United Environmental Services Ltd
1 Booths Park,
Chelford Road,
Knutsford,
Cheshire
WA16 8QZ

www.ues.org.uk
enquiries@ues.org.uk
01565 757788

LANDSCAPE & ECOLOGICAL MANAGEMENT PLAN

At

Land at Ilk Street and Alpine Street
Clayton
Manchester
Greater Manchester
M11 4ER

NGR: (SJ) 387558 398986

Prepared for:	The Casey Group Ltd c/o MHA Architects Ltd
Written by:	Alasdair Grubb, UES Ecologist
Approved by:	Toby Hart, UES Managing Director
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1 INTRODUCTION

1.1 Author and qualifications

This report is compiled and written by Alasdair Grubb BSc, Ecologist for United Environmental Services Ltd (UES).

It has been verified by Toby Hart BSc MCIEEM PIEMA, UES Managing Director.

1.2 Objectives and scope

The proposed development includes the construction of 66 residential units and associated infrastructure. A preliminary ecological appraisal (PEA) has previously been undertaken at the site by UES (see report reference UES02374/01) and full planning permission has been granted by Manchester City Council (reference number: 122897/FO/2019).

This Landscape and Ecology Management Plan (LEMP) presents a scheme for enhancing the biodiversity and opportunities for wildlife on the site. It is compiled in order to address how the final site landscaping plans will be implemented, maintained and managed, and which organisations are responsible for these requirements. The LEMP aims to:

- Ensure that retained and created habitats are established and managed appropriately throughout their lifetime
- Provide habitats and features on site which promote protected or otherwise notable species and enhance the overall biodiversity and ecology of the site
- Ensure that management responsibilities are appropriately delegated and that specific measures are scheduled

It is compiled in order to address Condition 19 of the full planning permission, as granted by Manchester City Council. Condition 19 reads as follows:

"Prior to the occupation of the development hereby approved, a scheme for delivering biodiversity enhancement at the site shall be submitted to and approved in writing by the City Council as the local planning authority. The biodiversity enhancement measures shall be implemented in accordance with the approved scheme.

Reason - To ensure that landscape and ecology management is adequately in place and to ensure the longevity of new planting in different areas of the site and to comply with policy EN15 of the Core Strategy."

1.3 Structure of the report

This report sets out the baseline ecological information before detailing how the objectives of this LEMP will be achieved during and after the development.

It should be read in conjunction with Appendix 1, as well as the PEA report prepared for the site by UES in May 2018 (UES02374/01).

2 BASELINE ECOLOGICAL INFORMATION

2.1 Habitats

A PEA was undertaken by UES of the proposed development site, which included a walkover survey in May 2018 (see report reference UES02374/01). The following principle habitat types were characterised on site:

- A2.1 Dense scrub
- A2.2 Scattered scrub
- A3.3 Scattered mixed trees
- B2.2 Semi-improved grassland
- J1.2 Amenity grassland
- J1.3 Ephemeral / short perennial
- J1.4 Introduced shrub
- J2.4 Fence
- J4 Bare ground
- J5 Hardstanding

Further information on the characteristics of these habitats is available in the PEA report (reference UES02374/01). The results of the ecological surveys highlighted the following species and / or habitats as potential issues and constraints on site:

- Designated sites
- Bats
- Breeding birds
- Invasive species
- Trees

2.2 Designated sites

The closest statutorily protected site is Clayton Vale Local Nature Reserve (LNR), which lies directly to the north of the proposed development site. Provided that best practice measures are employed to minimise disturbance of this LNR, including protecting the roots of any trees which may extend onto the proposed development site, the LNR is unlikely to experience any negative impacts associated with the development.

The proposed development site also lies within an Impact Risk Zone of Hollinwood Branch Canal Site of Special Scientific Interest (SSSI) and Rochdale Canal SSSI, however this type of residential development at this distance from the protected sites does not trigger the need for Natural England to be consulted on the planning application. No impacts are envisaged on these sites as a result of the proposed development.

Given the distances from site, the scale of development and intervening habitats, it is also considered unlikely that the proposed development will have any direct or indirect impact on any other local designated sites.

2.3 Bats

There are no buildings on site which could be used by roosting bats. However, two weeping willow trees on site contain snapped branches which provide low quality potential roosting features for bats. No further surveys are required, but soft-felling techniques should be used if any arboricultural works are to be undertaken on the trees, as a precaution to minimise any potential risk of harm.

The scrub, trees, introduced shrub and grassland habitats on site will provide support a source of invertebrates for bats to forage. Inappropriate landscaping could also result in the severing of commuting corridors used by bats as well as the loss of foraging habitats.

2.4 Birds

Areas of dense scrub, introduced shrub and scattered trees on site provide suitable habitat for foraging, roosting and nesting birds. Without mitigation the removal of trees and vegetation on site could have a negative effect on breeding birds.

2.5 Invasive species

Giant hogweed *Heracleum mantegazzianum* and Japanese knotweed *Reynouta japonica* are present on site. Japanese knotweed is listed under Schedule 9 of the Wildlife and Countryside Act 1981, and giant hogweed is listed under Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019. As such, it is an offence to plant or otherwise cause either of these species to grow in the wild.

2.6 Trees

There are a number of trees on site which vary in condition and maturity. They should be retained where possible, or replaced as part of a detailed landscaping plan.

3 LANDSCAPING AND HABITAT MANAGEMENT

Each habitat on site will require a certain level of establishment, maintenance and monitoring to ensure that they are providing the ecosystem function required of them. Section 3.1 details the habitats being created, and specific management measures for each habitat. The management responsibilities and mechanisms to ensure compliance are explained in section 3.2, and finally the management measures are summarised in the management schedule in section 3.3.

3.1 Habitat management

3.1.1 Scattered broad-leaved trees

The landscaping proposals for the site have been designed to include the planting of scattered trees and tree lines to compensate for the loss of scattered trees on site. A total of 24 scattered trees are due to be planted on site which include a mixture of amenity 'focal point' trees. Proposed trees species that will be planted include:

- 4 x Serviceberry - *Amelanchier arborea* 'Robin Hill'
- 4 x Broad-leaved cockspur thorn - *Crataegus prunifolia*
- 5 x Tea crab apple - *Malus hupehensis*
- 11 x Swedish whitebeam - *Sorbus intermedia* 'Brouwers'

Newly planted trees should be staked to aid growth and they should then be protected from deer, squirrel or rabbit damage using tree spirals or guards. For the first growing season following planting, vegetation within a one metre diameter of the base of each tree should be treated by the application of a glyphosate-based herbicide by knapsack sprayer, by an operative holding PA1 and PA6 licences, in order to reduce competition from weeds and grasses. This should first be carried out in April and throughout the following summer in response to new weed growth. Care must be taken to avoid spray drift onto the leaves or bark of the newly planted tree. Alternatively, a mulch material such as chippings or bark can be laid around the base of the tree within a one metre diameter.

Once established, trees will then require little management in the future, unless specifically addressing problems or damage to individual specimens. Branches should be removed only when they pose a risk to the health and safety of people or a property. Arboricultural works should be undertaken outside of the breeding bird season and should not be undertaken from March to August inclusive, unless a nesting bird check is undertaken immediately prior to the works by a suitably qualified ecologist. If any specialist works are required then an approved arboriculturalist should be appointed.

The planting of these trees will compensate for the loss of scattered trees on site. It will have a bottom-up enhancement on other taxa due to the foraging, nesting and roosting opportunities that newly planted trees will provide. Once established, trees will benefit wildlife by:

- Providing seeds, nuts and fruits for foraging birds and mammals.
- Attracting invertebrates which in turn benefit foraging birds, bats and other mammals.
- Providing habitat linkages across the site for commuting birds and bats, particularly along the north-western site boundary.
- Providing nesting and roosting opportunities for birds.

- Potentially provided roosting opportunities for bats if cracks and other features establish.

3.1.2 Planted hedgerows

Hedgerows will be planted across the site, using a mix of three species:

- Holly - *Ilex aquifolium*,
- Beech - *Fagus sylvatica*
- Wild privet - *Ligustrum vulgare*

During the first growing season the newly planted hedges must be well watered particularly during dry periods. A similar effort of weed suppression as detailed in section 3.1.1 should be carried out at the base of newly planted hedgerows during the first two growing seasons.

The newly planted hedgerows must have an initial prune within the second year after planting to encourage dense, bushy growth. This should be undertaken in late winter (January to February), when birds are not nesting and so that the fruits of the trees have been left as a food source for birds over the majority of winter.

The majority of the planted hedgerows form boundaries of the residential properties. After the initial planting and pruning, these shall be managed as required by residents, for amenity purposes.

For hedgerows that aren't being managed for amenity purposes e.g. in garden; after the initial prune, trimming must be undertaken every 3 years in January to February. The flowers and fruits on the most common hedgerow species develop on 2-3 year old wood and therefore trimming more frequently than this will reduce the wildlife value. Growth should not be left untrimmed for longer than 3 years however, as the woody growth will become too thick to be cleanly trimmed. A tall thick hedge with good growth at the base is optimal for wildlife (e.g. 2-3 metres tall by 2 metres wide).

The newly planted hedgerows will provide good suitability terrestrial habitat for a variety of wildlife. They will provide foraging and communing opportunities for common amphibian species and mammals. They will also provide nesting and foraging opportunities for birds.

3.1.3 Residential gardens, ornamental shrubs and herbaceous border planting

The residential gardens and areas of ornamental shrub and herbaceous border planting on site can be managed by residents or the designated management company as deemed appropriate. This habitat type is of limited value to wildlife and as these areas are likely to be frequently disturbed by residents through recreational activities, encouraging wildlife into these areas may cause unnecessary impacts on the wildlife and conflict with residents. They will therefore be managed for primarily amenity purposes.

3.1.4 Native scrub planting

The landscaping proposals include the planting of a stand of native species scrub in the south-eastern corner of the site. Species will include:

- Field maple - *Acer campestre*
- Hazel - *Corylus avellana*
- Hawthorn - *Crataegus monogyna*
- Holly - *Ilex aquifolium*
- Blackthorn - *Prunus spinosa*
- Dog rose - *Rosa canina*
- Guelder rose - *Viburnum opulus*

The newly planted scrub species should receive minimal management in the first 5 years after planting to allow them to mature and reach a sufficient size. After the scrub plants have matured, trimming of the scrub species should be undertaken every 3 years in January to February. The flowers and fruits on the majority of these species develop on 2-3 year old wood and therefore trimming more frequently than this will reduce the wildlife value. Any management of the scrub should be undertaken in late winter (January to February), when birds are not nesting and so that the fruits have been left as a food source for birds over the majority of winter.

3.1.5 Additional habitats

Bird boxes

The areas of scrub, ornamental shrub planting and the newly planted trees, will provide potential nesting habitat for birds, particularly when the trees reach a maturity where fissures and cavities can develop. Additionally, bird boxes will be affixed to suitable buildings to provide an enhancement in the availability of nesting habitat on the site. The proposed bird boxes are suitable for the species of birds recorded on site during the ecological surveys, as well as species which are likely to be present locally. The type and number of boxes to be fitted are specified below:

- Schwegler 1SP House sparrow terrace x 4 – Targeting house sparrow *Passer domesticus*
- Schwegler 1B (26mm entrance hole) nest box x 4 – Targeting smaller tits
- Schwegler 1B (32mm entrance hole) nest box x 4 – Targeting tits and house sparrow

Alternative models can be used if required (e.g. the specified models are out of stock), however any proposed changes must be agreed with UES to ensure that the boxes used provide opportunities for a range of species.

Bird boxes should be fitted at a height of between three and six metres, on a northern or eastern aspect to avoid the strongest winds. Proposed bird box locations are shown on the bat and bird box plan at Appendix 1.

Bat boxes

Bat boxes will be affixed to suitable parts of buildings to provide an enhancement in the availability of roosting habitat on site. The proposed bat boxes are suitable for the species of bats which are likely to be present locally. The type and number of boxes to be fitted are specified below:

- Schwegler 1FF x3 – Robust roosting and nursery bat box for inaccessible locations
- Schwegler 1FQ x2 – Robust roosting and nursery bat box

- Schwegler 1FF x2 – Suitable shelter for a small number of bats
- Schwegler 1WQ x1 – Robust bat box for both summering and wintering bats

Alternative models can be used if required (e.g. the specified models are out of stock), however any proposed changes must be agreed with UES to ensure that the boxes used provide a range of roosting opportunities.

Bat boxes should be fitted at a height of at least 5 meters, on a southerly aspect, with no clutter around the entrance by surrounding branches. Proposed bat box locations are shown on the bat and bird box plan at Appendix 1.

Once bats have inhabited a bat box, they may only be disturbed by a licenced bat ecologist.

3.2 Responsibilities, monitoring and remedial measures

The responsibility for ensuring that the initial habitat creation works (tree, scrub and shrub planting and installation of bat and bird boxes) lies with the contractors appointed to carry out those works at the time of the development. They will be responsible for ensuring that the habitat creation works are carried out to in accordance with this LEMP.

Subsequent management of the habitats on site will be the responsibility of the appointed management company of the housing development. They must ensure that the ongoing measures detailed within this LEMP are implemented. They will also be responsible for monitoring the establishment of habitats as well as monitoring them for any changes affecting their quality or function.

3.3 Management schedule

The below table summarises the management requirements and responsibilities detailed in the previous sections and forms a management schedule that should be adopted for at least ten years following the development works. This table should be read in conjunction with the previous sections, which include more detail which should not be overlooked.

Table 1 – 10 year plus management plan and schedule

ACTIVITY	DESCRIPTION	TIMINGS
Initial works – carried out by appointed contractors		
Initial arboricultural works	Following the recommendations of arboricultural consultant	During the development - September to February. If not possible, then a bird nest scoping survey should be carried out immediately prior to the works by a suitably qualified ecologist.
Tree planting	Including use of stakes, spirals or guards and treatment of vegetation at base of trees.	During the development, although planting between October and April is preferred.
Hedgerow planting	Use of stakes if required and regular watering after initial	During the development, although planting between

	planting. Treatment of vegetation at base of plants.	October and April is preferred.
Scrub and ornamental shrub planting	Use of stakes if required and regular watering after initial planting. Treatment of vegetation at base of plants.	During the development, although planting between October and April is preferred for woody species. Herbaceous species should be planted in between March and April.
Installation of bird and bat boxes	Installation of bird and bat boxes as described above in section 3.1.6 and as per ecological enhancements plan at Appendix 1.	During the development.
Ongoing management – carried out by the appointed management company		
Arboricultural works / tree pruning	To address specific health and safety risks	September to February. If not possible, then a bird nest scoping survey should be carried out immediately prior to the works by a suitably qualified ecologist.
Residential hedgerow pruning	Pruning of hedgerows in residential gardens, for amenity / aesthetic purposes.	As required by residents
Non-residential hedgerow pruning	Pruning to encourage bushy growth.	Initial prune within second year from planting. Thereafter, prune every 3 years. All hedge pruning to be conducted between January and February.
Scrub pruning	Pruning to encourage bushy growth.	No pruning within the first 5 years after planting. Thereafter, prune every 3 years. All pruning to be conducted between January and February.

4 CONCLUSION

Once implemented, the landscaping and ecological measures will provide an enhancement to the ecological value of the site. The bottom-up approach to improving the biodiversity on site will ensure that the habitats on site can support a range of invertebrate species and provide other food sources, which will then in turn benefit fauna further up the food chain. These landscaping proposals also ensure that any habitats which are to be lost to facilitate the development are appropriately compensated for. This is in accordance with section 109 of the NPPF, which states that developments should contribute to and enhance the natural and local environment.

APPENDICES

Appendix 1 – Bird and Bat Box Plan

Box locations key:

- 1FF bat box
- 1FQ bat box
- 2FE bat box
- 1WQ bat box
- 1SP House sparrow terrace
- 1B Bird box (32mm)
- 1B Bird box (26mm)

