#### OLD STRATFORD-BUCKINGHAM CANAL BOURTON MEADOW, BUCKINGHAM

#### **EXTENDED PHASE 1 HABITAT SURVEY**

A Report to Buckingham Canal Society

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May 2011

#### OLD STRATFORD-BUCKINGHAM CANAL BOURTON MEADOW, BUCKINGHAM

#### **EXTENDED PHASE 1 HABITAT SURVEY**

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01 OF 02

01 BUCKINGHAM CANAL SOCIETY 02 MIDDLEMARCH ENVIRONMENTAL LTD

This report was compiled by: James Hildreth BSc (Hons) CEnv MIEEM

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.

Contract Number C108675

May 2011

#### **EXECUTIVE SUMMARY**

In February 2011 Buckingham Canal Society commissioned Middlemarch Environmental Ltd to undertake an initial ecological appraisal of a disused section of the old Stratford-Buckingham canal on the outskirts of Buckingham. To fulfil the above brief to assess the existing ecological interest of the site, a desk study and an Extended Phase 1 Habitat Survey were undertaken.

The ecological desk study revealed one site with statutory nature conservation status and two sites with nonstatutory designations for nature conservation within 1km of the survey site. Records of protected species from within 1km of the survey site included two species of aquatic beetle.

The Extended Phase I Habitat Survey was undertaken on 1<sup>st</sup> March by James Hildreth (Senior Consultant). This survey identified the presence of the following habitats; amenity grassland, arable, broadleaved plantation woodland, dense scrub, fence, hardstanding, improved grassland, neutral semi-improved grassland, species-rich intact hedgerow and tall ruderal.

In order to ensure compliance with wildlife legislation and relevant planning policy, the following works further works are recommended:

- Herptiles: To ensure compliance with the Wildlife and Countryside Act 1981 (as amended), a reptile survey should be undertaken of suitable habitats within the proposed development site.
- Nesting Birds: To ensure compliance with the Wildlife and Countryside Act 1981 (as amended),
  vegetation clearance should be undertaken outside the nesting bird season. If this is not possible
  then any vegetation that is to be removed or disturbed should be checked by an experienced
  ecologist for nesting birds immediately prior to works commencing.
- **Badgers:** To ensure compliance with the Protection of Badgers Act 1992,a badger activity survey is recommended and this will consist of monitoring use of sett entrances, latrine use and recovery of hair samples over a period of 14 days.

Additional recommendations have also been made in relation to tree and hedgerow protection and biodiversity enhancement.

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#### 1. INTRODUCTION

#### 1.1 PROJECT BACKGROUND

In February 2011 Buckingham Canal Society commissioned Middlemarch Environmental Ltd to undertake an initial ecological appraisal of a disused section of the old Stratford-Buckingham canal on the outskirts of Buckingham.

To fulfil the above brief to assess the existing ecological interest of the site, a desk study and an Extended Phase 1 Habitat Survey were undertaken.

#### 1.2 SITE DESCRIPTION

The disused section of canal is now a dry, grassy ditch running from the A413 on the eastern side of Bucking, eastwards to Lock Cottage. The total length of this section of disused canal is approximately 465 metres with the centre point located at National Grid Reference SP 705 341. The survey area consists of the disused canal section which is now dominated by semi-improved grassland, with hedgerows either side. Beyond the hedgerow to the west of the canal is an arable field with improved grassland field margin. To the west of the canal and hedgerow is semi-improved pasture grassland habitat.

#### 2. METHODOLOGIES

#### 2.1 DESK STUDY

A desk study was undertaken to determine the presence of any designated nature conservation sites and protected species that have been recorded within a 1 km radius of the site. This involved contacting appropriate statutory and non-statutory organisations which hold ecological data relating to the survey area. Middlemarch Environmental Ltd then assimilated and reviewed the desk study data provided by these organisations.

The consultees for the Desk Study were:

- Natural England MAGIC website for statutory conservation sites;
- Buckinghamshire and Milton Keynes Environmental Records Centre;
- National Biodiversity Network Gateway website.

The data collected from these consultees are discussed in Section 3. Raw data are provided in Appendix 1.

#### 2.2 EXTENDED PHASE 1 HABITAT SURVEY

An Extended Phase 1 Habitat Survey was conducted following the methodology of the Joint Nature Conservation Committee (JNCC, 1993) as modified by the Institute of Environmental Assessment (IEA, 1995). Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are present on site. During the survey, the presence, or potential presence, of protected species was noted. Data recorded during the field survey is discussed in Section 4.

#### 3. DESK STUDY RESULTS

#### 3.1 INTRODUCTION

From the details provided by the consultees all relevant ecological data have been reviewed. The results from these investigations for the site are summarised below in Sections 3.2 and 3.3. Data are provided in Appendix 1.

#### 3.2 NATURE CONSERVATION SITES

Reference to the Multi Agency Geographical Information for the Countryside (MAGIC) website and the local biodiversity information indicate that three nature conservation sites with non-statutory protection occur within a 1 km radius of the survey area. These sites are summarised in Table 3.1.

Site Name	Designation	Proximity to Survey Area	Description						
Statutory protection									
Buckingham Sand Pit	LNR	1000 m North-west	Designated in 2003. An area of Ice-age geological interest.						
Non-statutory protection									
River Ouse, Buckingham	BNS	50 m east	Little aquatic vegetation except for occasional yellow water lilies and Ranunculus subg Batrachium. Banks mostly steep and fenced. Excellent water quality (1989). Fringes of emergent vegetation. Riffles and shoals in channel.						
Holloway Hedge	BNS	50 m north	The hedge links several open spaces. By the playing field is a good hedge with a woody species count of 8 species in 30m. Crab apple is found with mature trees (oak, ash). Estimated at over 700 years old and historically an important boundary.						
Key: LNR: Local Nature Reso BNS: Biological Notifica									

**Table 3.1: Summary of Nature Conservation Sites** 

#### 3.3 PROTECTED SPECIES

Table 3.2 provides a summary of protected species records within a 1 km radius of the study area. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area. Records of UK and local Biodiversity Action Plan have also been included within this table.

Species	No. of Records	Most Recent Record to Study Area		UK BAP?	Local BAP?	NERC S.41 List?	Legislation / Conservation Status	
Invertebrates								
Beetle Anacaena bipustulata	1	1997	400 m south	×	×	×	Nationally Scarce	
Beetle Nebrioporus depressus	1	1999	400 m south	×	×	×	Nationally Scarce	

Table 3.2: Summary of Protected/Notable Species Records Within 1 km Radius of Study Site

#### 4. EXTENDED PHASE 1 HABITAT SURVEY

#### 4.1 INTRODUCTION

The results of the Extended Phase 1 Habitat Survey are presented in Section 4.2. An annotated Extended Phase 1 Habitat Survey Drawing (Middlemarch Environmental Ltd Drawing Number C108675) is attached in Appendix 2. This drawing illustrates the location and extent of all habitat types recorded on site. Any notable features or features too small to map are detailed using target notes.

The survey was carried out on 1<sup>st</sup> March by James Hildreth (Senior Consultant) Table 4.1 details the weather conditions at the time of the survey.

Parameter	Condition
Temperature (°C)	8
Cloud (%)	100
Wind (BF)	2
Precipitation	None

**Table 4.1: Weather Conditions During Survey Period** 

#### 4.2 SURVEY CONSTRAINTS

February is considered a sub-optimal time to complete botanical surveys. However, it is considered that due to the extent and nature of the habitats present this constraint did not prevent a robust site assessment.

#### 4.3 HABITATS

The following habitat types were recorded on site during the field survey:

- · Amenity grassland
- Arable;
- Broadleaved plantation woodland;
- Dense scrub;
- · Fence;
- · Hardstanding;
- Improved grassland;
- Neutral semi-improved grassland;
- · Species-rich intact hedgerow; and,
- Tall ruderal.

These habitats are described below. They are ordered alphabetically, not in order of ecological importance.

#### **Amenity grassland**

A small section of this habitat falls within the surveyed area along the verge of the A413 at the southern end of the surveyed canal section.

#### **Arable**

The field to the west of the disused canal section is an active arable field, supporting a cereal crop at the time of survey. An improved grassland afield margin was present along the canal side of this field.

#### **Broadleaved plantation woodland**

At the southern end of the survey area a length of this habitat was recorded, along the length of the A413 road verge and it is anticipated to be plantation from the time of the road construction. Species recorded in this woodland include ash *Fraxinus excelsior*, sycamore *Acer pseudoplantanus*, field maple *Acer campestre*, hazel *Corylus avellana*, blackthorn *Prunus spinosa*, cherry *Prunus* sp., holly *Ilex aquifolium*, nettle *Urtica dioica* and bramble *Rubus fruticosus* agg.

#### Dense scrub

At the southern end of the survey area, south of the disused canal channel, there is an area of this habitat dominated by hawthorn *Crataegus monogyna* and elder *Sambucus nigra*. To the east of the centre of the disused canal section there is a nother pocket of this habitat type, also dominated by hawthorn and elder. Other species found in this habitat in both locations include blackthorn, young ash trees, nettle, bramble and ivy *Hedera helix*.

#### **Fence**

A boundary along the south east section of the canal was marked by a post and wire fence with no hedgerow. The fence did not support any vegetation.

#### Hardstanding

A small are of the A413 falls within the survey area and forms this habitat type.

#### **Improved Grassland**

An improved grassland field margin existed along the edge of the arable field to the west of the disused canal. This margin was approximately 10 metres wide and species recorded include nettle, creeping cinquefoil *Potentilla reptans*, creeping bent *Agrostis stolonifera*, spear thistle *Cirsium vulgare*, cow parlsey *Anthriscus sylvestris*, meadow grass *Poa* sp., hedge bedstraw *Galium mollugo*, red dead nettle *Lamium purpureum*, Yorkshire fog *Holcus lanatus* and creeping buttercup *Ranunculus repens*.

#### Neutral semi-improved grassland

The length of disused canal is now visible as a grassy ditch with a semi-improved nature. It appears to be infrequently cut and subject to very other management or intervention. The pasture grassland of the field east of the canal also consists of this habitat type, with wetter areas noticeable by the presence of clumps of rush

Juncus sp. Species recorded in this habitat include Yorkshire fog, cow parsley, nettle, meadow grass, lords and ladies Arum maculatum, wavy bitter-cress Cardamine flexuosa, red dead nettle, hogweed Heracleum sphondylium, hedge bedstraw, creeping bent, bramble, cocksfoot Dactylis glomerata, broad-leaved dock Rumex obtusifolius, dandelion Taraxcum officinalis agg., prickly sow-thistle Sonchus asper, clover Trifolium sp., creeping cinquefoil, creeping thistle Cirsium arvense, spear thistle, hard rush Juncus inflexus, cleavers Galium aparine and lady's bedstraw Galium verum.

#### Species-rich Intact Hedgerow

The disused canal was bordered on both side for the majority of the survey section by established hedgerows with only occasional gaps, some of which appeared to have been recently replanted. The western hedgerow appeared to be more intensively of recently managed, more scrub (bramble) was present along the eastern hedgerow and it was wider overall. Species recorded in this habitat include elder, cherry *Prunus* sp., blackthorn, ash, goat willow *Salix caprea*, bramble, nettle, lords and ladies, dog rose *Rosa canina*, red dead nettle, hedge bedstraw, ivy, hawthorn, hazel, sorrel *Rumex acetosa*, broadleaved dock, great willowherb *Epilobium hirsutum* and hogweed.

#### Tall ruderal

At the southern end of the survey area, the disused canal channel was not visible as a ditch and this southern area was dominated by a patch of ruderal vegetation, dominated by nettle, with hogweed, cleavers, Yorkshire fog and cocksfoot.

#### 4.4 FAUNA

During the field survey field signs of faunal species were noted. The time of year at which the survey is undertaken will affect species or field signs directly recorded during the survey.

Evidence of the following faunal species was observed on site:

#### **Birds**

A range of common bird species, including woodpigeon *Columba palumbus*, coal tit *Periparus ater*, blackbird *Turdus merula* and robin *Erithacus rubecula*, were recorded on site during the field survey.

#### **Mammals**

Evidence of rabbit activity *Oryctolagus cuniculus* and possible badger *Meles meles* activity was recorded during the field survey.

#### 5. DISCUSSIONS AND CONCLUSIONS

#### 5.1 NATURE CONSERVATION SITES

#### **Statutory Sites**

It is anticipated that no impact upon the Buckingham Sand Pit Local Nature Reserve (LNR) will result from the proposed re-construction of this disused canal due to the distance and ecological barriers between the disused canal and this LNR.

#### **Non-Statutory Sites**

Both of the recorded Biological Notifications Sites (BNS) are within 50 metres of the disused canal section at their closest points. It is considered unlikely that negative effects will result from the proposed development if precautions are taken to avoid the use of machinery and vehicles within areas close to these BNS. For example, the work to the canal should be undertaken from the western side to avoid potential damage to the River Ouse BNS and riparian habitats along it. Similarly, works towards the northern end of this section of disused canal should take care to avoid any damage, including soil compaction caused by machinery, in the vicinity of Holloway Hedge BNS. It is recommended that consultation with the Local Authority is undertaken when devising specific working practices and designing features of the proposed new canal section in order to safeguard these locally important wildlife sites.

#### 5.2 HABITATS

The ecological importance of the habitats present on site is assessed against their presence on the UK and Local BAPs and on Section 41 of the NERC Act and their ability to support protected or notable species. Those habitats which meet any of these criteria and are considered likely to be impacted by the proposals are highlighted as notable considerations. This is summarised in Table 5.1 and further discussed in the text below.

Habitat Type	UK BAP?	Local BAP?	NERC Act?	Is Habitat Capable of Supporting Protected / Notable Species	Is Habitat a Notable Consideration?
Amenity grassland	×	*	×	*	×
Arable	×	×	×	×	×
Broadleaved plantation woodland	×	<b>√</b>	×	✓	<b>√</b>
Dense scrub	×	×	×	✓	✓
Fence	×	*	×	*	×
Hardstanding	×	×	×	*	×
Improved grassland	×	×	×	✓	<b>√</b>
Neutral semi-improved grassland	×	×	×	✓	✓
Species-rich intact hedgerow	<b>√</b>	✓	✓	✓	✓
Tall ruderal	×	×	×	*	×

Table 5.1: Summary of Ecological Importance of Habitats on Site

#### **Amenity grassland & Arable**

Both of these habitat types are highly managed/disturbed and easily recreated. They have low potential to support protected species and for these reasons are not considered notable habitats with respect to the regeneration of this disused canal.

#### **Broadleaved plantation woodland**

This habitat is relatively young, with some trees reaching semi-maturity. There is potential for this habitat to support nesting birds and act as an ecological corridor. For this reason this habitat is deemed a notable consideration with respect to the proposed development.

#### Dense scrub

This habitat is relatively easy to recreate and not of particularly high ecological value in the local landscape. It does, however, have potential to provide nesting bird locations and shelter for reptiles and small mammals. The potential to support protected species makes this habitat a notable consideration in relation to the proposed development of the disused canal.

#### Fence & Hardstanding

These habitats did not support and flora and are easy to recreate if removed. Therefore they are not considered a notable habitat in relation to the proposed development.

#### **Improved Grassland**

This arable field margin strip of grassland is relatively low in ecological value in the local environment and easy to re-create if damaged or disturbed. There is some potential to support basking and foraging reptiles and for this reason it is considered a notable habitat in relation to the proposed development.

#### Neutral semi-improved grassland

This grassland habitat has a higher floristic diversity and is less easy to re-create than the improved grassland described above. The habitat has potential to support basking and foraging reptiles and for these reasons is considered a notable habitat with respect to the redevelopment of the disused canal.

#### Species-rich Intact Hedgerow

There is a significant length of this habitat within the close vicinity of the disused canal and it has high potential to support nesting birds and provide shelter for reptiles and small mammals. It is also a habitat that is harder to recreate in the short to medium term. For these reasons, the hedgerows within the survey area are deemed a notable consideration in relation to the re-development of the canal.

#### Tall ruderal

This habitat is relatively low value in the local environment and easy to recreate if disturbed. It has low potential to support protected species and is not considered a notable habitat in relation to the proposed canal regeneration.

#### 5.3 PROTECTED/NOTABLE SPECIES

Table 5.2 summarises which species are notable considerations for any development of the survey area. It also states whether these species are targeted by national or local Biodiversity Action Plans (BAPs) or afforded some protection under the NERC Act 2006.

Species UK BAP?		Local BAP? NERC Act?		Is Species a Notable Consideration?						
Invertebrates										
Beetle Anacaena bipustulata	×	×	×	×						
Beetle Nebrioporus depressus	×	×	×	×						
Herpetofauna (reptile	Herpetofauna (reptiles & amphibians)									
All species	✓	✓	✓	<b>√</b>						
Birds										
Nesting birds	#	#	#	<b>√</b>						
Mammals	Mammals									
Badger Meles meles	×	*	×	✓						
#: Species dependent										

Table 5.2: Summary of Ecological Importance of Species on Site

#### Invertebrates

The two invertebrate records provided during the desk study are for aquatic beetles recorded in the River Ouse. This habitat is not found within the survey area and the proposed works are unlikely to impact upon this habitat type. These species are not deemed a notable consideration in relation to the proposed canal project.

#### Herpetofauna (reptiles and amphibians)

No reptile or amphibian species were identified within the desk study. No ponds, ditches or other standing water habitats were identified within the survey area or within the local area (from aerial photo observations). For this reason it is unlikely that amphibian species will be using the survey site. However, reptile species (particularly grass snake) could potentially be present within the survey area due to the presence of suitable habitats for refuge, foraging, commuting, basking and hibernation sites in the hedgerows, scrub and grassland habitats. Therefore reptiles are deemed a notable consideration.

#### **Birds**

Dense scrub and hedgerows provide suitable nesting locations for a variety of bird species. This species group is considered notable with respect to the development of the site.

#### **Badger**

Potential badger sett entrances were recorded during the field survey. Levels of activity of this species are undetermined at present. However, given the scale of excavation visible and the limited number of entrances it is considered highly likely that this would form a sporadically used 'outlier' sett.

A summary of legislation relevant to the ecology of the site is included in Appendix 3.

#### 6. RECOMMENDATIONS

#### 6.1 NATURE CONSERVATION SITES

#### **Statutory Nature Conservation Sites**

No recommendations are made in relation to the Buckingham Sand Pit Local Nature Reserve identified in the desk study as it is felt that adverse impacts resulting from the development of the survey area are highly unlikely due to the distance and ecological barriers between the disused canal site and this LNR.

#### **Non-statutory Nature Conservation Sites**

It is considered that basic precautions to avoid working in areas close to the Biological Notification Sites will provide adequate protection to these locally important sites. However, consultation with the Local Authority should be undertaken to confirm suitable working practices and any specific requirements of these BNS.

#### 6.2 HABITATS

The following recommendations are made regarding the habitats present on site:

- Habitat Loss: In accordance with the provision of Planning Policy Statement 9 (Biodiversity & Geological Conservation) and Local Planning Policy, a habitat/species enhancement scheme should be incorporated into the landscaping scheme of any proposed works to maximise the ecological value of the site. This will involve, for example, the planting of native seed/fruit bearing species which will be of value to wildlife. The canal project offer opportunities for aquatic and emergent / marginal vegetation planting in addition to terrestrial planting schemes. Planting along the edge of the canal, in coir rolls, woven willow bank stabilisation or other natural products should use native species.
- Hedgerows: It is recommended that the hedgerows along the canal proposed for redevelopment are retained to the maximum extent possible. Where sections are removed for access during construction of the canal these should be replanted with a variety of native hedging species. Existing gaps in these hedgerows should also be in-filled with native hedging species as part of the overall landscaping of the scheme. The filling of existing gaps and the replanting of any sections that are removed during construction should use a mix of native hedgerow species and is likely to fulfil the request by AVDC to plant hedgerow at a 2:1 ratio for that which is removed.
- Trees and Hedgerows: Any trees and/or hedgerows on site, or overhanging the site, which are not to be removed as a part of any proposed works should be protected in accordance with British Standard "Trees in relation to construction Recommendations" BS5837:2005. Protection should be installed on site prior to the commencement of any works on site.

#### 6.3 PROTECTED / NOTABLE SPECIES

The following recommendations are made regarding protected species that are potentially present on site:

- Herptiles: To ensure compliance with the Wildlife and Countryside Act 1981 (as amended), disturbance and damage to reptile populations and individuals must be avoided. It is understood that a process of habitat manipulation during the months prior to the proposed canal development has been agreed as a suitable avoidance measure during consultation between Buckingham Canal Society and Aylesbury Vale District Council. This habitat manipulation is based on regular grass cutting to keep vegetation at a very low level and therefore render the area unsuitable for use by reptile species.
- Nesting Birds: To ensure compliance with the Wildlife and Countryside Act 1981 (as amended), vegetation clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive. If this is not possible then any vegetation that is to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally.
- Badgers: To ensure compliance with the Protection of Badgers Act 1992, the badger activity associated with the sett on site should be monitored. A badger activity survey is recommended and this will consist of monitoring use of sett entrances, latrine use and recovery of hair samples over a period of 14 days. Badger surveys can be completed at any time of the year. Should the badger sett be identified as active, works to the badger sett will require a licence from Natural England. Badger setts can be closed between July and November inclusive.

#### REFERENCES AND BIBLIOGRAPHY

IEA. (1995). Guidelines for Baseline Ecological Assessment, Institute of Environmental Assessment. E&FN Spon, An Imprint of Chapman and Hall. London.

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#### **APPENDICES**

APPENDIX 1: Desk Study Data

APPENDIX 2: Extended Phase I Habitat Survey Drawing

Middlemarch Environmental Drawing C108675-01

APPENDIX 3: Overview of Relevant Legislation

#### **APPENDIX 1**

Desk Study Data

#### **Site Check Report**

#### You clicked on the point:

Grid Ref: SP 709 339 Full Grid Ref: 470927, 233988

#### **Counties, Metropolitan Districts and Unitary Authorities (England)**

Name	Geographic Level
BUCKINGHAMSHIRE	COUNTY

#### **NUTS1 - Government Office Regions (England)**

Reference	Name	Hotlink
UKJ	SOUTH EAST	http://www.statistics.gov.uk/geography/nuts_se.asp

#### **Scheduled Monuments (England)**

There are no features within your search area.

#### **Protected Wreck Sites (England)**

There are no features within your search area.

#### **Nitrate Vulnerable Zones (England)**

**NVZ TYPE** 

**NVZ AREA** 

#### **Local Nature Reserves (England)**

Reference	Name
1083175	<b>BUCKINGHAM SAND PIT</b>

#### **Biosphere Reserves (England)**

There are no features within your search area.

#### **National Nature Reserves (England)**

There are no features within your search area.

#### Ramsar Sites (England)

There are no features within your search area.

#### **Special Protection Areas (England)**

There are no features within your search area.

#### **Special Areas of Conservation (England)**

There are no features within your search area.

#### Sites of Special Scientific Interest Units (England)

There are no features within your search area.

#### Sites of Special Scientific Interest (England)

There are no features within your search area.

#### World Heritage Sites (England)

There are no features within your search area.

#### **Nitrate Sensitive Areas (England)**

There are no features within your search area.

#### **Areas of Outstanding Natural Beauty (England)**

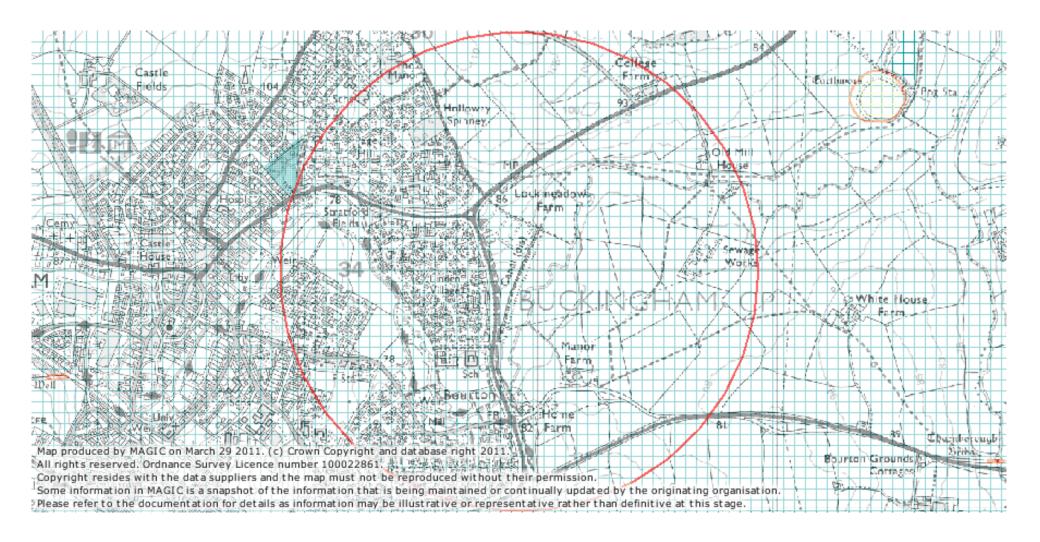
There are no features within your search area.

**Environmentally Sensitive Areas (England)** There are no features within your search area.

National Parks (England)
There are no features within your search area.

#### **Moorland Line (England)**

There are no features within your search area.



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## Buckinghamshire & Milton Keynes Environmental Records Centre

Museum Resource Centre • Tring Road • Halton • Aylesbury • HP22 5PN Tel 01296 696012 Fax 01296 624519 www.bucksmkerc.org.uk

Your ref 108675

Tina Palmer Middlemarch Environmental Triumph House Birmingham Road Allesley Conventry, CV5 9AZ

My ref 10-230
Date 28 February 2011
Contact Fabrizia Ratto
Tel 01296 696012

Email fratto@buckscc.gov.uk

Via email

Dear Tina Palmer,

#### Re: Old Stratford-Buckingham Arms Canal;

Thank you for your letter of 23<sup>rd</sup> February requesting information on sites and species within 500m of the site above. The information we have is summarised below. A map is provided below showing the locations of designated sites within the search area, and the relevant species records are detailed below. Please see the 'Definitions' section below for an explanation of the terms used to describe sites and species in this report.

#### STATUTORY SITES

We have no indication of any statutorily protected sites within the search area.

#### NON-STATUTORY SITES

The search area includes the following Biological Notification Sites (BNS):

Site Code	Site	Broad habitat	Description
73C01	River Ouse, Buckingham	Large River	Little aquatic vegetation except for occasional yellow water lilies and Ranunculus subg Batrachium. Banks mostly steep and fenced. Excellent water quality (1989). Fringes of emergent vegetation. Riffles and shoals in channel.
73C11	Holloway Hedge	Hedge with Trees	The hedge links several open spaces. By the playing field is a good hedge with a woody species count of 8 species in 30m.  Crab apple is found with mature trees (oak, ash). Estimated at over 700 years old and historically an important boundary.

#### HABITATS OF PRINCIPAL IMPORTANCE

The search area does not include areas mapped as UK Biodiversity Action Plan (UKBAP) Priority habitats by Buckinghamshire County Council in a recent (2009) project. These habitats are referred to as Habitats of Principal Importance in the recent PPS9 guidance.

#### PROTECTED AND NOTABLE SPECIES

Records of protected and/or notable species within the search area are shown in the table below.

The Buckinghamshire Badger Group (<u>www.bucks-badgers.org.uk</u>) also has records for this area, for further information contact Bob Simpson, the Buckinghamshire Badger Group Recorder, at 27 Waine Close, Buckingham, MK18 1FF.

The North Bucks Bat Group (<u>www.northbucksbatgroup.org.uk</u>) may have records for this area, for further details please contact them:

Telephone (office hours): 01296 427972 Email: records@northbucksbatgroup.org.uk

Post: c/o Haydon Mill, Rabans Lane, Aylesbury, Bucks, HP19 8RU

As agreed, I will forward an invoice for £75 + VAT for the time taken to extract this information and put together the report.

Please do not hesitate to contact me if you have any questions arising from this report.

Yours sincerely,

Fabrizia Ratto

**Environmental Records Officer** 

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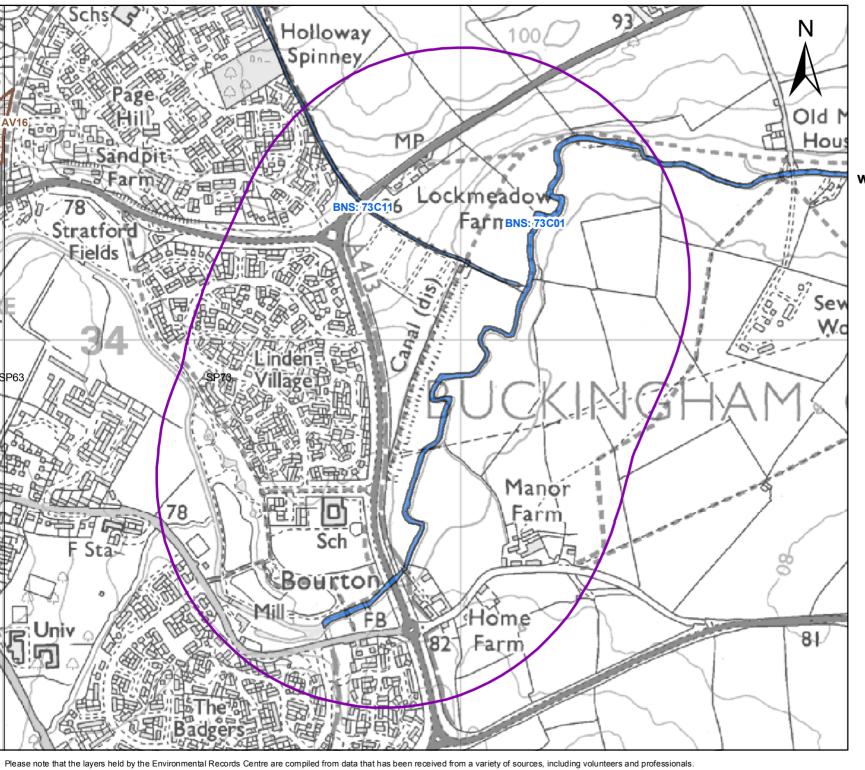
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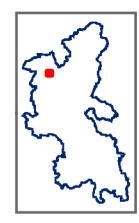
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  have no new records.
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# Non Designated Sites within 500m to Old Stratford and Buckingham Arms Canal



## Legend

Search Area

Biological Notification Sites

00.03**05**075 0.15 0.225 0.3 0.375

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## Protected and notable species records

#### Taxon column:

\* = species recorded as not native (e.g. introduced plants or escaped birds)

# (against badger Meles meles) = record of sett

Table sorted by group and taxon

Only includes records since 1980; contact BMERC if you need records from before this

Some records may have further details (e.g. information on quantity, sex and stage), contact BMERC if you need this additional detail

Data supplied by BMERC may include data from the following organisations: Botanical Society of the British Isles; Bucks Amphibian and Reptile Group;

Bucks Bird Club; National Recording Schemes for spiders, caddisflies, anthomyiid flies, ground beetles; plus many individual recorders

			European				Nationally rare					latest
group	species	English name	legislation	W+C Act	UK BAP	national status	plants:	local status	site	grid ref	precision	record
Insects: beetles	Anacaena bipustulata					Nationally Scarce/Nb			River Ouse at Buckingham	SP709335	100	1997
Insects: beetles	Nebrioporus depressus					Nationally Scarce/Nb			River Ouse at Buckingham	SP709335	100	1999

#### Sites of importance for wildlife and geology in Buckinghamshire and Milton Keynes

The following statutory designations are used in Buckinghamshire and Milton Keynes:

#### • Special Areas of Conservation (SAC)

Special Areas of Conservation are sites of international nature conservation importance and are designated under the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive).

#### National Nature Reserves (NNR)

National Nature Reserves are sites of national importance and are declared under section 19 of the National Parks and Access to the Countryside Act 1949 or section 35 of the Wildlife and Countryside Act 1981.

#### Local Nature Reserves (LNR)

Local Nature Reserves are sites of local importance and are declared under section 21 of the National Parks and Access to the Countryside Act 1949.

#### Sites of Special Scientific Interest (SSSI)

Sites of Special Scientific Interest are sites of national nature conservation or geological importance and are declared under section 28 of the Wildlife and Countryside Act 1981.

The following non-statutory sites have been identified in Buckinghamshire and Milton Keynes:

#### • Local Wildlife Sites (LWS)

Local Wildlife Sites are local non-statutory nature conservation sites, formerly called County Wildlife Site and equivalent to Sites of Importance for Nature Conservation. The aim of the selection process is to identify sites that support the most important habitats and species in Buckinghamshire and Milton Keynes. A selection panel, in consultation with local authorities, designates the sites. Summary citations or survey reports are available for most, but not all, Local Wildlife Sites.

#### Milton Keynes Wildlife Sites (MKWS)

Sites identified as Local Wildlife Sites are referred to as Milton Keynes Wildlife Sites when they fall within the administrative area of Milton Keynes Council.

#### • Milton Keynes Wildlife Corridors

These have been identified along the major road, rail and waterway corridors running through the Milton Keynes area. They are treated as being equivalent to Milton Keynes Wildlife Sites.

#### Biological Notification Sites (BNS)

Biological Notification Sites preceded Local Wildlife Sites as a local non-statutory designation. They were first designated in the late 1980s and have since been revised. There are no formal citations and for some sites we have no survey data. All Biological Notification Sites are in the process of being re-surveyed and assessed by Local Wildlife Site criteria; until this process is complete the two designations will continue to be in use. (Unfortunately, BNS within the administrative area of Milton Keynes Council have sometimes been called Local Wildlife Sites, this terminology will be phased out as soon as possible.)

#### Local Geological Sites (LGS)

Local Geological Sites are local non-statutory sites that recognise important earth science and landscape features. The Buckinghamshire Earth Heritage Group, in consultation with local authorities, designates the sites. They were previously known as Regionally Important Geological and Geomorphological Sites (RIGS).

#### Key Areas for Water Vole

Following surveys in 1997/8, the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust have labelled some waterways as Key Areas for Water Vole. The boundaries of Key Areas are taken to be 10m from the bank-top each side of a watercourse and the buffer area is taken to be 500m from each side of the watercourse. For further information contact the Wildlife Trust on 01865 775476.

#### **Buckinghamshire & Milton Keynes Notable Species List**

The Buckinghamshire and Milton Keynes Notable Species List has been compiled in response to data requests from ecological consultants and developers. Although records of protected species are most commonly requested, national and local BAP species records and records of other notable species are often required.

As part of our standard data search we now include records of species defined by the following legislation and criteria.

#### 1. European legislation

This column in our reports includes species listed in Regulations 39 (European protected animal species) and 42 (European protected plant species) of *The Conservation (Natural Habitats, &c.) Regulations* 1994. These provide protection for key species and habitat types and enacts the EU Habitats Directive into UK Law. The Habitats Directive requires the formation of a network of protected areas and the direct protection of specific species. It is an offence to deliberately capture, kill or disturb a wild animal of a European protected species or to deliberately take or destroy the eggs or destroy a breeding site or resting place of such an animal. It is also an offence to deliberately pick, collect, cut, uproot or destroy a wild plant of a European protected species.

On 21 August 2007 an amendment to the Habitats Directive came into force. The *Conservation (Natural Habitats &c.)* (Amendment) Regulations 2007 have a variety of consequences for the protection of European Protected Species, including the removal of many defences that were previously allowed. This includes the commonly relied upon 'incidental result defence', which previously covered acts that were the incidental result of an otherwise lawful activity and which could not reasonably have been avoided. For more details see:

http://www.naturalengland.org.uk/conservation/wildlife-management-licensing/habsregs.htm#houseguidance

#### 2. W+C Act

This column includes species listed in The Wildlife & Countryside Act 1981 (and later amendments), plus Badger (see below). The Wildlife and Countryside Act consolidates and amends existing national legislation to implement the Bern Convention and the EU Birds Directive in Great Britain. Various amendments have been made to the Act, e.g. in the Countryside and Rights of Way (CRoW) Act 2000.

- Schedule 1 (protected birds) It an offence (with exception to certain species) to intentionally kill, injure, or take any wild bird or the eggs or nests of species listed in Part 1. Part 2 lists birds protected during the closed season.
- Schedule 5 (protected animals, other than birds) The intentional or reckless killing, injuring, taking, possessing, disturbing or selling, of animals listed in Schedule 5 is prohibited, along with the damaging or disturbing of the places used for their shelter or protection. Protection of some species is limited to certain sections:
  - Section 9(1) Limited to intentional killing, injury or taking.
  - Section 9(2) Limited to processing and controlling.
  - Section 9(4a) Limited to damaging, destroying or obstructing access to any structure or place used by the animal for shelter or protection.
  - Section 9(4b) Limited to disturbing an animal whilst it is occupying any structure or place used for shelter or protection.
  - Section 9(5) Limited to selling, offering for sale, possessing or transporting for sale or advertising for sale
    of any live or dead animal, part of or derived from. (Not included in list)
- Schedule 8 (protected plants and fungi) The intentional picking, uprooting, trade in, or possessing of any wild plant listed in Schedule 8 is prohibited. Also, all wild plants are protected from intentional uprooting by an unauthorised person.

This column also shows records for badgers, which are protected under The Protection of Badgers Act 1992. This makes it an offence to wilfully kill, injure or take, or attempt to kill, injure or take, a badger and to interfere with a badger sett either by intent or by negligence. A licence, issued by English Nature, is required for works within 30 metres of a badger sett.

#### 3. UK BAP

This column shows species listed as UK Biodiversity Action Plan Priority species, and as Species of Principal Importance. The UK Biodiversity Action Plan lists Priority species for conservation in the UK. The species list was reviewed and extended in 2007. The list of Species of Principal Importance was originally published under Section 74 of the Countryside and Rights Way Act 2000, and carried forward into the NERC Act 2006. It is referred to in PPS9 and other guidance. The list of Species of Principal Importance is very similar to the list of Priority species in the UK Biodiversity Action Plan (there are some species that are BAP Priority but not Species of Principal Importance, and there is one species – Hen Harrier – that is a Species of Principal Importance but not a BAP Priority).

#### 4. National status

This column shows all species that have been listed in Red Data Books, or in reviews of Nationally Scarce species, or are redor amber-listed birds. A number of criteria have been devised for assessing the conservation status of species. In the UK, official lists of Red Data Book species are published by the government's Joint Nature Conservation Committee (JNCC). NB that the Red Data Books use different criteria for different groups, e.g. for plants the criteria give priority to declining and threatened species, whereas those for invertebrates are based more on rarity in terms of distribution. The more recent Red Data Book lists use international criteria developed by the World Conservation Union (IUCN), and include these categories:

- Extinct (EX)
- Extinct in the wild (EW)
- Critically endangered (CR)
- Endangered (EN)
- Vulnerable (VU)
- Near threatened (NT)
- Data deficient (DD)

The CR, EN and VU categories are considered to be threatened categories. Near threatened species are close to qualifying for one of these categories. Data deficient is not a threatened category, but indicates a need for more information in order to determine the appropriate category.

In addition to IUCN criteria, there are older Red Data Book and Nationally Scarce criteria used to define nationally rare and nationally scarce species:

- Red Data Book (= Nationally Rare): Occurring in 15 or fewer 10km-squares in Great Britain
- Nationally Scarce: Occurring in 16–100 10km-squares in Great Britain. For some groups this is further subdivided:
  - Nationally Scarce/Na: Occurring in 16–30 10km-squares
  - Nationally Scarce/Nb: Occurring in 31–100 10km-squares

For birds, the following categories apply, taken from Birds of Conservation Concern 2002–2007 (RSPB):

- Red List Species that are globally threatened according to IUCN criteria; those whose population or range has
  declined rapidly in recent years; and those that have declined historically and not shown a substantial recent
  recovery.
- Amber List Species with an unfavourable conservation status in Europe; those whose population or range has
  declined moderately in recent years; those whose population has declined historically but made a substantial
  recovery; rare breeders; and those with internationally important or localised populations.

#### 5. Nationally rare plants

This column uses distribution data from the Botanical Society of the British Isles to show those plants that have restricted national distributions, i.e. equivalent to the old Red Data Book categories.

#### 6. Local status

This column shows the local statuses that have been applied to plants, butterflies and moths. For the plants the source is the BSBI County Rare Plant List for Bucks, compiled by Roy Maycock in 2007 (NB this is a substantial change from the previous county rare/scarce plant list of the 1980s). The categories are:

- County Rare: generally confined to three or fewer tetrads (2km × 2km squares) in the county
- County Scarce: generally confined to between four and ten tetrads in the county

For butterflies and moths the source is Butterfly Conservation's Regional Action Plan for the Thames Region (Clarke and Bourn 2000). Species are given a High, Medium or Low priority based on rarity, decline and threat (NB that the "Low Priority" category does include species of conservation importance, but simply those which are considered a lower priority than the others).

#### Bird records

Under the EC Birds Directive and the Wildlife and Countryside Act it an offence to intentionally kill, injure, or take any wild bird or their eggs or nests (with the exception of certain species). Records of wild birds in general are not included in BMERC reports unless they are of species falling into one of the other categories listed here.

A full Notable Species list is available on request.

#### International and European Obligations

In the UK, species receiving protection under international legislation and agreements are protected through the Wildlife and Countryside Act, so are not shown separately in the BMERC notable species lists. For reference, the relevant categories are shown below.

#### Bern Convention on the Conservation of European Wildlife and Natural Habitats

The Bern Convention aims to ensure the conservation of wild flora and fauna species and their habitats.

- Appendix 1 (strictly protected flora) Plants for which contracting parties will prohibit deliberate picking, collecting, cutting
  or uprooting.
- Appendix 2 (strictly protected fauna) Animals for which contracting parties will prohibit deliberate capture, possession, killing, damage to or destruction of breeding or resting sites, disturbance or destruction or taking of eggs.
- Appendix 3 (protected fauna) Animals for which contracting parties will include closed seasons and regulate their sale, keeping for sale, transport for sale or offering for sale of live and dead wild animals. (Not included in Notable Species List)

#### • Bonn Convention on Migratory Species

The Bonn Convention aims to conserve terrestrial, marine and avian migratory species throughout their range.

- Appendix 1 (migratory species threatened with extinction) Species for which contracting parties will strictly protect
  and endeavour to conserve or restore the places where they live, mitigating obstacles to migration and controlling
  other factors that might endanger them.
- Appendix 2 (migratory species that need or would benefit from international co-operation) Species for which
  contracting parties will be encouraged to conclude global or regional agreements for the conservation and
  management of individual species or, more often, of a group of species. (Not included in Notable Species List)

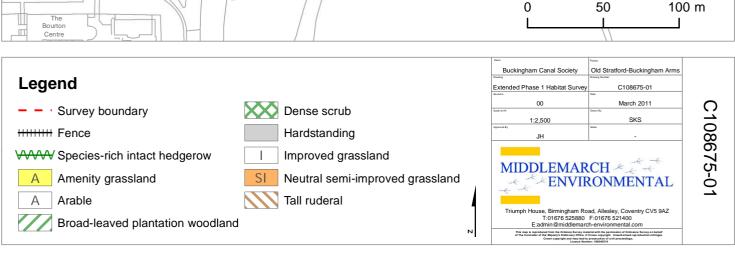
#### • The EC Council Directive on the Conservation of Wild Birds

The Birds Directive provides a framework for the conservation and management of all wild birds in Europe. As well as designating important sites for birds as Special Protection Areas, birds are generally protected from deliberate killing or capture and destruction of or damage to their nests or eggs, and deliberate disturbance. Allowances are made for game birds.

#### **APPENDIX 2**

Middlemarch Environmental Ltd Drawing C108675-01 Extended Phase 1 Habitat Survey





#### **APPENDIX 3**

Overview of Relevant Legislation

#### **GENERAL LEGISLATION AND POLICY OVERVIEW**

This section provides an overview of the framework of legislation and policy which underpins nature conservation and is a material consideration in the planning process in England.

CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010 (HABITATS REGULATIONS 2010) The Habitats Regulations 2010 consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994 and all its various amendments. The Habitats Regulations 2010 are the principal means by which the EEC Council Directive 92/43 (The Habitats Directive) as amended is transposed into English and Welsh law.

The Habitats Regulations 2010 place duty upon the relevant authority of government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria are, in conjunction with the European Commission, designated as Sites of Community Importance, which are subsequently identified as Special Areas of Conservation (SAC) by the European Union member states. The regulations also place a duty upon the government to maintain a register of European protected sites designated as a result of EC Directive 79/409/EEC on the Conservation of Wild Birds (The Birds Directive). These sites are termed Special Protection Areas (SPA) and, in conjunction with SACs, form a network of sites known as Natura 2000. The Habitats Directive introduces for the first time for protected areas, the precautionary principle; that is that projects can only be permitted having ascertained no adverse effect on the integrity of the site. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest.

The Habitats Regulations 2010 also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively. Schedule 2 includes species such as otter and great crested newt for which the UK population represents a significant proportion of the total European population. It is an offence to deliberately kill, injure, disturb or trade these species. Schedule 5 plant species are protected from unlawful destruction, uprooting or trade under the regulations.

#### THE WILDLIFE AND COUNTRYSIDE ACT (WCA) 1981 (AS AMENDED)

The WCA, as amended, consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Conservation (Natural Habitats. &c.) Regulations 1994 (as amended), offering protection to a wider range of species. The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).

Schedules of the act provide lists of protected species, both flora and fauna, and detail the possible offences that apply to these species. All relevant species specific legislation is detailed later in this Appendix.

#### THE COUNTRYSIDE AND RIGHTS OF WAY (CROW) ACT 2000

The CROW Act, introduced in England and Wales in 2000, amends and strengthens existing wildlife legislation detailed in the WCA. It places a duty on government departments and the National Assembly for Wales to have regard for biodiversity, and provides increased powers for the protection and maintenance of SSSIs.

The Act also contains lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

#### THE NATURAL ENVIRONMENT AND RURAL COMMUNITIES (NERC) ACT 2006

Section 40 of the NERC Act places a duty upon all local authorities and public bodies in England and Wales to promote and enhance biodiversity in all of their functions. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity. These lists supersede Section 74 of the CRoW Act 2000. These species and habitats are a material consideration in the planning process.

#### THE HEDGEROW REGULATIONS 1997

The Hedgerow Regulations make provision for the identification of important hedgerows which may not be removed without permission from the Local Planning Authority.

#### **UK BIODIVERSITY ACTION PLAN**

The United Kingdom Biodiversity Action Plan (UKBAP), first published in 1994 and updated in 2007, is a government initiative designed to implement the requirements of the Convention of Biological Diversity to conserve and enhance species and habitats. The UKBAP contains a list of priority habitats and species of conservation concern in the UK, and outlines biodiversity initiatives designed to enhance their conservation status. Lists and Broad and Local habitats are also included. The priority habitats and species correlate with those listed on Section 41 and 42 of the NERC Act.

The UKBAP requires that conservation of biodiversity is addressed at a County level through the production of Local BAPs. These are complementary to the UKBAP, however are targeted towards species of conservation concern characteristic of each area. In addition, a number of local authorities and large organisations have produced their own BAPs.

UKBAP and Local BAP targets with regard to species and habitats are a material consideration in the planning process.

#### PLANNING POLICY

#### Planning Policy Statement 9

Planning Policy Statement 9 provides guidance to local authorities regarding the protection of biodiversity and geology through the planning system in England. Key principles relating to biodiversity include:

- Development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas. These characteristics should include the relevant biodiversity and geological resources of the area. In reviewing environmental characteristics local authorities should assess the potential to sustain and enhance those resources.
- Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests. In taking decisions, local planning authorities should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; and to biodiversity and geological interests within the wider environment.
- Plan policies should promote opportunities for the incorporation of beneficial biodiversity and geological features within the design of development.

National planning policy is implemented through local and regional planning policies.

#### SPECIES SPECIFIC LEGISLATION

#### **REPTILES**

All of the UK's native reptiles are protected by law. The two rarest species – sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*) benefit from the greatest protection.

Common lizard (*Lacerta vivipara*), slow-worm (*Anguis fragilis*), adder (*Vipera berus*) and grass snake (*Natrix natrix*) are protected under the Wildlife and Countryside Act 1981 as amended from intentional killing or injuring.

Sand lizard and smooth snake are protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010 which together make it illegal to kill, injure, capture, handle or disturb these animals. Places they use for breeding, resting, shelter and protection are protected from being damaged or destroyed. It is also illegal to obstruct these animals from using such areas.

In England and Wales, this Act has been amended by the Countryside and Rights of Way Act 2000 (CRoW), which adds an extra offence, makes species offences arrestable, increases the time limits for some prosecutions and increases penalties. The Natural Environment and Rural Communities (NERC) Act 2006 places a duty on Government Departments to have regard for the conservation of biodiversity and maintains lists of species and habitats which are of principal importance for the purposes of conserving biodiversity in England and Wales. All native reptile species are included on these lists.

The reader is referred to the original legislation for the definitive interpretation.

This is a simplified description of the legislation. In particular, the offences mentioned here may be absolute, intentional, deliberate or reckless. Note that where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.

English Nature (2004) has stated that:

Reptiles are likely to be threatened, and the law potentially breached, by activities such as the following:

- Archaeological and geotechnical investigations
- Clearing land, installing site offices or digging foundations
- Cutting vegetation to a low height
- Laying pipelines or installing other services
- Driving machinery over sensitive areas
- Storing construction materials in sensitive areas
- Removing rubble, wood piles and other debris.

In general English Nature would expect reasonable avoidance to include measures such as altering development layouts to avoid key areas, as well as capture and exclusion of reptiles.

For sand lizards and smooth snakes, licences may be issued for some activities (such as disturbance and capture) that would otherwise be prohibited.

#### **NESTING BIRDS**

Nesting and nest building birds are protected under the Wildlife and Countryside Act WCA 1981 (as amended). Some species (listed in Schedule 1 of the WCA) are protected by special penalties.

Subject to the provisions of the act, if any person intentionally:

- kills, injures or takes any wild bird;
- · takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- takes or destroys an egg of any wild bird,

he shall be guilty of an offence.

'Reckless' offences with regard to the disturbance of nesting wild birds included in Schedule 1 of the Wildlife and Countryside Act were added by the Countryside and Rights of Way Act 2000.

The Natural Environment and Rural Communities (NERC) Act 2006 places a duty on Government Departments to have regard for the conservation of biodiversity and maintains lists of species and habitats which are of principal importance for the purposes of conserving biodiversity in England and Wales. These lists include a number of bird species.

#### MIDDLEMARCH ENVIRONMENTAL LTD

#### **QUALITY ASSURANCE**

TITLE: OLD STRATFORD- BUCKINGHAM CANAL

**EXTENDED PHASE 1 HABITAT SURVEY** 

A Report to Buckingham Canal Society

Contract Number: C108675

Report Number: RT-MME-108675

Revision Number: 01

Description: Final

Date: May 2011

Checked by:

Tom Docker **Ecological Consultant** 

Approved by:

Dr Philip Fermor Managing Director