slipping and to maintain a tidy environment.
Weed control and tidying at base of hedge					1		1						Remove and dispose of weeds.
Hedge trim		1							1				Should not be required for the first few years, after which pruning should only include the removal of dead or diseased branches.
Fertiliser	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	Apply an appropriate fertiliser as required to aid establishment if the hedge is showing signs of stress (i.e. defoliation, die back)

6.0 Ecological Enhancement Features

Ecological enhancement features (bat and bird boxes) are proposed within the site. The inclusion of bird and bat boxes within the retained trees will enhance opportunities for roosting bats and nesting birds within the site.

All bat and bird boxes must be installed prior to occupation of the development and in line with manufacturer's specifications.

A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.

6.1 Ecological Features: Bat Boxes

Bat Boxes will be positioned in a southerly or south-easterly direction on the trees and be installed at a height between 4 to 6 metres. Bat bricks should be positioned where they will warmed by the sun and have a clear flightpath to / from the box (i.e. not obscured by trees or buildings). The boxes should also not be lit by external lighting, so positioning away from streetlights will be best. Example bat boxes include: 1FF Schweglar Bat Box (external) and Ibstock Enclosed Bat Box 'C' (integrated).

Objectives

To enhance roosting opportunities for bats that are known to be present within the local area.

Installation

The Ibstock Enclosed Bat Boxes 'C' bat tubes will be installed into the external walls of buildings, either flush or beneath a rendered surface. This makes them ideal for situations where you wish the box to be discrete as only the entrance hole will be visible. They can also be painted to match the building with an air permeable paint if desired.

The Schweglar Flat Bat Boxes 1FF will be positioned on proposed trees within the Ecological Area.

Maintenance

Once bats have inhabited a bat box, they may only be disturbed by a licenced bat ecologist. This to be carried out from the ground to ensure they remain in workable condition, there are not damaged or misplaced.

One operation per month (within month / months specified) - 1

<u>Operation</u>	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Bat Boxes													
Annual inspection carry out by a qualified ecologist											1		Inspection to be carried out by a licenced bat ecologist. Review the number and condition of bat boxes. Where box is found damaged, to be replaced to a similar model prior to the next March. If the box is found to be misplaced, it will be resituated.

6.2 Ecological Features: Bird Boxes

The bird boxes are durable and will enhance the site by providing nesting opportunities for a wide range of bird species that are known to be present within the local areas. Many of the targeted bird species will not currently be nesting on site due to a lack of suitable nesting opportunities.

Objectives

Bird boxes will be maintained in a workable condition to provide nest and roost habitat throughout the year.

Installation

Bird Boxes will be positioned away from direct sunlight and wind exposure, and to face vegetative habitat to provide shelter and food. The bird boxes will face in a northerly or easterly direction, thus avoiding strong sunlight and wet winds, and be placed so that birds have a clear flight path to the nest box. Example bird boxes include: 1B Schwegler Nest Box (26mm Hole, external) and Woodstone Built-in Swift Nest Box A (integrated on trees).

The bird boxes should be sited at a minimum height of three metres.

Maintenance

Bird boxes to be inspected once a year in November by qualified ecologist to ensure they remain in workable condition, there are not damaged or misplaced. During the inspection bird boxes to be cleaned of any debris. If the nest box is occupied (by bird or other animal), cleaning will be delayed until the next year. If the box is occupied by wasp or hornets, the box will be removed and replaced by a suitable box.

One operation per month (within month / months specified) - 1

<u>Operation</u>	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Bird Boxes													
Annual inspection carry out by a qualified ecologist											1		Inspection to be carried out by a qualified ecologist. Review the number and condition of bird boxes. During the inspection bird boxes to be cleaned of any debris. Where box is found damaged, to be replaced to a similar model prior to the next March. If the box is found to be misplaced, it will be resituated. If the nest box is occupied (by bird or other animal), cleaning will be delayed until the next year.

7.0 Handover Procedures

The maintenance period will run concurrently with the rectification period so it may be prevalent to have the same contractor for both the construction side of the operations and the Maintenance Contractor, to help avoid disputes. After the rectification period, the management and maintenance objections need to remain in place for the following operational years of the development site.

To ensure a smooth handover between management contractor companies a clear documented record of works will be required.

8.0 Monitoring and Review

In order to ensure that the habitats created and retained within the site reach and maintain their maximum value all landscaping should be monitored every year to check establishment. It is recommended that the inspection take place in July/August. The inspection will identify any issues and future landscape management objectives. Results of this monitoring should be used to inform annual changes to the management plan, and at the end of the five-year rolling work programme.

A programme of monitoring is to be established by appointed Maintenance Contractor that will allow the success of landscape management and maintenance operations to be assessed, and will feed into periodic reviews of this Landscape Management Report to ensure that management protocols remain appropriate to achieving the broad aim of conserving biodiversity on site.

At the end of year 5 there will be a wholesale review of this plan and any changes to it (including the removal/insertion of operations and/or the change in frequency of operations) will be agreed between the Contractor, Landscape Architect, Authorising Body (i.e. Management company) or the Local Authority LPA if required.