





Biodiversity Impact Assessment
Land off Sysonby Grange Lane
Sysonby
Melton Mowbray
Leicestershire
NGR SK73819 18754



Assessment by
Christopher Barker CEnv dipHort ACIEEM

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	Reviewed by: KLB	C B E Consulting Highbank, 5 Grantham Road, Navenby Lincoln. LN5 0JJ. Telephone (01522) 810086. www.cbeconsulting.co.uk
	Report ref: P2013 / 0221 - 02	

1. Introduction

1.1 Site Description and Location

The site being assessed comprises a parcel of grazing land used for horses divided into small paddocks by temporary electric fencing, situated between Sysonby Grange Lane and the River Eye to the south of Sysonby village, Melton Mowbray, Leicestershire centred at NGR SK 73819 18754. The location of the site is shown on the plan within **Figure 1** and an aerial photograph has been provided within **Figure 2** to place the site in context.

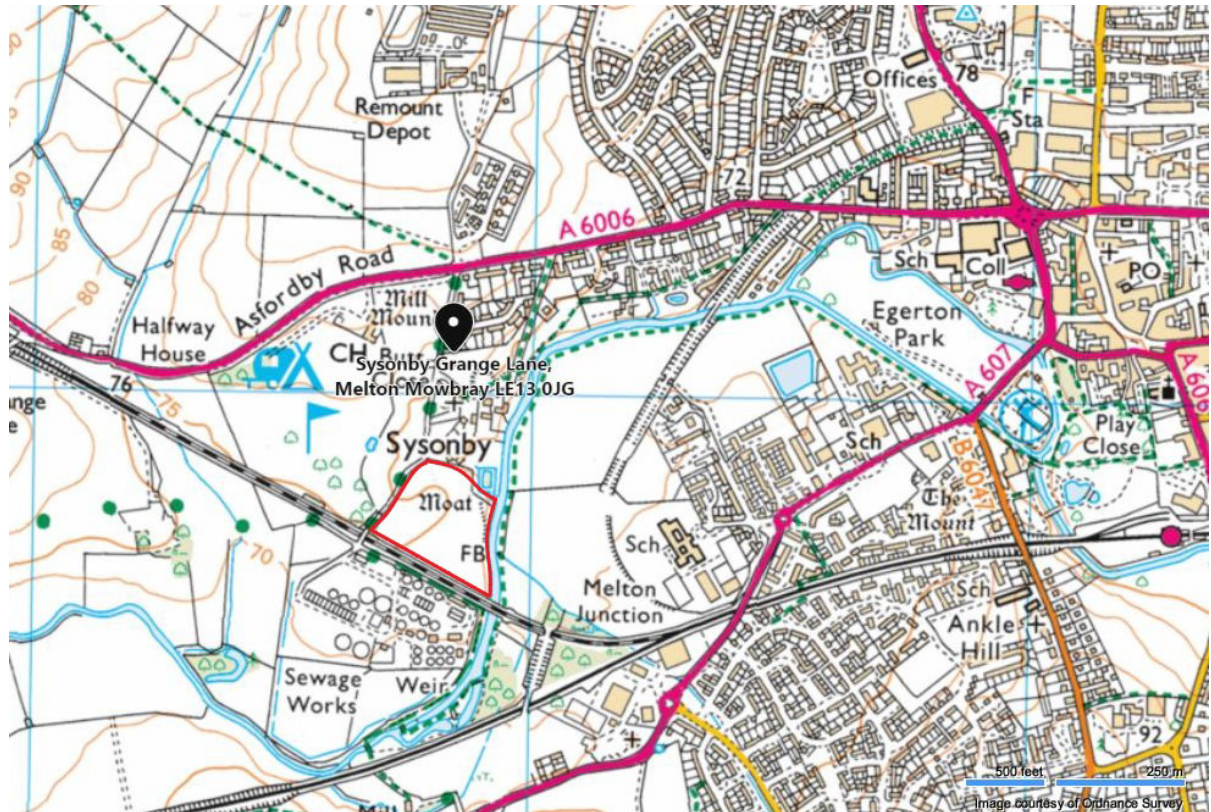


Figure 1: Site location.

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The defined site area was the subject of an Extended Phase 1 Habitat Survey prepared by CBE Consulting based on inspections completed during spring and summer 2020 (report reference P2013 / 0320 /01 dated April 2020

The defined site area comprises undulating grazing land which is used for horses. To the east it extends to the bank of the River Eye which is not fenced off and on the opposite bank are sports pitches within the Longfield Academy. To the south is an operation railway line beyond which there is a sewage treatment plant. To the north are residential houses and a small area landscaped to create a wildlife pond. To the west, on the opposite side of Sysonby Grange Lane is Sysonby Acres Golf Course.

An application has been submitted to the Local Planning Authority to redevelop the existing site and use this land for new stables, a storage barn, a camping amenity block with parking and camping land within and around which will be habitat creation areas. A development plan has been prepared as part of the application process. The Local Planning Authority have requested that a biodiversity impact assessment should be carried out for the site to determine the potential impact on biodiversity which could result from the proposed redevelopment.

The current biodiversity value of the land can be assessed and determined using the information within the Phase 1 Habitat Survey and subsequent letter report of October 2020 which assessed the naturalised grassland and riverbank areas prepared by CBE consulting. These identify the habitats present within the site area. A revised biodiversity offset calculation has been prepared following consultation with the County Ecologist using the methodology developed by Warwickshire County Council, the details of which are provided as Appendix 1 (separate appendix). A copy of the Phase 1 Habitat plan and the proposed development plan are provided within Appendix 2.



Figure 2: Site Contextual Aerial Photograph

Image Copyright Microsoft Mapping 2020

2. Phase 1 Habitat Report and Proposed Development.

2.1 Habitat descriptions

Within the 2020 Phase I Habitat Survey subsequent inspection of the previously bare soil area now colonised by grassland and ruderals, the following habitats were identified within the 3.93 hectare area assessed:

- Improved Grassland
- Boundary Scrub
- Semi-natural Woodland Shelter Belt
- Bare Earth
- River Eye and Bank
- Pond

During consultation Leicester CC have asked for further information in regard to the existing condition of the improved grassland and areas of riverbank described as being in 'poor' condition within the BCA.

The improved grassland has been heavily and extensively overgrazed and large areas support a very short and often sparse sward as a result. There is no evidence that fertilisation or even a management strategy of significant rotation / rest periods has been applied to this land and therefore the majority of it is considered to be in poor condition. The bare ground and ephemeral / ruderal growth along the river bank is very young and sparse and currently has very limited species diversity and therefore this has also been described as being in poor condition within the BCA.

Assessment of the site using the habitat survey plan has identified that the different habitat cover the calculated areas stated above within the site and these values have been used for assessment purposes.

2.2 Proposed development plan

The site area within the red line measures 3.93 hectares. The proposed development utilises the majority of the land within the field area but retains key features such as woodland and existing pasture and also protected the edge of the riverbank.

The new development comprises three buildings with landscaped car parking areas, new grassland areas to be managed for camping, significant areas of new grassland to be managed for habitat creation and new ponds constructed to be wildlife features. Within the proposal the River Eye bank is to be retained and protected with a 5m wide fenced stand-off area and the scattered trees along the southern boundary are being retained and these areas measure 3200m². The area measurements below provided by the Planning Consultant have been used to help assess the habitats to be created after development of the land.

1. Total Site Area = 3.93 hectares = 39,300m²
2. Total Site Area under buildings and hardstanding after development) = 4300m²
3. Total Site Area laid to amenity grassland = 2400m²
4. Total Site Area laid to introduced shrubs / trees 3000m²
5. Total Site Area laid to landscaped amenity garden / planting 3400m²
6. Total Site Area laid to semi-improved grassland 20000m² which comprises permanent pasture used for grazing horses (1.19ha across south of site), and two smaller areas to the north and east of the car park (0.43ha) which will be infrequently grazed and used as parkland.
7. Scattered scrub planted in the south corner of the site to create new habitat adjacent to the River Eye (0.1ha)
8. Total Site Area laid to new ponds and wetlands 2000m²

The majority of the land in the south-eastern and eastern parts of the land surveyed is being seeded to semi-improved grassland that will be managed to allow riding by horses but managed to promote biodiversity with minimal vegetation control and cutting.

Leicestershire County Ecologist has raised a concern that due to the level of fertility within this soil it will not be possible to achieve a moderate quality semi-improved grassland in less than 15 years. However, this land has not been fertilised for some time so the levels of nutrient will already be beginning to decline as is evidenced by the colonisation that has stated in some marginal areas. This land has also been heavily overgrazed. In order to create a semi-improved grassland of moderate quality within 10 years this land will be managed specifically to reduce fertility to encourage biodiversity. The top 100mm of topsoil will be removed to provide soils for planting around the car parking areas and building. For the first two seasons the existing sward will have an Italian Ryegrass established which will

be regularly cut / grazed with no fertiliser being added to further reduce fertility. The ryegrass will be removed after two years and replaced by a meadow grass mixture containing a range of suitable wildflower seeds. This sward will be grazed and not fertilised to encourage diversity and then managed to maintain this with minimal cutting of grazing.

The existing trees along the southern boundary of the field will not be disturbed and additional tree planting is proposed within the scheme replacing land which was previously level improved grassland intensively grazed by horses. To promote diversity further, a habitat area of scattered scrub will be created in the south corner of the land adjacent to the shelter belt and river which will provide a habitat for wildlife cover. Berry producing species will be planted in this area such as Hawthorn, Geulder Rose, Field Rose, Elderberry, Holly and Hazel.

2.3 Biodiversity Impact Calculation

The assumptions made within the biodiversity impact calculation are stated above based on the proposed layout and areas shown within the development plan.

The development plan as it is with the assumptions made above results in a small net gain in calculated biodiversity units across this site area of 0.70.

The calculation summary sheet is provided below. The full biodiversity calculation spreadsheet is provided as Appendix 1.

2.4 Management

The landscaped amenity grassland areas close to the new buildings and car parking areas will be managed by seasonal mowing under the management of the landowner. These areas will be cut at least four times each year and the cuttings will be removed.

The semi-improved grassland will be managed carefully to prepare a suitable soil that will support the establishment of a reasonably diverse meadow grassland. This land presently supports a very poor improved grassland which has been seriously overgrazed. The top 100mm of topsoil will be removed from this area and used to create the planting areas around the car park and building. The exposed soil across the field will be cultivated and seeded with a short term Italian Ryegrass mix which will be cut (or heavily grazed) during a two year period to further reduce fertility in this area. At the beginning of the third year the ryegrass sward will be removed by spraying and the soil will be cultivated to receive a species rich meadow grass seed mix. This sward, as it establishes, will be maintained by controlled grazing and cutting to maintain low fertility and also allow seed to set to promote diversity. This management regime will continue for 8 years to promote the establishment of the sward until it has stabilised.

The seed specifications within Appendix 3 provides management recommendations for the permanent grass sward and these recommendations will be followed. All the wildflower mix areas will require an initial cutting and removal of the growth in the first growing season to reduce weed competition but thereafter a mowing regime which allow the seed to set and fall into the sward is required and two cuts per annum, in early August and mid-September are likely to be required. Only the cuttings from the September maintenance should be removed from the site. This selective seasonal mowing will also be carried out by the landowner.

If any noxious weeds or invasive species establishes within the grassland areas or within the shrubs planted areas these specific locations will be spot treated with a translocated herbicide applied by spray to eliminate these.

Any shrub established within the landscaped areas which fails to establish or becomes diseased or damaged within a period of five years after planting will be replaced. All replacement stock will be plants of similar size and species to the original specification and will be planted in the next planting season.

At a suitable time during the first spring period after planting the new shrubs, an application of herbicide will be carefully applied around the base during the first growing season to eliminate any surviving weed competition and assist the shrubs to establish and maintain healthy growth and vigour. Application of herbicide will be carried out by the landowner as necessary on an annual basis in spring throughout the five-year aftercare period to restrict weed growth and assist the establishment of the planted stock.

Any ties or stakes used to support new plants will be checked each year and adjusted as necessary. If, on the completion of the five-year aftercare period, the stakes are considered to be unnecessary and the trees can support themselves, these stakes and ties will be removed and the stake holes filled with coarse granular material to assist with water and air infiltration to the root bole.

A handwritten signature in cursive script, appearing to read 'Christopher Barker', written in black ink on a white background.

Christopher Barker CEnv ACIEM

Full Assessment Contained within a separate Appendix 1

Biodiversity Impact Assessment Summary



Derived Locally from the Defra Metric
Version 19.0 (01/04/2018)

Site name: **Sysonby Grange Lane**

Planning reference number: **to be copied from the BIA sheet**

	Habitat Area (ha)	Hedgerow impact (km)	Connectivity Features (km)	Habitat Biodiversity Value	Hedgerow Biodiversity Value	Connectivity Biodiversity Value
Existing						
Onsite Biodiversity Impact	3.61	0.00	0.00	18.04	0.00	0.00
Indirect Biodiversity Impact	0.00	0.00	0.00	0.00	0.00	0.00
Total habitat / linear features impacted	3.61	0.00	0.00	18.04	0.00	0.00
Retained / Created / Enhanced						
Onsite biodiversity retained	0.32	0.00	0.00	2.96	0.00	0.00
Onsite Creation	3.61	0.25	0.00	15.78	0.42	0.00
Biodiversity retained and enhanced	0.00	0.00	0.00	0.00	0.00	0.00
Total biodiversity retained/enhanced	3.93	0.25	0.00	18.74	0.42	0.00
Trading Down	n/a	n/a	n/a	0.00	-0.42	0.00
Biodiversity Impact	n/a	n/a	n/a	0.70	0.00	0.00

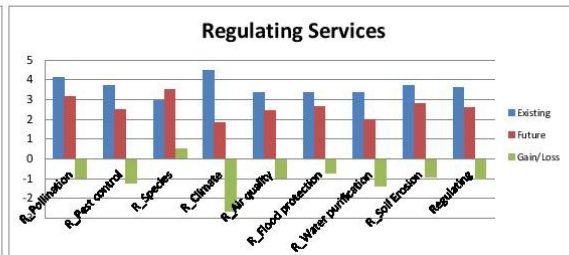
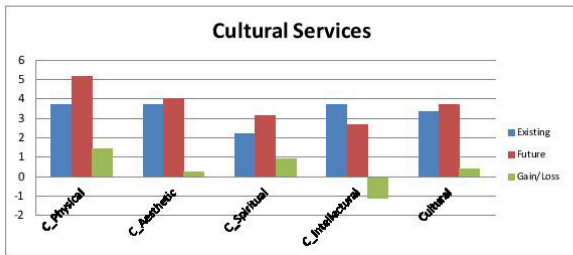
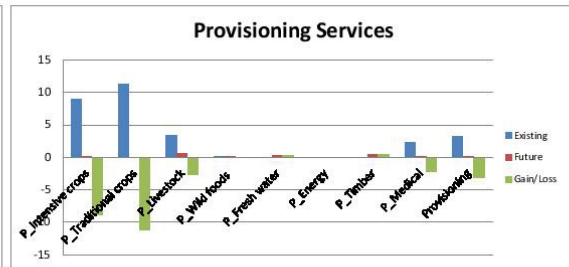
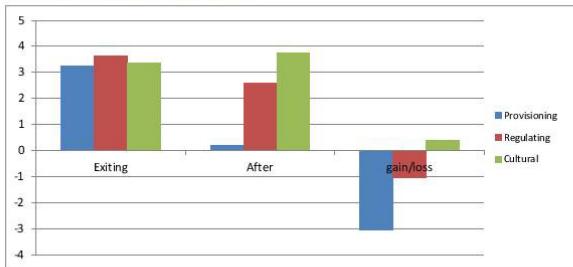
Habitat Impacts	Loss	Gain	Impact	%age losses	Compensatory Unit loss	Indicative Offset (ha)	WCC Offset units	WCC Indicative Offset Contribution
Woodland Habitat	0.00	2.00	2.00					
Grassland Habitat	14.58	8.93	-5.65					
Wetland Habitat	0.00	2.00	2.00					
Other Habitat (incl. Built Env)	0.50	2.85	2.35					
Total	15.08	15.78	0.70	0.00	0.00	0.00	0.00	£0
		Trading down	0.00					
			0.70					

Hedgerow Impacts	Loss	Gain	Trading down	Impact	Unit loss	Indicative Offset (km)	WCC Offset units	WCC Offset Contribution
Hedgerow	0.00	0.42	-0.42	0.00				

SUMMARY

This development will result in 0.7 Habitat Biodiversity Units gain; 0 Hedgerow Units loss and 0 Connectivity Biodiversity Units loss

ECOSYSTEM SERVICES ANALYSIS



For any questions with regard to biodiversity impact and this development please contact Warwickshire County Council Ecological Services:
email: planningecology@warwickshire.gov.uk or telephone 01926 418060

Appendix 2 – Habitat Plan and Development Plan

Proposed Development Plan



Habitat Plan 2020



Appendix 1 Specification of Meadow Grass Seed Mix

EM1 – MEADOW MIXTURE

Wildflowers

%	Latin name	Common name
5	<u>Centaurea nigra</u>	<u>Common Knapweed</u>
1.5	<u>Daucus carota</u>	<u>Wild Carrot</u>
4	<u>Galium verum</u>	<u>Lady's Bedstraw</u>
0.5	<u>Leucanthemum vulgare</u>	<u>Oxeye Daisy</u>
2	<u>Malva moschata</u>	<u>Musk Mallow</u>
2	<u>Poterium sanguisorba - (Sanguisorba minor)</u>	<u>Salad Burnet</u>
1.5	<u>Prunella vulgaris</u>	<u>Selfheal</u>
1.5	<u>Ranunculus acris</u>	<u>Meadow Buttercup</u>
2	<u>Silene dioica</u>	<u>Red Campion</u>
20		

Grasses

%	Latin name	Common name
8	<u>Agrostis capillaris</u>	<u>Common Bent</u>
40	<u>Cynosurus cristatus</u>	<u>Crested Dogstail</u>
28	<u>Festuca rubra</u>	<u>Slender-creeping Red-fescue</u>
4	<u>Phleum bertolonii</u>	<u>Smaller Cat's-tail</u>
80		

Ground preparation - To prepare a seed bed first remove weeds using repeated cultivation or a herbicide. Then plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll, or tread, to produce a firm surface.

Sowing - The seed should be sown at a rate of 40kg/ hectare. The Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed but firm in with a roll, or by treading, to give good soil/seed contact.

Aftercare - Most sown meadow wildflower and grass species are perennial; they will be slow to germinate and grow and will not usually flower in their first growing season. There will often be a flush of annual weeds from the soil in the first growing season which may grow up and obscure the meadow seedlings beneath. This annual weed growth is easily controlled by topping or mowing. Mow newly sown meadows regularly throughout the first year of establishment to a height of 40-60mm, removing cuttings if dense. This will control annual weeds and help maintain balance between faster growing grasses and slower developing wildflowers. Avoid cutting in the spring and early summer if the mixture has been autumn sown and contains Yellow Rattle.

In the second and subsequent years EM1 sowings can be managed in a number of ways which, in association with soil fertility, will determine the character of the grassland. The best results are usually obtained by traditional meadow management based around a main summer hay cut in combination with autumn and possibly spring mowing or grazing. Meadow grassland is not cut or grazed from spring through to late July/August to give the sown species an opportunity to flower.

After flowering in July or August take a 'hay cut': cut back with a scythe, petrol strimmer or tractor mower to c 50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow or graze the re-growth through to late autumn/winter to c 50mm and again in spring if needed.