

PROTECTED SPECIES SURVEYS

ΑT

LAND AT SAINSBURY'S, BATH ROAD, **MELKSHAM**

WYG Environment 1

PROTECTED SPECIES SURVEYS

LAND AT SAINSBURY'S, BATH ROAD, MELKSHAM

FOR

SAINSBURY'S SUPERMARKETS LTD

Refer	ence: P: Adm	inistration Environme	ntal Projects 2008 A03895	50 - Melksham Phase 2
Issue	1	Prepared by:	Reviewed by:	Verified by:
V2	Oct 08	Street	Allows	
		Melissa Turner Ecologist	Rachel Holmes Principal Ecologist	Mark Campbell Associate Director
V3	Nov 08	Dain	iflows	
		Nancy Davies Senior Ecologist	Rachel Holmes Principle Ecologist	
V4	April 2010	Dain	Allows	
		Nancy Davies Senior Ecologist	Rachel Holmes Principle Ecologist	

File Ref: P:\Administration\Environmental\Projects\2008\A038950 - Melksham\Phase 2
White Young Green Environmental Brigantine House, 27-31 Cumberland Street, Bristol, BS2 8NL

Telephone: 0117 924 4144 Facsimile: 0117 942 4145 E-Mail: enviro.bristol@wyg.com

WYG Environment 2 creative minds safe hands

www.wyg.com

CONTENTS

- 0.0 EXECUTIVE SUMMARY
- 1.0 INTRODUCTION
- 1.1 Site Description
- 2.0 LEGISLATIVE CONTEXT
- 3.0 METHODOLOGY
- 3.1 Field Survey
- 4.0 RESULTS
- 4.1 Field Survey
- 5.0 ECOLOGICAL EVALUATION
- **6.0 RECOMMENDATIONS**
- 7.0 CONSTRAINTS TO SURVEY

DOCUMENTS CONSULTED

Appendix A – Report Conditions Appendix B – Sketches

0.0 EXECUTIVE SUMMARY

	T
Site Location	The site comprises an area of approximately 3.5ha of land located within the centre of Melksham (NGR ST 902 639).
Previous Surveys	WYG undertook an Extended Phase 1 Habitat survey in March 2008 to assess the potential for the site to support protected species and to highlight any potential ecological constraints to development.
WYG Survey	WYG was commissioned to undertake protected species surveys recommended in the Phase 1 report to determine whether protected species use the site and to ensure compliance with the legislation that protects them.
Results	 A peak count of 19 adult slow worms. None of the trees supported roosting bats. However, bats do forage on the site. One otter spraint was found on site, suggesting that otters commute along the River Avon adjacent to the site.
Constraints to Survey	 Mowing destroyed approximately 15 reptile mats during the survey.
Recommendations	Otter There are no specific recommendations for otters as they are not resident on the site, however works should follow the Environment Agency's Pollution Prevention Guidelines 'Works in, near or liable to affect watercourses' (PPG05) to minimse impacts to the River Avon.
	Reptiles Reptiles should be removed from the site by translocation prior to works.
	 Bat boxes should be erected onto suitable trees to enhance roosting opportunities for bats The river corridor should remain unlit and where lighting is proposed, it should be of a specification that minimises impacts to foraging/commuting bats Should works be delayed by more than one year, an update bat survey should be undertaken.

1.0 INTRODUCTION

An extended Phase I habitat survey was undertaken by WYG in March 2008. The Phase 1 survey report recommended further, Phase 2 surveys, for certain protected species based upon the suitability of habitats present on site and immediately adjacent and/or records of such species present in the local area.

In September 2008, WYG was commissioned to undertake these surveys and the following were carried out;

- Otter (*Lutra lutra*) survey;
- Reptile presence/absence survey; and
- Bat emergence/return surveys

1.1 Site Description

The site comprises approximately 3.5ha of land located within the centre of Melksham (NGR ST 902 639; refer to Sketch 1). The north-east half of the site, is dominated by buildings and hard-standing with some amenity planting. The south-west half of the site is comprised of ephemeral vegetation, tall ruderals, secondary woodland, scrub, a tree line and rough grassland habitats. A pond was present towards the north-west site boundary. The northern boundary of the site was delineated by the River Avon and associated riparian woodland.

The site lies within the conurbation of Melksham. The A3102 runs along the eastern boundary with the River Avon forming the northern boundary to the site. A cemetery, residential housing with gardens and commercial buildings form the southern site boundary, whilst the western site boundary is bordered by Conigre Mead Local Nature Reserve (LNR).

2.0 LEGISLATIVE CONTEXT

a) Otter

Otters are known to use the River Avon adjacent to the site, and there has been an artificial otter holt created on the bank of the River Avon, on the northern site boundary.

Otters are listed on: Annexes II and IV of the EC Habitats Directive, Appendix II of the Berne Convention; Annex II of the European Communities Council Directive and Appendix I of the Convention on International Trade in Endangered Species (CITES) They are protected by:

- Schedule 5 and 6 of the Wildlife and Countryside Act 1981 (as amended).
- Conservation (Natural Habitats &c.) (Amendment) Regulations 2007.

Under this legislation it is an offence to deliberately kill, capture, damage/destroy breeding sites, disturb or sell otter. No trade of any otter, including any recognisable part or derivative is permitted. Under Annex II of the European Communities Council Directive, where otter is regarded of community interest, its conservation may require the designation of Special Areas of Conservation (SACs).

As such, the proposed development may cause disturbance to any otter that may be using the holt, therefore it will be necessary to conduct an otter survey to establish whether this species should be considered a constraint to the development. If their presence is confirmed a licence will need to be sought and mitigation measures would need to be adopted to ensure that the legislation is not breached.

b) <u>Reptiles</u>

Grass snakes were noted in the pond during the great crested newt presence/absence survey undertaken on site in March – May 2008. In addition, habitats including the semi-improved grassland and riparian embankment on site could support other common species of reptile.

All British reptiles receive protection under the Wildlife and Countryside Act 1981 (as amended). The four most common species of reptile (common lizard, grass snake, slow worm and adder) receive protection from Section 9(1) and all of Section 9(5) of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence to intentionally kill or injure an animal.

It is therefore a criminal offence to undertake major works on site that may result in the death or injury of a native reptile species where these species are known to be present.

In addition to the above, the two rare species of British reptile, the smooth snake and the sand lizard are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) and under Annexe IV of the Conservation of Natural Habitats and of Wild Fauna and Flora Directive, 1992 ('the Habitats Directive') as a European protected species. Furthermore, the Countryside and Rights of Way Act, 2000 (Schedule 12, paragraph 5) has amended Section 9(4) of the 1981 Act to include the term 'reckless'. It is therefore fully protected under Section 9 of the 1981 Act and under Regulation 39 of the Conservation (Natural Habitats etc) Regulations, 1994 that transposes the Habitats Directive into UK law.

Consequently, it is an offence to intentionally kill, injure or take a smooth snake/sand lizard as well as intentionally or recklessly damage, destruct or obstruct the access to the place of shelter or disturb the animal while it is occupying it.

c) Bats

Bats may roost within the standard trees on site.

All British bat species are listed in Schedule 5 of the Wildlife and Countryside Act (WCA), 1981 (as amended), and under Regulation 39 of the Conservation (Natural Habitats &c.) Regulations, 1994 (as amended). This makes it an offence to:

- intentionally kill, injure or capture any bat;
- deliberately disturb bats in a way likely to significantly affect:
 - i. The ability of any significant group of bats to survive, breed, or rear or nurture their young; or
 - ii. The local distribution or abundance of the bats
- intentionally or recklessly damage, destroy or obstruct the access to the place of shelter or protection;
- damage or destroy a bats breeding site or resting place; and
- be in possession of, transport, sell or exchange, or offer to sell or exchange any bat

This legislation applies to all life stages.

Consequently, attention should be given to dealing with the modification or development of an area if aspects of it are deemed important to bats such as flight corridors and foraging areas.

Furthermore, in terms of national conservation policy, seven of the sixteen breeding British species of bat (soprano pipistrelle, barbastelle, Bechstein's, noctule, brown long-eared, lesser- and greater- horseshoe bats) have been listed on the UK Biodiversity Action Plan (BAP) and are covered by Species Action Plans (SAPs), which highlight the importance of certain habitats to species, details of the threats they face and propose measures to aid in the reduction of population declines.

3.0 METHODOLOGY

3.1 Field Survey

Otter Survey

In September 2008, approximately a 400m section of the River Avon, which lies on the northern boundary of the site, was systematically searched for evidence of otter activity. Signs of the species include otter holts, spraints, lay-ups, slides and footprints.

A search was made for an artificial otter holt, which the Environment Agency identified as falling within the same grid reference as part of the site.

Reptile Presence/Absence

The method used was that described by Gent and Gibson (2003) for carrying out a presence/absence survey for reptiles. This requires undertaking seven survey visits during optimum weather conditions, i.e. when the temperature was neither too hot nor too cold, usually between 08:30 and 11:00 hours or between 16:00 and 18:30 hours and during periods of cloud with sunny spells and little wind. The survey periods for the relevant reptile species have been summarised in Table 1 below.

Table 1. Survey Periods for Common Reptile Species and Temperature Ranges

Species	Survey period	Optimal Temperatures
Common	Early March – early August (adults)	9° – 18°C
lizard	August and September (juveniles)	
Slow worm	Early March – early August	No data
Grass snake	April – early October	12° – 20°C
Adder	Early March – late September	8 – 16°C

A total of 50 mats made from black roofing felt were placed across the proposed development site on the 12^{th} August 2008. These act as artificial refugia, and encourage reptiles to hide under them. The site was visited on seven separate occasions when weather conditions were suitable and the artificial refugia were checked for the presence of reptiles.

Bat Emergence/Return Surveys

Two evening (emergence) surveys and one dawn (return) survey were undertaken to establish the presence or otherwise of roosting bats. The surveys focused on the trees assessed to be of Medium-High value to roosting bats (tree T1-a mature crack willow along the western boundary of the site and tree T3-a semi-mature crack willow within an area of young broadleaved woodland), see Sketch 3 for locations. The emergence surveys commenced half an hour before dusk and proceeded until one hour after sunset. The return surveys commenced an hour and a half before sunrise and continued for half an hour after sunrise.

Surveys were undertaken on 17^{th} and 18^{th} September and the 24^{th} September, 2008.

Any bats seen emerging from or returning to the trees were recorded. All surveys were aided by the use of frequency division 'duet' bat detectors.

4.0 **RESULTS**

4.1 **Field Surveys**

Otter

The habitats within the survey area can be separated into two sections - a canalised section adjacent to the bridge and a willow dominated riparian embankment.

The canalised section comprised of steel girders which rose from the water to approximately 15m high. This area was unsuitable for otter.

The riparian embankment was dominated by willow (Salix sp.) with an understorey comprising of redshank (Polygonum persicaria), common nettle (Urtica dioica) and greater plantain (Plantago major). This area was highly disturbed, with an abundance of pathways likely to be from walkers and their dogs. The grid location provided by the Environment Agency, suggests that the artificial otter holt is located within this area of riparian embankment. However no obvious sign of the holt was noted during the survey and no signs (tracks or slides) to suggest active usage within this area by otter was noted.

During the survey, an otter spraint was noted on the stump of a willow tree, adjacent to the river (TN1; refer to Sketch 2). The spraint was recent and contained the remains of mussel shells.

Reptiles

The survey dates and reptile survey results are summarised in Table 2 below. Good populations of slow worms and grass snakes were recorded, although only juvenile grass snakes were found. The presence of juvenile reptiles indicates that these animals breed on the site.

www.wyg.com

Table 2. Survey Results

Visit	Date	Weather Conditions	Temp (°C)	Record
1	08/09/08	Sunny, still, 85% cloud,	18	19 adult slow worms 5 juvenile slow worms 8 juvenile grass snakes *15 mats damaged/removed
2	10/09/08	Sunny spells, breezy, 80% cloud,	16	19 adult slow worms 6 juvenile slow worms 9 juvenile grass snakes
3	12/09/08	Sunny, slight breeze, 60% cloud	19	17 adult slow worms 6 juvenile slow worms 3 juvenile grass snakes
4	16/09/08	Sunny, no breeze, 60% cloud	21	7 adult slow worms 8 juvenile slow worms 4 juvenile grass snakes
5	17/09/08	Sunny, no breeze, 30% cloud	20	11 adult slow worms 7 juvenile slow worms 2 juvenile grass snakes
6	22/09/08	Sunny, no breeze, 80% cloud	18	14 adult slow worms 9 juvenile slow worms
7	24/09/08	Sunny spells, slight breeze, 85% cloud	18	10 adult slow worms 6 juvenile slow worms 1 juvenile grass snake

Bats

Evening emergence surveys

Location: T1
Date: 17/09/08
Evening sunset: 19:20
Temperature: 16°C

Weather: Mild, no breeze, 90% cloud cover.

No bats were seen emerging or heard echolocating from T1 during the evening survey. A common pipistrelle (*Pipistrellus pipistrellus*) was the first bat seen at 19:36 commuting from east to west towards the Conigre Mead LNR. A further common pipistrelle was seen at 19:39 and again at 19:42 commuting from the cemetery along the tree-line of the secondary woodland and into the Conigre Mead reserve. At 19:48 a common pipistrelle was seen foraging along the tree-line of the secondary woodland. Furthermore, a common pipistrelle was seen flying from the Conigre Mead reserve and over the semi-improved grassland of the site, where it proceeded to forage for a minute. Additional foraging activity occurred between 20:08 and 20:48 by a common pipistrelle above the tree-line of the secondary woodland.

Location: T3

Date: 17/09/08

No bats were seen emerging or heard echolocating from T3 during the evening survey. The first bat, a common pipistrelle was recorded at 19:20 commuting south and then north. At 19:40, a common pipistrelle was seen foraging round tree T3 for approximately a minute. Further activity occurred at 19:45 with a soprano pipistrelle (*Pipistrellus pygmaeus*) heard commuting, whilst a common pipistrelle was heard commuting south and then north. A common pipistrelle was also heard foraging above tree T3 and the surrounding trees at 20:05. A Daubenton's bat (*Myotis daubentonii*) was heard commuting at 20:10, the direction however was unknown. Further foraging around tree T3 occurred by common and soprano pipistrelles independently between 20:10 and 21:15.

Location: T1 Date: 24/09/08

Evening sunset: 19:05 Temperature: 12°C

Weather: Dry, mild breeze, 100% cloud.

No bats were seen emerging or heard echolocating from T1 during the evening survey. A common pipistrelle was recorded first at 19:24 flying towards Conigre Mead LNR. At 19:29 and 19:33 a common pipistrelle was seen commuting towards the River Avon. Further activity occurred here at 19:48 with a common pipistrelle heard commuting, whilst a *myotis* sp. was heard at 19:53. The last activity occurred at 20:57 when two common pipistrelle bats were heard (direction unknown).

Location: T3 Date: 24/09/08

No bats were seen emerging or heard echolocating from tree T3 during the evening survey. The first bat, a common pipistrelle was recorded at 19:22 foraging close to the footpath that lead through the trees and further south towards the cemetery. The foraging was in a short burst, lasting only a minute. Further activity here occurred at 19:44 with a common pipistrelle heard commuting, whilst a further common pipistrelle was heard foraging at 19:45. Between 19:57 and 20:41, a soprano pipistrelle was seen and heard foraging close to the footpath through the trees and then to the rough grassland adjacent to the cemetery. A common pipistrelle was also heard foraging above the trees at 20:53 and 20:56.

Dawn swarming surveys

Location: T1
Date: 18/09/08
Dawn sunrise: 06:40
Temperature: 8.5 – 10.1°C

Weather: Cold, no breeze, small amount of cloud

No bats were seen returning to tree T1 during the dawn survey; neither was

any activity recorded.

Location: T3 Date: 18/09/08 No bats were seen returning to tree T3 during the dawn survey. A single detection of a commuting common pipistrelle occurred at 06:10.

5.0 **ECOLOGICAL EVALUATION**

The nature conservation value of each species groups was assessed with reference to a range of guidelines including:

- The UK BAP (from www.ukbap.org.uk);
- Criteria based on Ratcliffe (1977);
- Criteria based on the guidelines for ecological impact assessment developed by the Institute of Ecology and Environmental Management (IEEM, 2006); and
- Published population and assessment criteria (Battersby & Tracking Mammal Partnership 2005, UK Steering Group 1995, Froglife 1999, Gregory et al 2002).

Each species is assigned to one of the six categories that have been defined by the Institute of Ecology and Environmental Management (IEEM, 2006). These categories represent the geographical importance of the receptor. The categories are;

- National value
- Regional value
- County Value
- District Value
- Local value
- Within the zone of influence only
- Negligible

Otter

An otter spraint was noted on site during the survey. This suggests that this part of the River Avon falls within the territory of an otter – the territories of which can encompass up to 50 km of river for male otters and up to 24 km for females. The spraint indicates that otters use the riparian embankment on site to commute along, although activity is considered low with no other field signs noted.

No holts or lay-ups were found during the survey to suggest that otters permanently reside on site.

The habitat adjacent to the river is comprised of industrial and retail land along the whole northern boundary, whilst the riparian habitat along the southern banks, adjacent to the site, is disturbed by the public and their dogs. Higher quality habitat is available for otters in the wider area, where the River Avon passes through open countryside and woodland. Whilst otters are nationally important and UK Biodiversity Action Plan (BAP) species (although not Wiltshire BAP), the limited signs found during the survey suggests that the habitats on site do not offer suitable refuge for the species. The otter population on site is of local value.

Reptiles

Assessment of reptiles at the site was based on the following:

14

The population of reptiles

WYG Environment

- The range of species present
- Occurrence of rarer species i.e. Sand Lizard and Smooth Snake
- Habitat potential

According the guidelines produced by Froglife (1999) the reptile populations can be classified into three classes based on the maximum number of adult reptiles seen on any one survey visit. The classifications are shown in Table 3 below.

Table 3. Reptile Population Size Classes

Reptile species	Low population	Good population	Exceptional population
Adder	<5	5-10	>10
Grass snake	<5	5-10	>10
Common lizard	<5	5-20	>20
Slow worm	<5	5-20	>20

The maximum number of adult reptiles recorded at the site was 19 slow worms, which falls into the 'good population' category. Two species of reptiles were recorded (slow worms and grass snakes), but these did not include any of the rarer species.

Slow worms were recorded throughout the semi-improved grassland area. High numbers were found under refugia in the rough grassland in the southwestern corner of the site; the grass banks surrounding the pond (in particular the eastern bank); and the grassland situated adjacent to the area of ephemeral vegetation.

Refuges placed within the tussocky grass towards the south-western section of the site attracted up to 5 adults on one survey visit. In addition, all majority of juveniles recorded during the survey were observed under refugia in this area of the site; with up to 3 juveniles on one visit. The south-western site boundary adjoins a cemetery, whilst Conigre Mead LNR, containing a series of ponds and rough grassland, forms the western site boundary. Both of these habitats are likely to support foraging slow worm and grass snake. The secondary woodland along the south-western site boundary is likely to contain structures which could be used as hibernacula by reptiles.

The 'good population' of reptiles on site is of **local** value.

Bats

Three common bat species (a Daubenton's bat, common pipistrelle and soprano pipistrelle) were recorded on site. Bat activity was considered to be low during the evening emergence surveys on the 17th and 24th September,

WYG Environment 15 creative minds safe hands

with one bat recorded commuting or foraging at any one time on site at five to ten minute intervals throughout the survey. In addition to this, bat activity during the dawn swarming survey on the 18th September was absent.

Only two trees on site were assessed to have suitable features for roosting bats during the initial bat roost assessment, however neither of them were positively identified as harbouring bats. No bats were recorded emerging or returning to T1 or T3 during the emergence/return surveys.

The broadleaved woodland along the boundaries of the site and the habitats along the River Avon provide bats with linear corridors for commuting and foraging. Low numbers of common pipistrelle were seen and heard commuting towards the river and foraging close to the footpath through the broadleaved woodland adjacent to T3. Activity was also noted in the rough grassland adjacent the cemetery. Whilst bats are nationally important and some are on the Wiltshire BAP, no roosts were found and general bat activity was considered low, suggesting that the habitats on site offer limited forage/commuting opportunities and no obvious refuge for these animals. The bat population on site is of **local** value.

5.0 RECOMMENDATIONS

A habitat management plan should be provided to detail how any new and retained habitats will by managed for wildlife in the long-term and a Construction Ecological Management Plan (CEMP) should be prepared to ensure that habitats and species are protected during construction.

As well as provisions for protected species, these documents should contain details of how the river and bank habitats will be protected throughout the construction and operational phases of the development.

Otter

Survey results indicate that otters are not resident on the site, although the riparian embankment does fall within an otter's territory. It is recommended that the River Avon is protected from dust, noise and pollution during works and the Pollution Prevention Guidelines 'Works in, near or liable to affect watercourses' (PPG05) published by Environment Agency should be adhered to at all times.

Reptiles

Good populations of reptiles were recorded on the site and these need to be considered in the development plan. It is understood that a small area of the site, to the west of the store, will be used to extend the car park. The remainder of the site may be used for flood alleviation by the creation of a new attenuation pond and some alterations to the ground levels.

To avoid breaching the Wildlife and Countryside Act, 1981 (as amended) by killing or injuring reptiles, it is recommended that reptiles are removed from the site prior to works by means of a translocation. This would involve the installation of reptile-proof fencing around the site boundary, trapping any reptiles on the site and moving them to a safe location. As the reptiles will be able to return to the area used for flood alleviation once work has been completed, the translocation should be viewed as a temporary measure and this should be taken into account when selecting and planning enhancements to the recipient site.

Conigre Mead LNR would be the most suitable recipient site because it contains habitats which are very similar to those on the site. Furthermore, its proximity would allow reptiles to disperse back to the site once the reptile-proof fencing was removed. The translocation to this site should be undertaken with the consent of Wiltshire Wildlife Trust.

If permission to use Conigre Mead LNR as a donor site cannot be obtained, then an on site translocation should be considered. This would involve a small area of the site being retained and enhanced for reptiles and used as a recipient site. Whilst the area of land available for receiving the reptiles is likely to be small, it is likely that the animals would disperse into the surrounding countryside. If the recipient area was in the west of the site, the reptiles would probably disperse into Conigre Mead LNR and therefore the Wiltshire Wildlife Trust should be informed of the translocation.

The recipient sites may require enhancements, such as the creation of hibernacula/refugia, to support the additional reptiles. In addition, the site will be enhanced for reptiles following the development.

The method for on or off-site translocation involves the donor site being surrounded by reptile proof fencing to prevent relocated animals from moving back onto the construction site. A number of reptile mats should then be set on the site and checked on a regular basis between March and September. All reptiles found under the mats should be moved to the donor site. Please note that based on guidelines published by Herpetofauna Groups of Britain and Ireland (1998) - Evaluating local mitigation/translocation programmes: Maintaining best practice and lawful standards, it is recommended that based on a population of <50 slow worms per hectare, reptile translocations will require a minimum of 60 visits in suitable weather. If reptiles are still being caught towards the end of the survey season then the translocation should extend into a second survey season. If however reptiles are not being caught during the 60 trapping days, advice should be sought from the local Natural England office to verify if the trapping effort can be reduced.

Once the translocation is complete the vegetation clearance should proceed on a warm, dry, still day. Any hibernacula (piles of wood, stones or dead vegetation) should be taken apart by hand and any reptiles found moved to the receptor site. The vegetation clearance should be supervised by a qualified ecologist.

Bats

No bat roosts were recorded within the trees surveyed and no trees are to be removed as part of the development proposals.

The River Avon and broadleaved woodland habitats on site should be kept unlit to ensure that their value to commuting/foraging bats is maintained. Where lighting is proposed, such as around the extended car park, this should be of a bat friendly specification (low or high pressure sodium lamps as opposed to mercury lamps) with domes to direct light downwards/ minimise light spill and the lighting columns should be as short as possible. Refer to the Bats and Lighting document at http://www.ile.org.uk/uploads/File/Technical/BATS%20AND%20LIGHTING%2 OIN%20THE%20UK%20-%202007%20version.pdf. In addition, strategic planting should be used to retain and enhance connectivity along the linear features and minimise light spill.

To enhance the site for roosting bats, bat boxes should be erected to retained trees on site. A variety of bat boxes suitable for a range of species should be erected onto trees that are unlit. The boxes should face south and be positioned in a sheltered spot, which is protected from heavy winds and rain, with an unobstructed entrance as per recommended guidelines.

Should works be delayed by more than one year, an update bat survey should be undertaken immediately prior to any works that destroy or disturb trees that are considered of Medium-High potential to roosting bats.

General Enhancement

Consideration should be given to the incorporation of additional biodiversity enhancing features within the development in order to ensure that the development meets criteria set out within Planning Policy Statement 9 (PPS9) *Biodiversity and Geological Conservation* (2005) for creating biodiversity gain.

Whilst water voles have not been recorded on site or the adjacent Conigre Mead LNR, it is recommended that the landscaping and planting of the new flood alleviation area be tailored to accommodate this species. Appropriate habitat management (as proposed within the habitat management plan) will help achieve favourable conditions on site for water vole and other wildlife, which might be attracted to the site from neighbouring areas.

The habitat management plan should be produced following liaison with Wiltshire Wildlife Trust. The aim should be to enhance and manage the habitats in order to promote connectivity on and off site for the benefit of local wildlife.

Within the landscaping scheme it is recommended that certain species of flora are planted to enhance the foraging opportunities on site for wildlife. Where abiotic conditions are suitable, the following species are recommended: rowan (*Sorbus aucuparia*), holly (*Ilex aquifolium*), hawthorn (*Crataegus monogyna*), dogwood (*Cornus sanguinea*), crab apple (*Malus sylvestris*), ivy (*Hedera helix*), honeysuckle (*Lonicera periclymenum*) and guelder rose (*Viburnum opulus*). These ideally, should be sourced from native, local stock. The use of native planting in areas of new planting is particularly important along the river and adjacent to Conigre Mead LNR.

6.0 CONSTRAINTS TO SURVEY

The reptile survey was disrupted by mowing shortly after the reptile mats were deployed. The mowing removed or damaged approximately 15 mats. Five replacement mats were laid down during the third survey visit and the survey included these mats for the remaining four visits.

This report records wildlife found during the survey and anecdotal evidence of sightings. It does not record any plants or animals that may appear at other times of the year and were therefore not evident at the time of the visit. Some species that might use the site or be apparent at other times of the year, or only in certain years, would not have been detected.

DOCUMENTS CONSULTED

- Chanin P (2003) Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10. English Nature, Peterborough
- Dunsmore, H. & Jones, A. (2002). North Lanarkshire Biodiversity Action Plan: Otter: species Action Plan. Scottish Wildlife Trust (Unpubl.).
- Froglife (1999) Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
- Herpetofauna Groups of Britain and Ireland (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practice and lawful standards. HGBI advisory notes to for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth. Unpubl.
- Joint Nature Conservation Committee (2001) Habitat management for bats, JNCC, Peterborough.
- Joint Nature Conservation Committee (1998) Herpetofauna Worker Manual, JNCC, Peterborough.
- Joint Nature Conservation Committee (1999). The Bat Workers' Manual, JNCC, Peterborough.
- Office of the Deputy Prime Minister (August 2005). Planning Policy Statement
 9: Biodiversity and Geological Conservation (PPS 9). H.M.S.O., London.
- Suffolk Wildlife Trust & English Nature (2002). Planning Applications & Reptiles:
 Guidelines for local authorities and developers. Unpubl.
- Wildlife and Countryside Act 1981. H.M.S.O., London.

APPENDIX A: REPORT CONDITIONS

REPORT CONDITIONS

This report is produced solely for the benefit of Sainsbury's Supermarkets Ltd and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

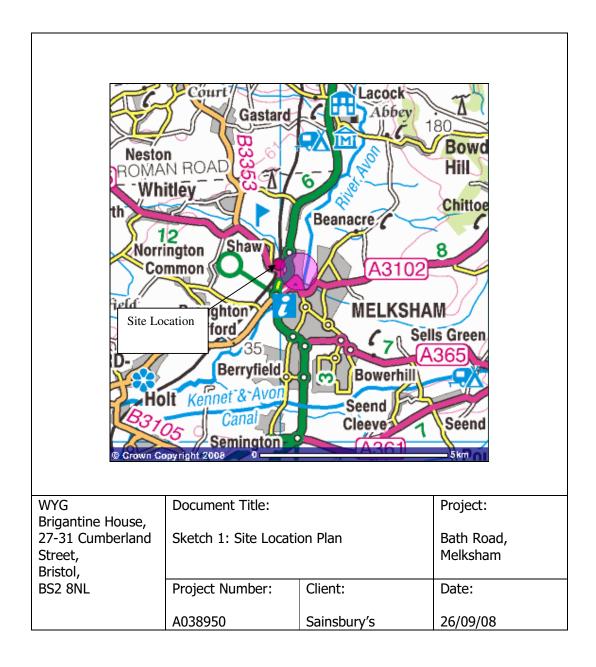
This report refers, within the limitations stated, to the condition of the site and the recorded proposals at the time of the inspections and study. No warranty is given as to the possibility of future changes in the condition of the site.

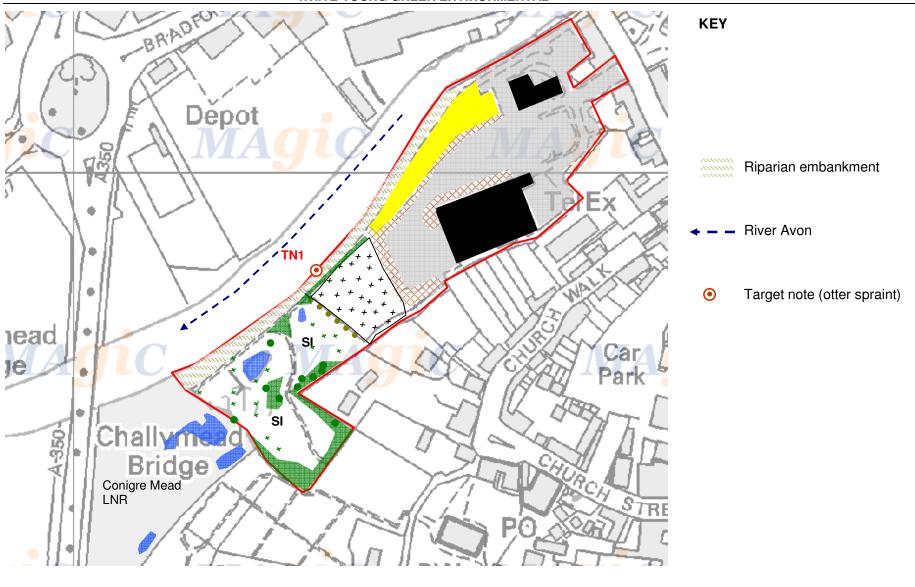
This report is based solely on the referenced data, inspections, discussions with Statutory Authorities and assessment by WYG. Some of the opinions are based on unconfirmed data and information and are presented as the best that can be obtained at this stage without further extensive research.

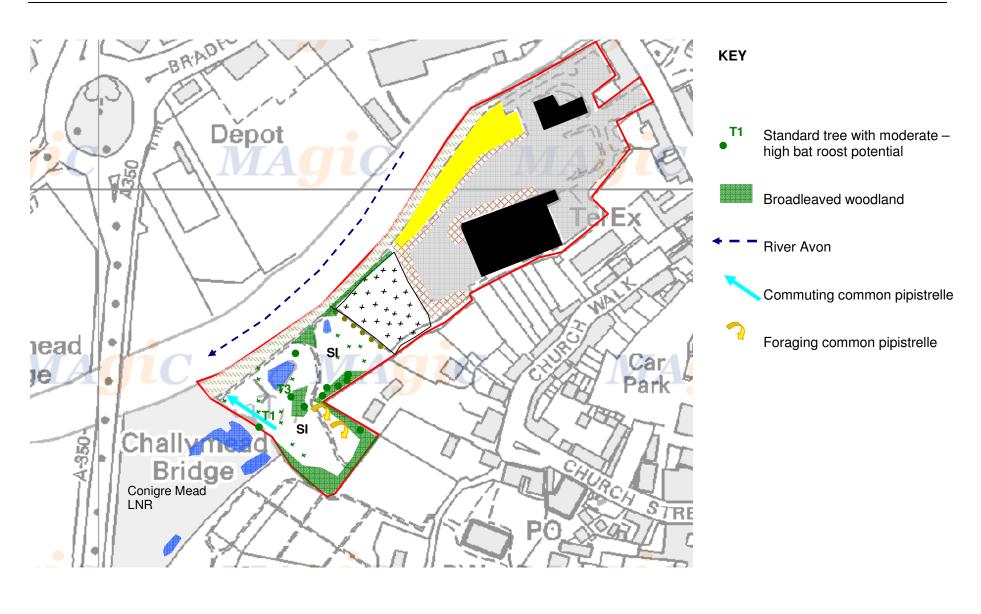
The report is prepared for the objectives, scope and proposed uses stated in the report and should not be used in a different context without consent of WYG. The report is limited to those aspects specifically reported on and is necessarily restricted. No liability is accepted for any other aspect. The opinions expressed cannot be absolute due to the limitations of time and resources imposed by the agreed brief.

Whilst the findings detailed within this report reflect our best assessment, because there are no exact UK definitions of these matters, being subject to risk analysis and interpretation, we are unable to give categoric assurances that they will be accepted by authorities or interested parties without question as such bodies have their own interpretation of regulations and standards.

APPENDIX B: SKETCHES







Sketch 3: Bat activity map showing trees surveyed and results
Sketch 3: Bat activity map showing trees surveyed and results
Sketch 3: Bat activity map showing trees surveyed and results
Sketch 3: Bat activity map snowing trees surveyed and results