

**LAND AT TATENHILL LANE, BURTON ON
TRENT**

**LANDSCAPE AND ECOLOGICAL
MANAGEMENT PLAN**

P/2017/01110
Received 29/08/2017

A Report to: Lioncourt Homes Ltd

Report No: RT-MME-124525

Date: February 2017



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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

Report Version	Date	Completed by:	Checked by:	Approved by:
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The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In February 2017 Lioncourt Homes Ltd commissioned Middlemarch Environmental Ltd to produce a Landscape and Ecological Management Plan (LEMP) in order to ensure the long-term biodiversity value at the site of a proposed residential development at Tatenhill Lane, Burton on Trent. This management plan is required to discharge Condition 18 of planning application P/2013/01160, which states that:

No development shall take place until a long-term management plan for habitats within the site has been submitted to and approved in writing by the Local Planning Authority. The habitats shall thereafter be managed in accordance with the approved plan.

Middlemarch Environmental Ltd previously carried out an Extended Phase 1 Habitat Survey at 78 & 80 Tatenhill Lane, Burton on Trent in 2013 (Report RT-MME-113555-01). At the time of this survey, it was understood that these two properties and their respective gardens were to be demolished and removed in order to provide an access into a proposed residential development situated to the south and south-east of the properties.

Prior to this, in 2010 and 2011, Middlemarch Environmental Ltd completed a suite of baseline ecological surveys at the adjoining proposed development plot, comprising:

- Extended Phase 1 Habitat Survey (Report RT-MME-107126, April 2010);
- Reptile Survey (Report RT-MME-107305-01, June 2010);
- Nocturnal and Dawn Bat Surveys (Report RT-MME-107305-02, June 2010);
- Great Crested Newt Habitat Suitability Index Assessment (Report RT-MME-107305-03, June 2010);
- Japanese Knotweed Survey (Report RT-MME-107305-04, June 2010); and,
- Great Crested Newt Survey (Report RT-MME-109617, May 2011).

It is understood that together, these previously surveyed plots of land form the proposed development site which is the subject of this LEMP.

1.2 SCOPE OF THE MANAGEMENT PLAN

This LEMP is designed to provide information regarding the long term management of landscape and ecological habitat features to be retained and created on site. It covers a period of 10 years, and contains the following information:

- Chapter 2: Existing Ecology
- Chapter 3: LEMP Context
- Chapter 4: Landscape and Ecological Management Proposals
- Chapter 5: Implementation, Monitoring and Review
- Chapter 6: Drawings

The LEMP is a live document and may therefore be subject to review based on the findings of monitoring of the success of initial management. It is anticipated that at the end of the period covered by this plan a new LEMP will be compiled based on the findings of monitoring and in accordance with the best practice principles. As this is a strategic LEMP it is anticipated that detailed plans for each phase of the development will be provided with each reserved matters application.

1.3 DESCRIPTION OF DEVELOPMENT

The Ecological Masterplan (Base Architects Drawing BA445-021) provided by the client indicates that the site is to be developed for residential housing and associated gardens, access infrastructure and small areas of green open spaces.

1.4 DOCUMENTATION PROVIDED

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.1.

Document Name / Drawing Number	Author
Ecological Masterplan / BA445-021	Base Architects

Table 1.1: Documentation Provided by Client

The Ecological Masterplan referred to in Table 1.1 is provided in Chapter 6.

2. EXISTING ECOLOGY

2.1 SITE DESCRIPTION

The site is located on the south-western outskirts of Burton upon Trent in Staffordshire, approximately 200 m south-west of the B5018/A38 junction and centred at National Grid Reference SK 217 211. The site comprises a roughly rectangular field, with the plot previously occupied by 78 & 80 Tatenhill Road extending slightly beyond the north-western corner of the site. Overall, the site occupies an area of approximately 2.6 ha.

At the time of the 2010/2011 surveys, the main site area was dominated by poor semi-improved grassland habitat, with marginal areas of tall ruderal and scrub habitat present. The site boundaries comprised mixed hedgerows, with a variety of fences along the northern boundary. The plot previously occupied by 78 & 80 Tatenhill Road consisted of a large bungalow with formal gardens to front and rear, together with some small workshop units adjacent to the southern boundary of the rear garden. The area was enclosed by mixed formal boundaries of wooden fences, ornamental hedgerows and brick walls.

Residential properties along Tatenhill Lane are located immediately adjacent to the north of the main site area. To the west is the Trent & Mersey canal with farmland beyond. To the south/south-west are the outskirts of Branston Water Park. A former area of gravel extraction now reinstated as a general amenity area for the public. To the east is a narrow strip of woodland with adjacent area of light industrial usage.

2.3 HABITATS

At the time of the Extended Phase 1 Habitat Survey of main site (Report RT-MME-107126), completed in March 2010, the following habitats were identified on site:

- Boundaries;
- Poor semi-improved grassland; and,
- Tall ruderals.

At the time of the Extended Phase 1 Habitat Survey of 78 & 80 Tatenhill Road (Report RT-MME-113555-01), completed in February 2013, the following habitats were identified on site:

- Amenity grassland;
- Buildings/hard surfaces;
- Boundaries;
- Introduced shrubs;
- Ponds; and,
- Scattered trees.

2.4 IMPACT OF DEVELOPMENT

Although all poor semi-improved grassland, tall ruderals, amenity grassland, buildings/hard surfaces and introduced shrubs will be lost to accommodate the proposed development, these habitats are considered to be of low ecological value. The pond located within the 78 & 80 Tatenhill Road will be lost, but a number of new ponds designed specifically for wildlife will be created around the peripheries of the proposed development. It is understood that higher value habitats including boundary hedgerows and associated trees are to be retained, enhanced and incorporated into the landscaping scheme for the site.

In addition, a number of habitat features are to be created. Management proposals for the retained and created habitat features are outlined in Chapter 3 and specific objectives and management prescriptions are provided in Chapter 4.

3. LANDSCAPE AND ECOLOGICAL MANAGEMENT PLAN CONTEXT

3.1 FEATURES TO BE MANAGED

Table 3.1 provides a summary of the landscape and ecological features on site for which management proposals are provided in this report. The locations of these features are illustrated on the Ecological Masterplan (Base Architects Drawing BA445-021) in Chapter 6.

Habitat	Description
Existing scattered trees	The majority of existing trees, associated with boundary hedgerows, are to be retained.
Proposed scattered trees	Trees to be planted within green open spaces. Where feasible, native seed/fruit bearing species will be planted within landscaped areas.
Existing hedgerows	Boundary hedgerows are to be retained and enhanced and incorporated into the landscaping scheme.
Proposed hedgerows	Where feasible, mixed native hedgerows will be planted along access routes and along residential property boundaries.
Proposed wildflower meadow	Wildflower areas will be created within areas of green open space and adjacent to proposed pond features, using a seed mix such as Emorsgate EL1. A full species list is provided in Section 4.4.
Proposed pond features	A series of ponds are to be created around the site peripheries. A full list of plant species suitable for planting within the ponds is provided in Section 4.5.
Proposed shrub and amenity planting	Small areas of ornamental shrubs and/or herbaceous perennials will be planted adjacent to residential properties.
Proposed amenity grassland	Amenity grassland areas, associated with access routes and residential properties, will be created across the site.
Additional proposed habitat features	Habitat piles / refugia / hibernacula, comprised of piled logs / brash material will be created for invertebrates and amphibians along the southern side of the site, as well as east / south-eastern side, adjacent to the swales. Bird / Bat Boxes are also to be installed, located on trees throughout the site.

Table 3.1: Summary of Landscape and Ecological Features to be Managed

3.2 ECOLOGICAL VALUE OF FEATURES TO BE MANAGED

This section outlines the ecological value of each of the landscape and ecological features to be managed, and indicates whether they provide a contribution to national or local biodiversity targets.

Existing and Proposed Scattered Trees

Existing mature trees may provide suitable features for roosting bats and the existing trees associated with the boundary hedgerows contribute to a diversely structured habitat of value to a range of species. The newly planted trees will contribute towards the establishment of a varied mosaic of habitats and provide valuable habitat for a range of invertebrate and bird species.

Existing and Proposed Hedgerow

Ancient and species-rich hedgerows are an ecologically important habitat on both a local and national scale, being a Habitat of Principal Importance in England. Hedgerows act as important wildlife corridors and creation and enhancement of hedgerows within developments provide a more integrated landscape-scale approach to biodiversity conservation.

Wherever feasible, existing boundary hedgerows are to be retained and enhanced, whilst new hedgerow will be planted along access routes. Newly created hedgerow within the site is likely to take some time to provide an established mature wildlife corridor around the site.

Proposed Wildflower Meadow

The wildflower and grass species proposed to be sown will contribute towards creating species-rich grassland areas, particularly adjacent to existing habitats of value such as hedgerows, providing valuable wildlife corridors around the site peripheries. In addition, wildflower grassland provides a valuable habitat resource for a range of invertebrate species, which in turn provide a valuable foraging resource for a variety of birds, mammals and herpetofauna.

Proposed Ponds

The proposed ponds will be designed to be of value to a range of species, including amphibians and invertebrates. Ponds are listed as a Habitat of Principal Importance in England. The ponds are to be created around the site peripheries and with appropriate management these can become valuable ecological features. Ponds have the potential to support protected species such as great crested newt *Triturus cristatus* and grass snake *Natrix natrix*, and can also provide valuable foraging areas for bats. The created ponds will have good habitat connectivity to other valuable habitats on the site.

Proposed Shrub and Amenity Planting

Ornamental shrubs do not meet any national or local biodiversity criteria, however they provide valuable habitat for nesting birds and pollinating insects, in addition to providing cover for mammals.

Proposed Amenity Grassland

Amenity grassland does not meet any national or local biodiversity criteria, although planting of low growing wildflowers will enhance this habitat for a range of invertebrates.

Additional proposed habitat features

Hibernacula features will provide additional habitat for a range of amphibians and invertebrates, some of which are Species of Principal Importance in England. They may also provide habitat for the species listed on the local BAP, such as grass snake and great crested newt.

Bird and bat boxes will also help to provide habitat to protected species and priority BAP species, such as a common pipistrelle *Pipistrellus pipistrellus*, noctule bat *Nyctalus noctula* and house sparrow *Passer domesticus*.

4. LANDSCAPE AND ECOLOGICAL MANAGEMENT PROPOSALS

4.1 INTRODUCTION

This chapter provides aims and objectives of management, and outlines specific management prescriptions, for each of the following features:

- Existing and Proposed Scattered Trees (Section 4.2);
- Existing and Proposed Hedgerow (Section 4.3);
- Proposed Wildflower Meadow (Section 4.4);
- Proposed Pond Features (Section 4.5);
- Proposed Shrub and Amenity Planting (Section 4.6);
- Proposed Amenity Grassland (Section 4.7);
- Additional Proposed Habitat Features (Section 4.8).

4.2 EXISTING AND PROPOSED SCATTERED TREES

4.2.1 Aims and Objectives

Aim: Ensure protection of existing trees and plant and maintain native trees, in order to provide a diverse habitat of value to a range of faunal species.

Objectives:

1. Protect mature trees at the site.
2. Protect existing scattered trees at the site to retain the integrity of the site boundary.
2. To avoid disturbance to nesting birds during habitat management.
3. Provide suitable habitat for a range of invertebrate, bird and bat species.

This management plan will help to ensure the long term health of trees on the site, as well as providing suitable habitat for a range of bird and invertebrate species, and potential roosting habitat for bats.

Table 4.1 presents management activities in order to meet the aims and objectives outlined above.

4.2.2 Management Prescriptions for Existing and Proposed Trees

Feature	Prescription	Purpose	Timing	Year									
				1	2	3	4	5	6	7	8	9	10
Existing Mature Trees	Minimal intervention strategy. Tree condition to be reviewed annually to ensure no risk to public from damaged / dead trees.	Reasons of public health and safety.	n/a	x	x	x	x	x	x	x	x	x	x
	Monitor tree health and consult qualified arboriculturalist with any potential issues. Any tree felling should consider a need to retain tree stumps at 3 – 5 m above ground level. This is to be agreed on an individual basis in each situation.	Maintain tree health and allow habitat to provide important features for nesting birds and insects. Retention of tree stumps as standing dead wood to provide habitat for invertebrates.	n/a	x	x	x	x	x	x	x	x	x	x
Newly Planted Trees	If required, soils to be cultivated / decompacted prior to commencement of tree planting. Trees to be delivered to site immediately prior to planting being undertaken. Trees to be protected by storage bags when delivered to the site. Trees will be planted when soils are in a suitable condition, not waterlogged or frozen. If soils are compacted loosening will be undertaken.	Ensure that planted trees have the best possible chance of establishing at the site.	November to February	x	x								
	The trees should be planted with suitable ties / stakes and protected with tree guards/ shelters or rabbit fencing. Tree protection should be removed in Year 5 if no longer required.	To ensure trees/shrubs become successfully established.	As soon as trees are planted	x	x			x					
	Stakes, ties and tree guards to be checked regularly during establishment phase and loosened, tightened, or replaced as necessary.	To ensure trees/shrubs become successfully established.	n/a	x	x	x	x	x					
	If for any reason large-scale losses of trees/shrubs occur then an Arboricultural assessment may be required to determine reasons for failure and identify appropriate remedial action.	To ensure trees/shrubs become successfully established.	n/a		x	x	x	x	x	x	x	x	x
	Within areas that do have public access, tree condition to be reviewed annually to ensure no risk to public from damaged / dead trees.	Reasons of public health and safety.	n/a		x	x	x	x	x	x	x	x	x

Table 4.1: Existing and Proposed Trees Habitat Management Recommendations

4.3 PROPOSED AND EXISTING HEDGEROW

4.3.1 Aims and Objectives

Aim: Maintain and enhance the biodiversity of the boundary hedgerows.

Objectives:

1. Encourage hedgerow management techniques at the site to support Staffordshire Habitat Action Plan priorities.
2. Encourage species diversity.
3. Encourage hedgerow buffer strips.
4. Reduce disturbance to nesting species from management practices.
5. To maintain connectivity between habitats.

'Hedgerows' are included within Staffordshire's BAP and this management plan will help to ensure species-rich hedgerows are maintained and created around the site boundaries. Species-rich hedgerows provide wildlife corridors and connectivity through a landscape and subsequently their management is important for a landscape-scale approach to nature conservation.

Table 4.2 provides management activities in order to meet the aims and objectives for this habitat.

4.3.2 Management Prescriptions for Existing and Proposed Hedgerows

Feature	Prescription	Purpose	Timing	Year										
				1	2	3	4	5	6	7	8	9	10	
Newly planted hedgerows	Implementation of standard aftercare management, to include replacement of any losses and cutting of half of the height of the hedgerow soon after planting.	To ensure hedgerows become established.	As required. Avoid cutting hedgerows during bird nesting season (March-September inclusive).	x	x	x	x	x						
	Water newly planted hedgerow sections during dry periods.	To ensure survival during establishment period.	Summer	x	x									
	During vegetation establishment phase (first five years after planting), adjacent grassland vegetation should be trimmed / cut back.	To maximise opportunities for newly planted sections to establish.	n/a	x	x	x	x	x						
New mixed native hedgerows when established to a height of > 3 m.	Where possible, hedgerow should be laid according to the 'Midland' regional style of hedge-laying. A single line of stakes should be placed 18 inches apart behind the stem-line of the hedge with the top bound by hazel. 25% of the length of the hedgerow should be laid in each of Years 1, 3, 5 and 7.	To encourage regeneration of hedgerow shrubs and maintain the integrity of the hedgerow.	November to February	x		x		x		x				
Existing hedgerows and new hedgerows when established	Existing and established hedgerows should be cut so that 50% of each side is trimmed every year.	To enhance the biodiversity of the hedgerows.	Late January to February	x	x	x	x	x	x	x	x	x	x	x
	Should they develop gaps or become poorly structured, gaps should be infilled with native woody species and advice on cutting regimes should be sought from an appropriate ecologist.	To maintain the integrity of the hedgerows.	As required	x	x	x	x	x	x	x	x	x	x	x
	Standing Trees - If hedgerow sections are designed to contain standing trees these trees should be retained and left unmanaged. Mature trees within hedgerows should only be managed for health and safety reasons.	Retain a diversity of age ranges within the species composition of the hedgerow.	n/a	x	x	x	x	x	x	x	x	x	x	x
	Manage wildflower grassland buffer strips adjacent to hedgerows in accordance with measures outlined in Section 4.4.	Promote a hedgerow edge 'ecotone' for use by small mammals, birds and invertebrates.	n/a						x	x	x	x	x	x

Table 4.2: Existing and Proposed Hedgerows Habitat Management Recommendations

4.4 PROPOSED WILDFLOWER MEADOW

4.4.1 Aims and Objectives

Aim: Creation and maintenance of diverse floral species grasslands, accounting for soil properties and environmental factors.

Objectives:

1. Manage areas of wildflower grassland meadow at the site.
2. Increase the botanical diversity within the grassland sward.
3. Enhance suitability of the habitat for invertebrates.

It is recommended that wildflower areas are created using a seed mix such as Emorsgate EL1, which contains slow growing grasses and a selection of wildflowers that respond well to regular short mowing. Table 4.3 details the species included within this seed mix.

Species	Common Name	%
Wildflowers		
<i>Galium verum</i>	Lady's bedstraw	3
<i>Leontodon hispidus</i>	Rough hawkbit	0.5
<i>Leucanthemum vulgare</i>	Oxeye daisy	1
<i>Lotus corniculatus</i>	Bird's-foot trefoil	3
<i>Primula veris</i>	Cowslip	1.5
<i>Prunella vulgaris</i>	Selfheal	5
<i>Ranunculus acris</i>	Meadow buttercup	3
<i>Rumex acetosa</i>	Common sorrel	2
<i>Trifolium pratense</i>	Wild red clover	1
Grasses		
<i>Agrostis capillaris</i>	Common bent	8
<i>Cynocurus cristatus</i>	Crested dogstail	40
<i>Festuca rubra</i>	Slender-creeping red-fescue	28
<i>Phleum bertolonii</i>	Smaller cat's-tail	4

Table 4.3: Proposed Wildflower Areas Seed Mixture (from Emorsgate Seeds)

Table 4.4 presents management activities in order to meet the aims and objectives outlined above.

4.4.2 Management Prescriptions for Proposed Wildflower Meadow

Feature	Prescription	Purpose	Timing	Year											
				1	2	3	4	5	6	7	8	9	10		
Wildflower meadow	Areas to be seeded cultivated, leveled and debris removed.	To ensure wildflower areas become established.	Sow seeds in March, April or September.	x											
	Grassland to be cut once in July or August to a height of 50 mm.	To enhance the floral biodiversity of the grassland habitat.	First cut: July or August after seeding of desirable species.	x	x	x	x	x	x	x	x	x	x	x	
	Re-growth can be mown through to autumn/winter and again in spring if required.	To give a more managed appearance.	Second cut: autumn-spring if required.												
	Arisings to be left for a maximum of 1 week after cutting and then removed off site.	To allow seed to drop. Provides a refuge for amphibians.													
	Use 'spot' treatments where necessary to control the spread of noxious weed species. Treat species with an approved translocated herbicide and apply through a weed wiper or wand.	Maintain the diversity of the grassland sward by reducing competition from vigorous species.	June to September.	x	x	x	x	x	x	x	x	x	x	x	

Table 4.4: Proposed Wildflower Meadow Habitat Management Recommendations

4.5 PROPOSED PONDS

4.5.1 Aims and Objectives

Aim: To establish species-rich pond and marginal habitats to be of value to a range of wildlife.

Objectives:

1. Manage areas of standing water at the site to support Habitat of Principal Importance for Nature Conservation Ponds and Staffordshire BAP for Ponds, Lakes and Canals priorities.
2. Ensure botanical diversity of standing water areas.
3. Maintain suitable habitat for amphibians and other notable wildlife.

The development and management of this habitat will help to support the Staffordshire BAP objective to create and enhance pond habitats.

Table 4.5 lists the species recommended for planting within ponds.

Species	Common name
Emergent, marginal and submerged vegetation	
<i>Veronica beccabunga</i>	Brooklime
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Juncus effusus</i>	Soft rush
<i>Mentha aquatica</i>	Water mint
<i>Callitriche stagnalis</i>	Common water starwort
<i>Ranunculus</i> species	Water crowfoot
<i>Polygonum amphibium</i>	Amphibious bistort
<i>Caltha palustris</i>	Marsh marigold
<i>Carex riparia</i>	Greater pond sedge
<i>Lythrum salicaria</i>	Purple loosestrife
<i>Myosotis scorpioides</i>	Water forget-me-not
<i>Alisma plantago-aquatica</i>	Water plantain
<i>Iris pseudacorus</i>	Yellow flag iris
<i>Sparganium erectum</i>	Bur-reed
<i>Ranunculus lingua</i>	Greater spearwort
Floating-leaved vegetation and aquatics / oxygenators	
<i>Nymphaea alba</i>	White Water Lily
<i>Myriophyllum spicatum</i>	Water milfoil
<i>Ceratophyllum</i> sp.	Hornwort
<i>Potamogeton natans</i>	Broadleaved pondweed

Table 4.5: Suitable Species for Planting Within Ponds

Table 4.6 presents management activities in order to meet the aims and objectives for the habitat.

4.5.2 Management Prescriptions for Proposed Ponds

Feature	Prescription	Purpose	Timing	Year										
				1	2	3	4	5	6	7	8	9	10	
Ponds	Replace any plant losses during vegetation establishment phase.	To ensure that sufficient vegetation cover is provided within the pond.	June-July	x	x	x								
	Once vegetation is established, 10 to 20% of the emergent vegetation at the water's edge should be removed per year in rotation depending on the rate of establishment.	Ensures the open water habitat and a mosaic of plant species, densities and ages is retained.	September to December				x	x	x	x	x	x	x	x
	Allow removed material to dry out before disposal off site.	To allow aquatic invertebrates to get back into the pond.												
	Check condition of ponds and watercourse margins and implement remedial action if required.	Ensures that pond and margins are in good condition.	April / May	x	x	x	x	x	x	x	x	x	x	x
	Check for and remove dumped rubbish from within the ponds and margins. To be completed at least once a year.	Ensures pond is not polluted as a result of rubbish dumping. Maintains clear pond areas for use by amphibians.	November to February	x	x	x	x	x	x	x	x	x	x	x
	Clearance of trees or scrub from pond edge that may be shading pond. Ensure that pond edge has maximum of 20% shading. Trees and scrub to be cleared by hand from pond edges and cut material used to create habitat piles within new woodland planting areas.	To ensure that the ponds are maintained as suitable amphibian breeding ponds with minimal shading around pond edges.	To be reviewed every 5 years. Removal of trees and shrubs November to February.						x					

Table 4.6: Proposed Ponds Habitat Management Recommendations

4.6 PROPOSED SHRUB AND AMENITY PLANTING

4.6.1 Aims and Objectives

Aim: To establish native and “wildlife friendly” shrub habitat to be of value to a range of wildlife and to balance biodiversity and amenity requirements.

Objectives:

1. To ensure the establishment of a diverse shrub/herbaceous habitat type, forming an ecotone with other habitat types.
2. To provide habitat for a range of fauna.
3. To avoid disturbance to nesting birds during habitat management.
4. To maintain ornamental shrubs for their aesthetic value.

Table 4.7 presents management activities in order to meet the aims and objectives outlined above.

4.6.2 Management Prescriptions for Shrub and Amenity Planting

Feature	Prescription	Purpose	Timing	Year										
				1	2	3	4	5	6	7	8	9	10	
Shrub and Amenity Planting	If required, soils to be cultivated / decompacted prior to commencement of shrub planting. Shrubs to be delivered to site immediately prior to planting being undertaken. Shrubs will be planted when soils are in a suitable condition, not waterlogged or frozen. If soils are compacted loosening will be undertaken.	Ensure that planted shrubs have the best possible chance of establishing at the site.	November to February	x	x									
	Water newly planted shrubs during dry periods.	To ensure survival during establishment period.	Summer	x	x									
	Any necessary cutting of shrubs or scrub areas should be carried out over winter.	To prevent disturbance to nesting birds.	October - February	x	x	x	x	x	x	x	x	x	x	x

Table 4.7: Shrub and Amenity Planting Habitat Management Recommendations

4.7 PROPOSED AMENITY GRASSLAND

4.7.1 Aims and Objectives

Aim: Provide a range of nectar bearing plants to support a variety of invertebrates within areas of amenity grassland.

Objectives:

1. Maintain grassland habitat for its aesthetical value.
2. Encourage species richness.

Table 4.8 presents management activities in order to meet the aims and objectives for the habitat.

4.7.2 Management Prescriptions for Amenity Grassland

Feature	Prescription	Purpose	Timing	Year										
				1	2	3	4	5	6	7	8	9	10	
Short turf with low growing wildflowers	Cut at least 12 times per annum. Can be cut on a weekly basis during summer months when growth is fastest. Cut as and when necessary during remainder of year. Arisings to be removed.	Maintain close packed sward.	n/a	x	x	x	x	x	x	x	x	x	x	x

Table 4.8: Amenity Grassland Habitat Management Recommendations

4.8 ADDITIONAL PROPOSED HABITAT FEATURES

4.8.1 Aims and Objectives

Aim: To ensure long-term provision of habitat feature for amphibians, invertebrates, bats and birds.

Objectives:

1. Monitoring of species-specific features to ensure they remain in favourable condition.
2. Replacement of any features lost of damage to ensure no net-loss of habitat for notable species.

Table 4.9 presents management activities in order to meet the aims and objectives for the habitat.

4.8.2 Management Prescriptions for Additional Proposed Habitat Features

Habitat	Prescription	Purpose	Timing	1	2	3	4	5	6	7	8	9	10
Refugia/ hibernacula	Monitor condition of hibernacula and undertake remedial action where necessary.	To ensure that features remain in good condition and maintain their value to biodiversity.	Annually, April to September	x	x	x	x	x	x	x	x	x	x
Bat boxes on trees/building	Condition of bat roost features to be checked each year. If problems are identified, remedial action should be agreed with an ecologist and implemented promptly.	To ensure features are fit-for-purpose.	September	x	x	x	x	x	x	x	x	x	x
Bird boxes	Annual monitoring to assess condition of boxes. Replacement of failed boxes. Minimal intervention strategy – no additional monitoring proposed.	To ensure ongoing provision of bird nesting features on site.	Annually in October	x	x	x	x	x	x	x	x	x	x

Table 4.9: Amenity Grassland Habitat Management Recommendations

5. MONITORING

Monitoring is required to check whether habitats are establishing correctly and to provide input into future amendments to site management. Table 5.1 outlines the recommended monitoring for the next ten years.

Feature	Monitoring	Timing	Year										
			1	2	3	4	5	6	7	8	9	10	
All Habitats	Ecological survey to be carried out to Phase 1 Habitat Survey methodology.	May					x						x
All Habitats	Photographic monitoring to be carried out using fixed-point photography to keep record of developing habitats and results of habitat management works.	May					x						x
Trees	To be monitored on an annual basis to check tree health and identify any potentially dangerous trees to be felled.	n/a	x	x	x	x	x	x	x	x	x	x	x
Hedgerows	A HEGS survey should be conducted in order to monitor the condition of the hedgerows at the site and how they change with management.	May					x						x

Table 5.1: Proposed Landscape and Ecological Monitoring

6. DRAWINGS

Base Architects Drawing BA445-021 - Ecological Masterplan



KEY

- SWALES
- BUFFER ZONE
- POND

NOTES:

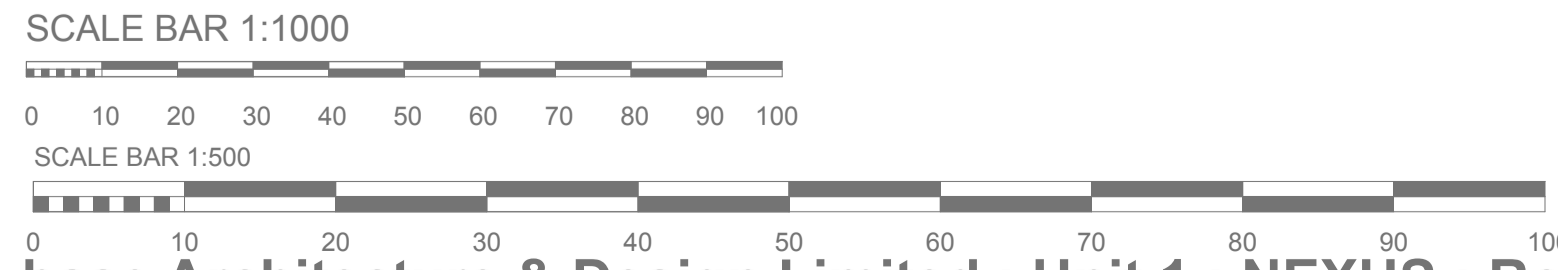
NEW PLANTING SHOULD INCLUDE WHERE FEASIBLE NATIVE SEED/FRUIT BEARING SPECIES WHICH WILL BE OF VALUE TO WILDLIFE AND RETENTION OF BOUNDARY FEATURES.

DETAILED LANDSCAPING DESIGN FOR THE SITE TO INCORPORATE A MIXTURE OF HABITATS AND INCLUDE A SIGNIFICANT PROPORTION OF NATIVE AND 'WILDLIFE FRIENDLY' TREES AND SHRUBS IN ORDER TO PROVIDE NESTING LOCATIONS AND FEEDING OPPORTUNITIES. WORKS WILL ALSO INCLUDE INSTALLATION OF A RANGE OF NESTBOXES FOR A VARIETY OF SPECIES WITH BOXES TARGETED AT USAGE BY HOUSE SPARROWS AND STARLINGS.

LIGHTING TO BE LOW LEVEL AND DIRECTIONAL SO AS TO RETAIN BAT FORAGING AND COMMUTING CORRIDORS ALONG THE EASTERN AND SOUTHERN PERIPHERIES.

HABITAT PILES/ REFUGIA/ HIBERNACULA TO COMPRISE OF PILED LOGS/ BRASH MATERIAL FOR INVERTEBRATES AND AMPHIBIANS. TO BE SITUATED ALONG THE SOUTHERN (BRANSTON WATER PARK) SIDE AND EAST/ SOUTH EASTERN SIDE ADJACENT TO THE SWALES.

BIRD/ BAT BOXES TO BE LOCATED ON TREES AS ADVISED BY SPECIALIST



Rev No.	Date	Rev.	By	Chk.

PLANNING

Scale	Date	Drawn by	Chk.
1:500@A1/1:1000@A3	Nov 2013	HR	CH



Project Title: Land off Tatenhill Lane, Burton		
Client: Central and Country Developments		
Drawing Title: Ecological Masterplan		
Project No. BA445	Drawing No. 021	Revision. -