North Northamptonshire
Draft Supplementary Planning Document
for public consultation October-November 2010

Biodiversity

THE wildlife TRUSTS

Contents

Front page photographs**:**
Top left: Marbled white butterfly on knapweed
Centre: Wildlife pond
Bottom right: Pyramidal orchid on calcareous grassland

Introduction

Protecting our natural resources and enhancing the environment is one of the Government's four priorities for immediate action to deliver sustainable development[1]. Biodiversity is a fundamental constituent of this. All local authorities have a statutory duty to have regard, so far as is consistent with the proper exercise of their functions, to the purpose of conserving biodiversity (Natural Environment and Rural Communities Act, 2006[2] - guidance for Local Authorities is available[3]). This duty is addressed by the inclusion of nature conservation policies, both in the North Northamptonshire Core Spatial Strategy and saved policies in the old Local Plan for each borough/district.

This Supplementary Planning Document (SPD) explains how biodiversity shall be incorporated into the development process to ensure that the requirements of legislation and policy are met. It is designed to be used by those considering and applying for planning permission, and offers a standardised approach which all applicants shall follow. The SPD provides guidance on the interpretation of the main principles set out by Planning Policy Statement 9: Biodiversity and Geological Conservation[*], and the relevant local plans, and is to be used in conjunction with expert ecological assessment of the details of each specific case.

Local policies that are addressed by this SPD are:

North Northamptonshire Core Spatial Strategy:
- Policy 5: Green Infrastructure
- Policy 13: General Sustainable Development Principles
- Policy 16: Sustainable Urban Extensions

Kettering Borough Local Plan (saved policies):
- K3 (Ise Valley)
- K4 (Slade Valley)

Corby Borough Local Plan (saved policies):
- P1(E) - Environmental Protection on Development Sites
- P7(E) - Wildlife, Geological and Protection
- P8(E) - Wildlife, Geological and Protection
- P9(E) - Wildlife, Geological and Protection
- P14(E) - Nature Conservation Strategy

East Northants Local Plan (saved policies):
- EN8 – Protection of SSSIs, NNRs and LNRs
- EN9 – Safeguarding Sites of Local Conservation Interest

East Northamptonshire – Rural North, Oundle and Thrapston Plan
These policy numbers are subject to change when the Plan is adopted.
- Policy 14 – Protection of Local Sites of Conservation Interest and Designation of Local Nature Reserves
- Policy 15 – Enhancing Biodiversity

Wellingborough Local Plan (saved policies):
- G18 – Sites of Nature Conservation Value

[*] PPS9 is under review (Consultation paper on a new Planning Policy Statement: Planning for a Natural and Healthy Environment, published 09/03/2010). The consultation draft indicates that biodiversity will be covered through Policy NE8 according to the same principles as in the published PPS 9.

Structure of this SPD

The SPD is split into 2 sections.

The first section is structured around a flow chart (*Addressing biodiversity in developments, page 5*) which will guide applicants and officers through the steps that should be taken to ensure biodiversity is fully addressed in every proposal. The process applies to development of any scale; those applying for small scale developments must still follow the flowchart but may find that they very quickly reach the last step. Each process in the flow chart is accompanied by a section of text that will explain why the step is needed and point the reader to information that will support them in completing each stage of the process.

The flow chart should be used at the pre-application stage to ensure that the application contains all relevant information to allow progression to formal determination. Considering these steps at the pre-application stage will minimise cost to the developer and save the time involved in the determination stage. The flow chart should be used by development control officers in the determination stage to ensure that only applications that are in accordance with national and local policy on biodiversity are permitted.

The second section of the SPD sets out requirements for addressing biodiversity in the validation process, the setting of appropriate planning conditions and obligations, and the construction and aftercare stages.

Section 1

Addressing biodiversity in developments

Ensure that the application has fully addressed the impacts of the proposal on biodiversity, and that all of the required supporting information is in place before proceeding to the next stage.

Follow the flowchart - addressing biodiversity in developments.

Section 2

Validation

Ensure the application meets the validation requirements.

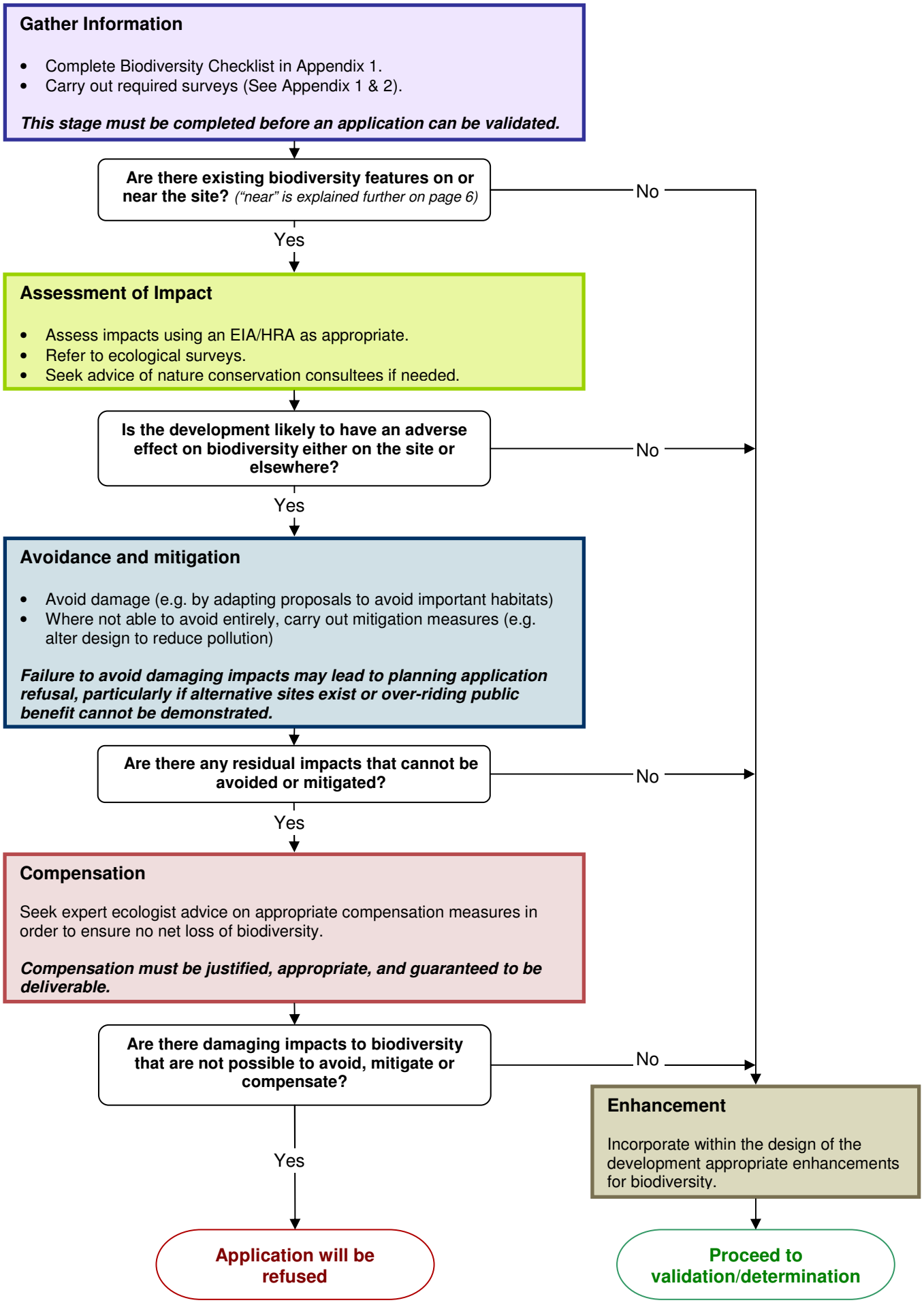
Conditions and Obligations

Appropriate conditions or obligations will be agreed to ensure mitigation, compensation and enhancement are carried out effectively.

Construction & Aftercare

Ensure that plans are in place to implement good practice during construction and provide for the ongoing conservation management and monitoring of the site.

Section 1 Flowchart - addressing biodiversity in developments



Supporting guidance for flowchart

Gather Information

It is essential that all applicants complete this stage, which will ensure that all necessary ecological information is gathered, forming the evidence base for further steps. Carrying this out at the earliest possible stage reduces the risk of delays caused by insufficient information, taking into account that most ecological surveys can only be carried out at specific times of year (refer to Survey Calendar in Appendix 2).

The checklist in Appendix 1 clarifies when certain types of ecological survey and assessment will be needed.

The Biodiversity Checklist can be completed by the applicant, the case officer or an Ecologist depending on the type of site and proposal. Biodiversity features near the site need to be assessed as well as those on the site. 'Near' will vary in its meaning depending on the zone of influence of the development. A small extension to a residential property is likely to only affect the footprint of the development site, whereas a development on previously undeveloped land close to a water source may have a zone of influence of several kilometres in the direction of water flow due to the potential to contaminate ground water and run-off.

In addition to carrying out new surveys, it will almost always be necessary for the appointed ecologist to gather existing data from the Northamptonshire Biodiversity Records Centre which holds data on species and protected sites for the whole county, and from county specialists for certain groups e.g. bats. These data, along with initial survey work, may identify further survey needs that were not apparent from the checklist. E.g. a data search may reveal records of protected species using a site in the past. As long as there is a reasonable likelihood of the species being present and affected by the development specific surveys must be undertaken to confirm their presence or absence.

Survey work should be undertaken and prepared by competent persons and following appropriate survey methods[4].

Full completion of this stage, along with the production of relevant ecological reports, is a requirement for a planning application to be valid (See Appendix 3). Biodiversity surveys cannot be postponed until after determination and then addressed by condition[5]. This is supported by legal precedent[6].

Assessment of Impact

Information from desktop and field surveys must be used, in conjunction with the development proposals, to assess the impacts of the proposed development on the biodiversity features both on and around the site. The potential impacts, positive as well as negative, whether direct, indirect, cumulative, long-term or short-term should all be assessed[7].

This should be done by a professional ecologist, who will include an assessment of the impacts within the ecological report.

Examples of impacts to be assessed include:

- Habitat fragmentation and isolation.
- Permanent loss of, or damage to, all or part of an important site for biodiversity directly through loss to developed land.
- Short term damage to an important site through the construction process, vehicle access, storage of materials, pollution etc.

- Increased disturbance and pressure by people and pets.
- Reduced resources for species (food, water, shelter, reproduction and dispersal).
- Interruptions to an established management regime.
- Introduction of alien soils or plant species.
- In-direct effects from development some distance away.
- Cumulative effects arising from large numbers of small development which on their own would have a lesser impact.

Certain types of development may need to be further assessed through the statutory procedures of Environmental Impact Assessment (EIA) or Habitats Regulation Assessment (HRA). The requirement for EIA comes from the European EIA Directive (85/33/EEC as amended by 97/11/EC and 2003/35/EC). The requirement for Habitats Regulation Assessment comes from the European Habitats Directive (92/43/EEC), and relates to development proposals that may directly or indirectly affect the designated interest of European protected sites. In Northamptonshire, this relates to the Upper Nene Valley Gravel Pits proposed Special Protection Area, which must be given the same consideration as a classified SPA in the planning system[5]. Further guidance[8] on HRA process and survey methodologies is being produced for Northamptonshire by Natural England.

Avoidance and Mitigation

If significant impacts to biodiversity are likely steps must be taken to avoid these impacts. Avoidance steps might include designing the site master plan around biodiversity features in such a way as to ensure all important features, and ecological connectivity between them and the surrounding countryside, are retained.

Where avoidance of all impacts is not possible, the local planning authority will need to first be satisfied that the development cannot reasonably be located on any alternative sites that would result in less or no harm[9]

If there are no such alternatives, adequate measures to mitigate the effects should be demonstrated. Mitigation involves taking steps on the site itself to reduce and minimise the negative impacts to biodiversity that cannot be avoided entirely. These might include adapting construction methods or site plans to reduce pollution or disturbance. Mitigation should not be confused with compensation, such as replacement of lost habitat, which is covered in the next section.

Failure to avoid or adequately mitigate damaging impacts may lead to planning application refusal, particularly if alternative sites exist or if an over-riding public benefit cannot be demonstrated.

Compensation

All on-site mitigation options should be exhausted before compensation is even considered[10]. This is because compensation schemes rarely successfully replace what has been lost, and it is far better to not damage biodiversity in the first place than to try to compensate for the damage caused[11]. Moreover, the provision of off-site compensation is not an appropriate reason to allow a development to damage irreplaceable biodiversity, such as ancient woodland[12].

Where significant harm is likely, which cannot be avoided or adequately mitigated, the following questions should be asked:

1. Are there overriding reasons why damage should be allowed, taking into account the importance of the biodiversity asset, the need for the development and availability of alternatives? (if not, refuse)
2. Can the biodiversity asset that will be damaged be recreated, or translocated, with a high certainty of success? (seek expert guidance and if not, refuse)
3. Can the compensation be delivered early, ideally before damage to the original asset occurs, on a more than 1:1 basis? (seek expert guidance and if not, refuse)
4. Can the compensation be guaranteed by conditions or planning obligations? (if not, refuse)

If the answer is yes to all of the above questions, appropriate compensation measures should be sought[9]. In contrast to mitigation, compensation is usually carried out off-site and often involves major habitat restoration or creation to offset what is being lost to development[12]. If the answer to any of the above questions is no permission should be refused.

Biodiversity is extremely complex, with no two patches within a habitat being identical, even less so between sites[12]. Even if there were full knowledge of a system it would not be easy to measure. It is therefore beyond the scope of this SPD to define how to calculate required compensation. Instead, each situation must be treated individually and expert ecological advice should be sought. Normally, the area of land for compensation will need to be much larger than that lost (this might be up to 10x, as in the case of Stanton Cross Development s.106 agreement, Borough of Wellingborough, WP/2005/0720/F). Wherever possible, compensation habitats should also be created to a suitable quality before damage takes place, allowing species to colonise it from the area to be lost.

In line with the UK Government Sustainable Development Strategy, environmental costs should fall on those who impose them – the “polluter pays” principle[7].

If significant harm to biodiversity cannot be avoided entirely, adequately mitigated or compensated, then planning permission will be refused[9]***.***

Enhancement

All developments should seek to improve Northamptonshire by providing a net gain in biodiversity[13]. This shall be appropriate to the scale of the development, type and location of the development. Enhancements will vary from the use of native species in the landscaping scheme to incorporating a large area of new managed natural habitat within the open space of the development[14].

The type and location of more significant enhancements that are suitable in Northamptonshire can be found in the published Biodiversity Action Plan for the county[15]. Any enhancements that are proposed must be backed by a sound plan to ensure that they are sustainable and will result in a long-term benefit to biodiversity. For example, creating an area of species-rich grassland but having no plans or funding in place to maintain it after the first 5 years will not result in a long-term benefit because much of the interest will gradually be lost when management ceases.

Opportunities for enhancement that add value to a habitat network[16] should be sought as a first priority[17,5]. Enhancements that increase connectivity for wildlife will have a bigger positive impact on biodiversity than enhancements that are considered in isolation.

Consideration should also be given to the size of habitat created. Larger areas of habitat are more financially and logistically effective to manage. Therefore closely related development could consider joining together to create larger and more effective habitat areas.

Section 2

Validation

The validation process flow chart in Appendix 3 outlines the steps to be taken to ensure an application is valid for biodiversity.

When submitting a planning application the 1APP form asks whether protected or priority species, designated sites, important habitats or other biodiversity features will be adversely affected or conserved and enhanced. If the pre-application stages have been completed then the answer to this question and justification for why will be straightforward.

If the answer to any of the questions on the Biodiversity Checklist (Appendix 1) is yes, then the corresponding 'yes' box on the application form should also be ticked. The 'yes' box should be ticked by default unless justification can be provided as to why it is not appropriate in that particular circumstance. ***If the answer to any of the 1APP biodiversity questions is yes, appropriate surveys must be provided to the LPA in order for the impact to be assessed.***

If the answer is **no** to either of the 1APP questions then written justification of this must be provided (by a suitably qualified person) with the application, including a statement acknowledging that the applicant is aware that it is a criminal offence to disturb or harm protected species should they subsequently be found or disturbed.

If an application is judged to be valid on initial impression, but after professional consideration it is later identified that the application will affect features clearly specified in the validation requirements (*e.g.* a designated site or a feature likely to contain protected species), then in the absence of relevant biodiversity information the LPA may judge the application to be invalid[18].

Conditions & Obligations

Planning conditions and obligations will often be appropriate means for ensuring effective mitigation, compensation and enhancement[19].

Government guidance on the role of planning conditions for development that affects a European protected site (such as a pSPA) is clear and helpful in this matter[5]. This guidance makes it clear that conditions can be used to ensure that site integrity is not adversely affected and that any risk to that integrity is prevented. This principle should apply to all developments that affect biodiversity.

A condition precedent *"No development should take place until…"* should be used where relevant for biodiversity related conditions so that the relevant details that the condition is referring to will have to be submitted to and approved by the LPA before any development can take place.

In ecological terms, a condition appended to any granted planning permission should be capable of being measured and/or monitored in order to ensure the effectiveness and completeness of its delivery.

If a Section106 Agreement is used to enforce ecological elements of an application, it is very important that not only should these elements be capable of on-going measuring and monitoring, as appropriate, but also that a properly costed approach is taken so that the adequate funding requirements are allocated to cover the delivery of the ecological needs and ongoing maintenance.

Construction & Aftercare

The on-going positive conservation management of habitats in relation to a development site, whether they are either retained or newly created habitats, should be undertaken in perpetuity. If a time frame is required, management in perpetuity can be defined as a minimum of 25 years based on habitat banking recommendations[20]. However, in some cases a time frame of 60 years[21] or even 125 years[22] may be justified. The approach taken for mitigation or compensation may need to be different from that which is taken for enhancement measures.

A Method Statement is required as part of the European Protected Species licence application process and should include methodology detailing how the long term conservation status of the local and UK protected species populations will be maintained and where possible enhanced.

As a project progresses to the construction phase it is imperative that the mitigation strategies outlined in the environmental statement (or other ecological reports) are put into practice. A Construction Ecological Management Plan is often used for this purpose.
An environmental risk assessment will be undertaken to identify all aspects of construction that could have an environmental impact and assesses the potential risk and impact of that activity on the environment. Management controls are then devised to eliminate and/or minimise those identified impacts.

Where there is likely to be a sizeable amount of retained habitat and/or a significant amount of new habitat created there will need to be an Ecological Management Plan (EMP) in place and approved by the local planning authority. The Ecological Management Plan identifies the biodiversity features on the site (existing or to be created) which will be managed to maintain and enhance the nature conservation value. The management plan sets out objectives for these habitats, with detailed management specifications as well as at least a 10-year monitoring programme. The EMP must be fully costed and set out clearly how the management and monitoring will be funded.

During the site preparation works and the construction phase the role of an Ecological Clerk of Works (ECoW) should be considered. The role of the ECoW is to guide and advise on how to avoid or minimise on-site ecological impacts. An ECoW will oversee the construction period and advise on the resolution of ecological issues as they arise, to protect the on-site features, habitats and species. An ECoW will ensure that all landscaping and ecological works, including habitat creation projects and mitigation for protected species, are undertaken in accordance with the Ecological Management Plan and the various method statements agreed with the Local Planning Authority

Glossary

Biodiversity
Biodiversity simply means the variety of life.

Biodiversity Action Plan (BAP)
In 1992, at the Earth Summit in Rio, the UK government, along with 150 other countries, signed the Convention on Biological Diversity. The UK's strategy in response was the UK Biodiversity Action Plan, launched in 1994. Local Biodiversity Action Plans (LBAPs) followed the recognition that "biodiversity is ultimately lost or conserved at the local level." They identify priorities for action and give guidance on implementing targets to reverse the loss of habitats and species.

Compensation
Compensation is usually carried out offsite and involves major habitat restoration or creation to offset what is being lost

Construction Ecological Management Plan (CEMP)
As a project progresses to the construction phase it is imperative that the mitigation strategies outlined in the environmental statement (or other ecological reports) are put into practice. A Construction Ecological Management Plan is often used for this purpose.
An Environmental Risk Assessment will be undertaken to identify all aspects of construction that could have an environmental impact and assesses the potential risk and impact of that activity on the environment. Management controls are then devised to eliminate and/or minimise those identified impacts.

Ecological Clerk of Works (ECoW)
The role of the ECoW is to guide and advise on how to avoid or minimise on-site ecological impacts. An ECoW will oversee the construction period and advise on the resolution of ecological issues as they arise, to protect the on-site features, habitats and species. An ECoW will ensure that all landscaping and ecological works, including habitat creation projects and mitigation for protected species, are undertaken in accordance with the Ecological Management Plan and the various method statements agreed with the Local Planning Authority.

Ecological Management Plan
The Ecological Management Plan identifies the biodiversity features on the site (existing or to be created) which will be managed to maintain and enhance their nature conservation value. The management plan sets out objectives for these habitats, with detailed management specifications as well as at least a 10-year monitoring Programme.

Green Infrastructure
A planned network of multifunctional green spaces and interconnecting links.

Habitat
The immediate space where an animal or plant lives and has food, water and protection.

Habitats Regulation Assessment
A statutory undertaking by any competent authority before giving permission for any plan or project which may affect a European site.

Method Statement
A Method Statement is required as part of the European Protected Species licence application process and should include methodology detailing how the long term conservation status of the local and UK protected species populations will be maintained and where possible enhanced.

Mitigation
Mitigation can be defined as taking steps on the site itself to avoid and minimise damage to biodiversity and carry out restoration work.

Mitigation Strategy
There are some protected species, such as water voles and adder, for which there is no licensing system. In these cases, the scope of mitigation, some times referred to as a Mitigation Strategy, is agreed at local level by Natural England.

Phase 1 Habitat Survey
This survey identifies the habitats that are contained within or make up a site, and the key plant species for each of those habitat types. It will also provide target notes on important aspects of the site, for example, the presence of rare plants or animals, or a special habitat feature such as an ancient hedgerow. Some consultants carry out what are called extended Phase 1 surveys that provide more information, particularly on vegetation of a site, than a Phase 1 survey.

pSPA
Proposed Special Protection Areas are strictly protected sites that are in the process of being classified in accordance with Article 4 of the EC Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species. Proposed SPAs must be given the same consideration as a classified SPA in the planning system[5].

Significant harm
Harm to biodiversity is considered to be significant (for the purpose of this document) when it results in a long term negative impact on an important site, a BAP habitat or a population of an important (protected, notable, or BAP) species.

Toolbox Talks
Toolbox talks are safety lectures aimed at the construction trade. The lectures are intended to educate workers about creating and maintaining safer work conditions, and attendance is mandatory with many companies. Toolbox talks help to ensure that the Construction Ecological Management Plan is adhered to. Example toolbox talks can be found at www.ciria.org.

1APP
The Standard Planning Application Form (1APP) was introduced by Communities and Local Government and the Welsh Assembly Government to replace all existing types of planning application forms (except minerals) within England and Wales.

Appendix 1: Biodiversity Checklist

Initial Impressions	Yes	No	Survey Requirements (if answer yes)	Action?
Does the proposal involve a loft conversion, alteration or demolition of a barn or building, or erection of a wind turbine?			**Bat and bird survey** These operations may affect bats and birds which are protected by law. Natural England must be contacted regarding licensing if bats are found. Only exception is open sided barns of metal construction.	
Does the proposal involve the removal of trees or hedgerows?			**Assessment of trees for bat roost potential & other biodiversity** (invertebrates and fungi) **Hedgerow Regulations Assessment** (for hedgerows) Hedgerows are a priority BAP habitat and should be retained and enhanced. Where retention is not possible they should be replaced and increased in length. Ancient and veteran trees should also be retained, and ancient trees of the future protected.	
Does the development footprint affect semi-natural habitats such as woodland, grassland, ponds, orchards, heathland or reedbed?			**Phase 1 Habitat Survey** (see glossary) & further surveys (for protected species etc.) as identified by the ecologist (e.g. badgers, bats, reptiles, invertebrates). These are all priority habitats in the Northamptonshire Biodiversity Action Plan. All areas of these habitats should be retained and enhanced. See www.northamptonshirebiodiversity.org, and if in doubt contact the Northamptonshire BAP Coordinator.	
Does the development affect (on/adjacent/connected to) a designated/recognised site e.g. pSPA, SSSI, Local Wildlife Site, Potential Wildlife Site, Protected Wildflower Verge, Pocket Park?			**An ecological survey** will be required to assess the potential effects from the proposal. **Habitats Regulation Assessment** will be required for any development that may impact on the Upper Nene Valley Gravel Pits pSPA. Contact Natural England for information on pSPA/SSSIs Contact The Wildlife Trust for Local Wildlife Sites or Potential Wildlife Sites	
Does the proposal utilise previously developed (brownfield) land?			**Phase 1 Habitat Survey** including assessment for **reptiles** and **invertebrates**. The habitats that arise on previously developed land can be very valuable for plants, reptiles and invertebrates. This includes old/restored quarries, landfill sites, railway lines, derelict land.	
Does the proposal include/come into close proximity of a water body (stream, river, gravel pit, lake, ditch etc)?			**An ecological survey** will be required to assess the habitat and impacts on associated protected/notable species such as otter, water vole, white-clawed crayfish. Impacts may be indirect – e.g. decline in water quality, otters killed on new roads	
Does the proposal lie in a corridor of green spaces or have the potential to provide habitat corridors or stepping stones?			**Green Infrastructure/habitat connectivity assessment** Assess how the inclusion of a corridor of natural habitats, based on the existing biodiversity value of the site, and perhaps included within a Green Infrastructure corridor, can act to connect biodiversity resources together and climate change proof the landscape. Refer to the BAP[15], Northamptonshire's Landscape Character and Green Infrastructure Suite[16], and Natural England Guidance[23]. **For larger applications/SUE this must be considered at the earliest stage – contact The Wildlife Trust**	

Appendix 2: Survey Calendar (CIRIA C587, from http://www.ciria.org)

Guidance on the optimal timing for carrying out specialist ecological surveys and mitigation

This is not definitive and is intended to provide an indication only. The timing of surveys and animal activity will be dependent on factors such as weather conditions. Please consult the species briefing sheets for more detailed information, including species distribution.

* Where survey techniques involve the capture, handling or disturbance of protected species then only licensed persons can undertake surveys; personal survey and monitoring licences are obtained from Natural England.

** Where mitigation involves the killing, capture, injury and/or disturbance of protected species and/or the damage, destruction or obstruction of their habitats, a development licence must be obtained from the Department for Food and Rural Affairs. Licenses will be granted only to persons who have proven competence in dealing with the species concerned. Development licence applications take approximately 30 days to be processed by government departments. Where mitigation works need to be conducted under licence before works begin, licence applications will need to be submitted considerably earlier.

	KEY
	Recommended survey time
	No surveys
	Mitigation conducted at these times
	Mitigation works restricted

		Licence required?	J	F	M	A	M	J	J	A	S	O	N	D
Habitats / vegetation	Surveys	N	Mosses and lichens. No other detailed plant surveys – Phase 1 surveys only (least suitable time)			Detailed habitat assessment surveys Surveys for higher plants and ferns Mosses and lichens in April, May and September only						Mosses and lichens. No other detailed plant surveys – Phase 1 surveys only (least suitable time)		
	Mitigation	N	Planting and translocation		No mitigation for majority of species							Planting and translocation		
Birds	Surveys	N	Winter birds		Breeding birds / migrant species			Breeding birds		Breeding birds / migrant species			Winter birds	
	Mitigation	N	Clearance works may be conducted at this time, but must stop immediately if any nesting birds are found		No clearance or construction works Bird nesting season					Clearance works may be conducted at this time, but must stop immediately if any nesting birds are found				
Badgers	Surveys	*	All survey methods – best time is in spring and early autumn / winter											
	Mitigation	**	Building of artificial setts No disturbance of existing setts						Stopping up or destruction of existing setts					See Jan to June
Bats	Surveys	*	Inspection of hibernation, tree and building roosts			No surveys		Activity surveys and inspection of building roosts. Emergence counts.				No surveys	Inspection of hibernation, tree and building roosts	
	Mitigation	**	Works on maternity roosts		Works on maternity roosts until mid-May. Works on hibernation roosts from mid-March				Works on hibernation roosts only		Hibernation roosts until November. Maternity roosts from mid-September		Works on maternity roosts only	

[1] Applies in Northern Ireland only

Appendix 2: Survey Calendar (CIRIA C587, from http://www.ciria.org)

		Licence required?	J	F	M	A	M	J	J	A	S	O	N	D
Dormice	Surveys	*	Nut searches (sub-optimum time)		Nest searches (April sub-optimum time)		Cage traps and hair tube surveys to mid-October Nut searches from September (optimum time September to December) Nest searches (optimum time September to March)						Nut searches and nest searches (optimum time)	
	Mitigation	**	**No clearance works**				Clearance works (sub-optimum time)	**No clearance works**			Clearance works to early October (optimum time)		**No clearance works**	
Otters	Surveys	*	Surveys for otters can potentially be conducted all year round, though vegetation cover and weather conditions may limit the times at which surveys can be carried out											
	Mitigation	**	Mitigation can potentially be conducted in any month, but is likely to be restricted where otters are found to be breeding											
Pine martens	Surveys	*	Surveys may be conducted all year round weather permitting Optimum time is spring and summer. Surveys for breeding dens from March to May.											
	Mitigation	**	Works in areas of pine marten habitat and dens		**Avoid all works in pine marten habitat**								Works in areas of pine marten habitat and dens	
Red squirrels	Surveys	*	Surveys may be conducted all year round weather permitting Optimum time is spring and summer. Surveys for breeding females from December to September.											
	Mitigation	**	**Avoid all works in red squirrel habitat**									Works should preferably be conducted at this time		**Avoid all works in red squirrel habitat**
Water voles (n/a in NI)	Surveys	*	**Reduced activity**	Initial surveys possible	All survey methods can be used during this period, though vegetation cover and weather conditions may limit the times at which surveys can be carried out. (Optimum time: March to June)								Initial surveys possible	**Reduced activity**
	Mitigation	N[2]	**Avoid all works in water vole habitat**			Works in water voles habitat possible	**Avoid all works in water vole habitat**			Works in water vole habitat possible		**Avoid all works in water vole habitat**		
Sand lizards, smooth snakes (n/a in NI) [1]and common lizards	Surveys	*	**No surveys – reptiles in hibernation**		Activity surveys from March to June and in September / October. Surveys are limited by high temperatures during July and August. Peak survey months are April, May and September.								**No surveys – reptiles in hibernation**	
	Mitigation	**	Scrub clearance		Capture and translocation programmes can only be conducted whilst reptiles are active (March to June and September / October). Trapping is limited by high temperatures during July / August. Scrub clearance								Scrub clearance	

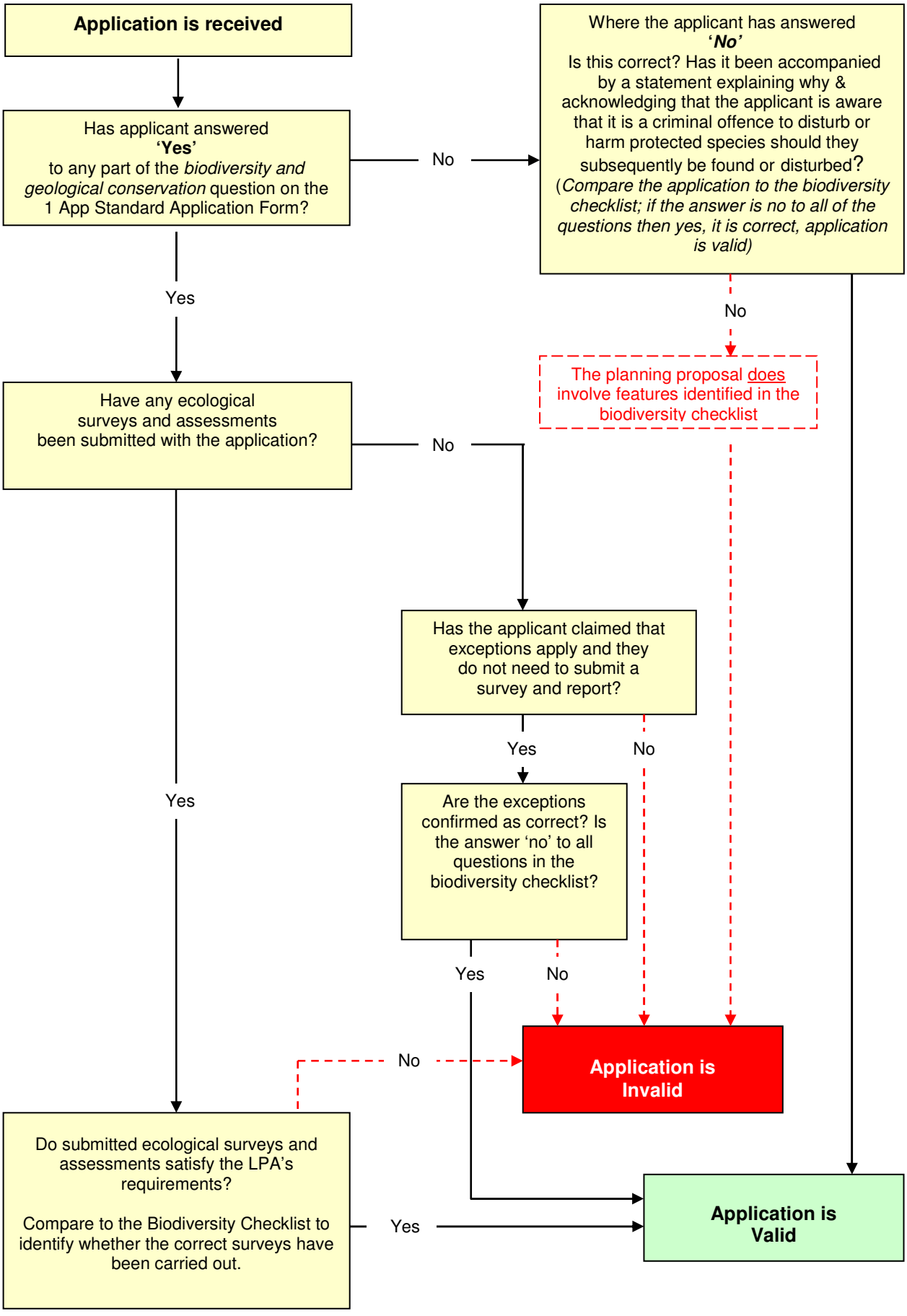
2 The extent of legal protection of the water vole has been extended to fully protect the animals and their habitats.

Appendix 2: Survey Calendar (CIRIA C587, from http://www.ciria.org)

		Licence required?	J	F	M	A	M	J	J	A	S	O	N	D
Other reptiles	Surveys	N	**No surveys – reptiles in hibernation**		Activity surveys from March to June and in September / October. Surveys are limited by high temperatures during July and August Peak survey months are April, May and September.								**No surveys – reptiles in hibernation**	
	Mitigation	N	Scrub clearance		Capture and translocation programmes can only be conducted whilst reptiles are active (March to June and September / October). Trapping is limited by high temperatures during July / August Scrub clearance								Scrub clearance	
Great crested newts (n/a in NI)	Surveys	*	**No surveys – newts in hibernation**		Pond surveys for adults: mid-March to mid-June. Surveys must include visits undertaken between mid-April and mid-May. Egg surveys April to mid-June. Larvae surveys from mid-May Terrestrial habitat surveys				Larvae surveys to mid-August Terrestrial habitat surveys		Terrestrial habitat surveys		**No surveys – newts in hibernation**	
	Mitigation	**	**No trapping of newts Pond management only**		Newt trapping programmes in ponds and on land				Newt trapping on land only				**No trapping of newts Pond management only**	
Natterjack toads	Surveys	*	**No surveys - toads in hibernation**			Surveys of breeding ponds for adults. Surveys for tadpoles from May onwards. Surveys for adults on land				Surveys for adults on land.		**No surveys – toads in hibernation**		
	Mitigation	**	Pond management works			Trapping of adults in ponds from April to July. Trapping of adults on land Trapping of tadpoles from May to early September						Pond management works		
White-clawed crayfish	Surveys	*	**Reduced activity**			Surveys can be undertaken	**Avoid surveys (females are releasing young)**		Optimum time for surveys				**Reduced activity**	
	Mitigation	***	**Avoid capture programmes (low activity levels may lead to animals being easily missed)**			Exclusion of crayfish from construction areas.	**Avoid capture programmes**		Exclusion of crayfish from construction areas				**Avoid capture programmes (low activity levels may lead to animals being easily missed)**	
Fish	Surveys	*	For coastal, river and stream-dwelling species, the timing of surveys will depend on the migration pattern of the species concerned Where surveys require information on breeding, the timing of surveys will need to coincide with the breeding period, which may be summer or winter months, depending on the species											
	Mitigation	**	Mitigation for the protection of watercourses is required at all times of year. Mitigation for particular fish species will need to be timed so as to avoid the breeding season. This varies from species to species.											

*** Where mitigation involves the capture of white-clawed crayfish, a mitigation licence must be obtained from Natural England. Licences will be granted only to persons who have proven competence in dealing with the species concerned.

Appendix 3: Validation Process



Cambourne, Cambridgeshire

The creation of a new settlement between Cambridge and Bedford which contains 4,200 new homes shows how biodiversity conservation formed an integral part of the development masterplan. Natural features are being used to enhance the quality of life for existing and future residents. Biodiversity was considered at an early stage of this development, with the developers employing ecologists as part of the design team. The design process involved identifying, protecting and managing all existing valuable biodiversity features as part of a green infrastructure, creating new areas of habitat and incorporating ecological corridors which provide pedestrian and cycle ways through the site. The design is intended to bring nature in Cambourne right up to residents' doorsteps.

This good practice example shows how the existing biodiversity (which was relatively limited) was protected and how areas of new wildlife interest can be created. The long-term management of the green spaces for biodiversity and people has been secured through a Section 106 agreement. Two members of staff are employed to manage 80 ha of land for nature conservation, including woodland, grassland, lakes and Sustainable Urban Drainage System wetlands.

Cambourne Master Plan 1995 (Terry Farrell & Partners)

Gather Information
Surveys in 1994 indicated that the proposed site contained:

- Four square kilometres of arable land
- A few ditches
- Hedges
- Isolated houses and gardens

- Small scattered woodlands
- An active badger population
- A small great crested newt population
- Bats were present
- Considerable invertebrate interest in one of the woodlands.

Assessment of Impact

- Loss of existing hedgerows was likely.
- Possible negative impact on badgers and great crested newts was identified.
- Further isolation and degradation of woodlands was probable due to separation by housing development and road infrastructure and increased use by people.
- Run-off into ditches and watercourses was likely to increase in volume and decrease in quality.

Avoidance and Mitigation

- All important hedgerows have been retained and 11 miles of new hedgerow planted.
- Strategies were produced and implemented to avoid any harm to badgers or great crested newts.
- The badger population has been protected and continues to thrive. Custom-designed ditches provide new sett locations and badger tunnels are well-used.
- All existing woodland has been retained and enhanced and 160 acres of new woodland has been planted.
- Sustainable Urban Drainage systems have been put in place to ensure water quality and quantity is managed within the site.

Compensation

None needed

Enhancement

- Two ‘valleys’ separating the ‘villages’ were deepened (using subsoil from road and building foundations) and designed as Country Park areas with hedged fields, streams, lakes, grassland and trees.
- An EcoPark has been created around existing woodland and the enhanced stream, with new reedbeds, marshes, ‘ridge and furrow’ grasslands, and a small area of wood pasture.
- Bat and bird boxes have been erected in suitable habitats across the site.
- Seven on-line lakes, connected by streams, have been created in the two valleys.
- Greenways connect green habitat to the village centres.
- Beyond the built-up areas all planting is confined to native species found in Cambridgeshire.

Construction and Aftercare

- The employment of an Ecologist to oversee the construction phase was ensured through the Section 106 agreement. Surveys and studies have been ongoing on the site to ensure the success of the management plan.

Conditions and Obligations

- S.106 agreement covering the production of an Ecological Management Plan and implementation and monitoring of the management plan, by organisations agreed by the Council.
- Conditions to ensure:
    - Production of a landscaping scheme
    - Scheme for phased provision of public open space and its permanent maintenance
    - Great crested newt and badger survey updates and schemes for the protection of these species.

Achievements to Date

- The population of great crested newts is expanding in both numbers and range as the new waterbodies mature.
- Water voles and water shrews have colonised the site and are taking advantage of the new lakes and ditches.
- 115 species of bird have been recorded on site, about 40 of which are new since 1996.
- 65 bird species have bred on the site and as new lakes mature, the number and variety of waterfowl is increasing.
- The number of butterfly and dragonfly species has increased steadily to 25 and 17 respectively.
- Pipistrelle bats now breed on the site and noctules and Daubenton's bats have also been recorded.
- The residents are enthusiastic about their environment and many, particularly the children, take a considerable interest in the wildlife around them.

"The landscape and environment are exceptional – the open spaces and their value for people and wildlife. It wasn't expensive though. A lot of detailed thought went into it."

Dick Longdin, Master Planner (Randall Thorpe, Landscape Master Planners)[24]

Appendix 5: Useful Contact Details

Institute of Ecology and Environmental Management

Find an expert: http://www.ieem.net/ieemdirectory.asp

Natural England

Enquiry service: 0845 600 3078
Northamptonshire Team (Nottinghamshire Office): 0300 060 6000

Northamptonshire BAP Coordinator

Contact via http://www.northamptonshirebiodiversity.org

Northamptonshire Biodiversity Records Centre

01604 400448

Royal Society for the Protection of Birds (RSPB)

Banbury Office: 01295 253330

The Wildlife Trust for Bedfordshire, Cambridgeshire, Northamptonshire and Peterborough

01604 405285

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[2] Natural Environment and Rural Communities Act (2006) Section 40.

[3] Defra (2007) Guidance for Local Authorities on Implementing the Biodiversity Duty. http://www.defra.gov.uk/environment/biodiversity/documents/la-guid-english.pdf.

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[5] ODPM (2005) Government Circular: Biodiversity and Geological Conservation – Statutory obligations and their impact within the planning system.

[6] R (on the application of Simon Woolley) v Cheshire East Borough Council. (2009). *The judgment clarifies for the first time the legal duty of a LPA when determining a planning application for a development which may have an impact on European Protected Species (EPS), such as bats, great crested newts, dormice or otters.*

[7] ODPM (2005) Planning Policy Statement 1: Delivering Sustainable Development

[8] Natural England (in production). Upper Nene Valley Gravel Pits pSPA Guidance.

[9] ODPM (2005) Planning Policy Statement 9, Key Principle vi.

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[23] Defra (2007) Conserving biodiversity in a changing climate: guidance on building capacity to adapt. http://www.ukbap.org.uk/Library/BRIG/CBCCGuidance.pdf.

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