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ECOLOGICAL ASSESSMENT

Saint Pauls Junior School, Oxford Road, Wokingham RG41 2YH



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Should you have any queries relating to this report, please contact

JOMAS ASSOCIATES LTD

www.jomasassociates.com

0333 305 9054

info@jomasassociates.com

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1.0. INTRODUCTION

Survey and reporting

- 1.1. This report details the results of an Ecological Assessment (comprising an Extended Phase 1 Habitat & Protected and Species Scoping Survey) of a proposed development on a parcel of land at St Paul's Junior School, Oxford Road, Wokingham, RG41 2YH.
- 1.2. The survey to inform the assessment was carried out on 14 January 2026.

Application site

- 1.3. The application site is located within the grounds of St Paul's Junior School in Wokingham. The school is located towards the centre of Oxford Road, a residential road in Wokingham. (National Grid Reference SU 80146884, Figure 1).
- 1.4. The total area of the application site is approximately 0.14ha
- 1.5. The local planning authority is Wokingham Borough Council.

The proposed scheme

- 1.6. It is proposed to erect a Special Educational Needs and Disabilities (SEND) building within the grounds of St Paul's Junior School (see Figure 2).
- 1.7. A small willow tree will be removed to facilitate the development.

Figure 1 – Site location plan



Figure 2 – Proposed site layout



2.0. METHODOLOGY

Desk study

- 2.1. A desk study data search was undertaken. This involved reviewing publicly available datasets and citations of statutory designated sites of importance for nature conservation, Natural England's Priority Habitat Inventory GIS dataset for England, and Natural England's Ancient Woodland Inventory for sites within the zone of influence of the survey area (considered to be a maximum of 1km in this case).
- 2.2. In addition, species records (on Natural England's MAGIC website¹) were accessed, and aerial photographs and Ordnance Survey maps were studied for features of interest.

Extended Phase 1 Habitat and Protected Species Scoping Survey

- 2.3. An Extended Phase 1 Habitat and Protected Species Scoping Survey was undertaken. This comprised a walkover survey of the application site and the classification of habitats following the descriptions provided within the Joint Nature Conservancy Council 'Handbook for Phase 1 Habitat Survey' (NCC 1990, JNCC 1993). An assessment of the site in terms of its suitability for notable or protected species was carried out and any features of note were described.

Habitat Suitability Index appraisal for great crested newts (GCN)

- 2.4. There is a pond located within St Paul's Junior School, approximately 5m from the application site. This pond was visited during the survey, and its Habitat Suitability Index (HSI) was calculated.
- 2.5. HSI scoring systems were originally developed by the US Fish and Wildlife Service as a means of evaluating habitat quality and quantity for fish.
- 2.6. In the UK a HSI for GCN has been developed (Oldham et al., 20002). The HSI incorporates ten suitability indices, such as waterbody area, water quality, presence of fish, presence of waterfowl etc. These are multiplied to give a score of between 0 and 1. The higher the score the more likely a pond is to host GCN (for example a study of 248 ponds in southern England found that 93% of ponds with a HSI score of greater than 0.8 hosted GCN).

Surveyor details

- 2.7. The survey was undertaken Cherry Leung MSc Qualifying CIEEM (Ecologist) and Matthew Stephenson BSc (Hons) (assistant ecologist).

Constraints

- 2.8. There were no constraints to the survey.

¹ <https://magic.defra.gov.uk/>

² Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10 (4), 143-155.

3.0. RESULTS

Weather conditions

- 3.1. Weather conditions during the survey were -10C, 0/8ths cloud cover, wind at Beaufort Scale 1 and no rain.

Desk study

Statutory sites of importance for nature conservation

- 3.2. There is one statutory site of importance for nature conservation within 1km of the site. This is Holt Copse & Joel Park Local Nature Reserve which lies approximately 300m northeast of the application site.

Ancient woodland

- 3.3. There is one area of woodland listed on Natural England's Ancient Woodland Inventory within 1km of the site. This is Holt Copse, a small block of ancient woodland within Holt Copse & Joel Park Local Nature Reserve (see above), located approximately 400m northeast of the application site.

Great Crested Newt Risk zone

- 3.4. The NatureSpace "Impact Risk Map"³ shows the site as being located within the "Green zone" (defined as "moderate habitat suitability – great crested newts may be present").

Nearby ponds

- 3.5. There are no ponds shown on ordnance survey maps (1:25,000 scale) within 500m of the site. However, there is a pond within the grounds of St Paul's Junior School, located in the woodland approximately 5m from the northern boundary of the application site.

Protected and notable species records

- 3.6. There are 12 records of licenses issued by Natural England for works affecting protected species on The MAGIC website within the 2km of the site. These are summarised in Table 1 below.

Table 3 – Summary of Natural England licence records within 2km of the application site

Distance and direction from the application site	Species affected	Breeding site	Year licence was issued
0.3km North	Brown long-eared bat	No	2016
0.6km North east	Noctule	Yes	2010
0.6km South east	Common pipistrelle	No	2015
1.2km South west	Brown long-eared bat, common pipistrelle	No	2014
1.2km South west	Brown long-eared bat	No	2014
1.3km North	Common pipistrelle	No	2016
1.5km North east	Great crested newts	No	2020
1.5km North east	Brown long-eared bat, common pipistrelle, soprano pipistrelle	No	2020
1.7km North east	Common pipistrelle	No	2015
1.7km North east	Great crested newts	No	2019, 2020
2km South east	Brown long-eared bat, common pipistrelle	No	2018
2km South west	Common pipistrelle	No	2017

³ The "Impact Risk Map" is the accepted statutory guidance that Local Planning Authorities must take into account when considering the risk of development for great crested newts. naturespaceuk.com/the-scheme/impact-map/

Surrounding land use

- 3.7. The application site is located within the grounds of St Paul's Junior School in Wokingham.
- 3.8. Directly adjacent on all sides of the application site are the remaining grounds of St Paul's school. This comprises a large grassland field, broadleaved woodland / scrub along the northern boundary with long grass along the front, and buildings and associated hardstanding. Tree species within the woodland include beech, hazel, ash, birch, and oak, and species below include cherry laurel and holly.
- 3.9. Beyond the school in all directions and continuing further north, south, and east are residential properties with their associated gardens and trees.
- 3.10. Further northwest and southwest, approximately 200m from the application site, are two blocks of broadleaved woodland connected by Emm Brook which is lined with trees on both sides.
- 3.11. Further east, approximately 300m is a trainline running north to south bordered by woodland and lines of trees in places.
- 3.12. Wokingham Hospital is located 200m to the southeast.

Habitats within the application site

- 3.13. The application site comprises part of an amenity grassland field within St Paul's Junior School and areas of hardstanding.
- 3.14. A Phase 1 habitat map and associated target notes are provided in Appendix 1, and photographs provided in Appendix 2.
- 3.15. A brief description of each habitat is given below.
- 3.16. **Hardstanding** – Paved pathways bordering the main school building.
- 3.17. **Amenity Grassland** – Amenity grassland field used as a playing field with gazebos above. Species recorded include perennial rye grass, yarrow, and daffodils at the northern periphery.
- 3.18. **Introduced shrub** – There is a small shrub bed to the east of the application site.
- 3.19. **Scattered tree**– There is a small, multi-stemmed willow tree against the northern boundary of the site. This will be removed to facilitate the development. It has no features suitable for use by roosting bats.

HSI Score for the pond within St Paul's School

- 3.20. A habitat suitability index appraisal was undertaken for Pond 1. It has a HSI of 0.575 or "Below average" - see photos in Appendix 2.

4.0. ASSESSMENT AND RECOMMENDATIONS

Statutory sites of importance for nature conservation

- 4.1. There is one statutory site of importance for nature conservation within 1km of the site. This is Holt Copse & Joel Park Local Nature Reserve which lies approximately 300m northeast of the application site. It will be unaffected by the proposal.
- 4.2. As such, statutory site of importance for nature conservation will not be a constraint to the proposals.

Ancient woodland

- 4.3. There is one area of woodland listed on Natural England's Ancient Woodland Inventory within 1km of the site. This is Holt Copse, a small block of ancient woodland within Holt Copse & Joel Park Local Nature Reserve (see above), located approximately 400m northeast of the application site. This will be unaffected by the proposals due to the distance from the site and the scale of the works.
- 4.4. As such, ancient woodland will not be a constraint to the proposals.

Priority Habitats

- 4.5. The Secretary of State periodically publishes a list of habitats that are of principal importance for the conservation of biodiversity in England under Section 41 (S41) of the 2006 Natural Environment and Rural Communities (NERC) Act. The list currently comprises 56 habitats, referred to as "priority habitats" in the National Planning Policy Framework (NPPF).
- 4.6. Paragraph 192 of the NPPF reads:

"To protect and enhance biodiversity and geodiversity, plans should [...] promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity"
- 4.7. As such where priority habitats are found they should be protected from the adverse impacts of development.
- 4.8. The habitats within the application site are not "priority habitats".

Artificial light at night

- 4.9. Artificial light can significantly and adversely affect wildlife. Particularly where it illuminates important habitats. It is likely to be a major factor behind the recent significant decline in invertebrate abundance and diversity and can disrupt the life cycle of invertebrates, bats and other wildlife.
- 4.10. The woodland along the north of the school grounds is likely to fit the description of the priority habitat lowland mixed deciduous woodland. It has a fringe of long grassland to the south. This area is likely to be of importance for a variety of wildlife including bats, badgers and birds.

- 4.11. It will therefore be important to ensure that this area is not illuminated by new lighting (both internal and external) and the lighting plans should be reviewed to ensure that this is not the case.

Great crested newts

Legislation and ecology

- 4.12. Great crested newts (GCN) receive special protection under UK law and it is an offence under the Wildlife and Countryside Act 1981 (as amended) and the European Habitats and Species Directive (92/43/EC), enacted in the UK through The Conservation of Habitats and Species Regulations 2017 (The Habitat Regulations) to deliberately or recklessly destroy or damage their habitat, or to disturb, kill or harm them without first having obtained the relevant licence for derogation from the regulations from the Statutory Nature Conservation Organisation (the SNCO - Natural England in England).
- 4.13. GCN spend most of their lives on land, within up to 500m of a breeding pond. The most important terrestrial habitat is within 100m, where most of the population are likely to be located foraging, resting, sheltering and hibernating relatively close to their breeding site. However, a proportion of the population is also likely to forage for food and shelter in suitable habitats up to 250m from a breeding pond and juvenile animals have been known to disperse up to 500m from it in a single season.
- 4.14. GCN are likely to be disturbed by any work that involves altering their breeding pond (e.g. by introducing fish or deepening or altering its size) or works that involve clearing land up to 500m around ponds, where such land has been managed and maintained in such a way that it is likely to support GCN. In such cases a licence for derogation from the provisions of the habitat regulations may need to be obtained.
- 4.15. In addition, GCN are a species of principal importance for the conservation of biodiversity in England under Section 41 (S41) of the 2006 Natural Environment and Rural Communities (NERC) Act (these are the “priority species” as per the NPPF).

Site status

- 4.16. The NatureSpace “Impact Risk Map”⁴ shows the site as being located within the “Green zone” (defined as “moderate habitat suitability – great crested newts may be present”).
- 4.17. There are no ponds shown on ordnance survey maps (1:25,000 scale) within 500m of the site. However, there is a pond within the grounds of St Paul’s Junior School, located in the woodland approximately 5m from the northern boundary of the application site. This pond achieved an HIS score of 0.574 or “Below average.”.
- 4.18. Using Natural England’s Risk Assessment (see Figure 3), if Pond 1 were to host GCN, the proposals would be ‘likely’ to cause an offence under the Habitat Regulations due to loss of GCN habitat.

⁴ The “Impact Risk Map” is the accepted statutory guidance that Local Planning Authorities must take into account when considering the risk of development for great crested newts. naturespaceuk.com/the-scheme/impact-map/

Figure 3 - Natural England GCN Risk Assessment for the proposed development if the pond within St Paul's Junior School were to host GCN

Component	Likely effect	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.5
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
Maximum:		0.5
Rapid risk assessment result:		AMBER: OFFENCE LIKELY

Ways forward

4.19. Given that:

- (1) The application site is in a GCN "Green Zone"
- (2) The habitat to be affected (short-cut amenity grassland) is sub-optimal habitat for GCN
- (3) The pond achieved an HSI score of "below average"

4.20. It is unlikely that GCN will be affected by the proposed development and no further surveys or mitigation is recommended.

Badgers and foxes

Legislation

4.21. Badgers and their setts are protected under the 1992 Protection of Badgers Act and the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally or recklessly kill, injure or take badgers or to interfere with a badger sett. Interference with a sett includes blocking tunnels, or damaging the sett in any way, and could include blocking a badger pathway if it were to stop badgers entering or leaving a sett. Penalties for offences can be severe, with fines of up to £5,000 plus up to six months' imprisonment, for each illegal sett interference, badger death or injury.

4.22. As with all wild mammals, foxes, are protected from deliberate ill treatment, such as asphyxiation due to tunnel collapse, under the Wild Mammals (Protection) Act 1996 with sanctions on summary conviction to a fine not exceeding level 5 on the standard scale, or a term of imprisonment not exceeding six months, or both. As such if the hole is used by foxes an offence could be committed unless the hole was unoccupied at the time of the survey.

Site status

4.23. There is a long disused mammal hole approximately 10m north of the application site in the adjacent woodland. The hole was of a size that is suitable for use by badgers and foxes but was blocked with ivy and leaves.

- 4.24. There was a mammal path under the northern fence located approximately 20m to the west of the application site and a fox was seen in the woodland during the site visit.
- 4.25. 50m to the west of the application site, also within the woodland, there were an additional four mammal holes, three of which appeared to be partially used and one disused. There were no large piles of spoil around the entrance holes, but they were large enough to be used by either foxes or badgers but is more likely to be a badger sett (if it is a badger sett it is likely to be an outlier sett – see appendix 4 for a description of sett types). They are however too far from the development to be affected by it and regardless of the species using them they will not be a constraint to the proposals.
- 4.26. There is however a small risk that the disused sett or fox earth (within 10m of the site) will be opened up and used by badgers or foxes and / or that a new sett or earth is dug.
- 4.27. It is therefore recommended that a pre-commencement badger sett survey of the site and adjacent woodland is undertaken within a month of the start of works. If an active badger sett or fox earth is found it may need to be excluded by fitting one-way gates over any entrance holes (under licence to natural England if it is a badger sett) to ensure that any animals within it are not harmed.
- 4.28. Appendix 4 provides further details on badger ecology and sett closures.

Nesting birds

- 4.29. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). Section 1 of this Act makes it an offence to kill, injure or take any wild bird, or intentionally to take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- 4.30. There is a small risk that birds may nest in the willow tree to be removed. The tree surgeon should therefore check for nesting birds before removing the tree. If a nest is found the tree should not be felled until all young have fledged the nest and it is no longer in use.

Protected species

- 4.31. It is considered highly unlikely that the proposals will have any adverse impact upon any protected species, such as bats, hedgehogs, or reptiles because:
- The habitats to be affected by the proposals (hardstanding and amenity grassland) are unsuitable or sub-optimal for use by these species
 - There are no vegetation, trees or structures on-site which are suitable for use by roosting bats

Landscaping and ecological enhancements

- 4.32. Paragraph 193 of the NPPF reads:
“[...] opportunities to improve biodiversity in and around developments should be integrated as part of their design [...]”

- 4.33. It is therefore recommended that any new planting comprises predominantly native and wildlife- friendly species. It is also recommended that ecological enhancements such as bird and bat boxes, bricks or tiles are built into the new building.

5.0. SUMMARY

Priority habitats

- 5.1. The site comprises hardstanding, amenity grassland, introduced shrub, and a small willow tree.
- 5.2. The habitats on site are not “priority habitats” as defined in the NPPF, and, as such, there should not be any priority habitat-related constraints to the development.

Adjacent woodland

- 5.3. The woodland along the north of the school grounds is likely to fit the description of the priority habitat lowland mixed deciduous woodland. It has a fringe of long grassland to the south. This area is likely to be of importance for a variety of wildlife including bats, badgers, invertebrates and birds.
- 5.4. It will therefore be important to ensure that this area is not illuminated by new lighting (both internal and external), and the lighting plans should be reviewed to ensure that this is not the case.

Badgers

[REDACTED]

Nesting birds

- 5.6. There is a small risk that birds may nest in the willow tree to be removed. The tree surgeon should therefore check for nesting birds before removing the tree. If a nest is found the tree should not be felled until all young have fledged the nest and it is no longer in use.

Other protected species

- 5.7. As long as the lighting recommendation above is adhered to it is highly unlikely that the proposals will have any adverse impact upon protected species, including , bats, hedgehogs, amphibians or reptiles.

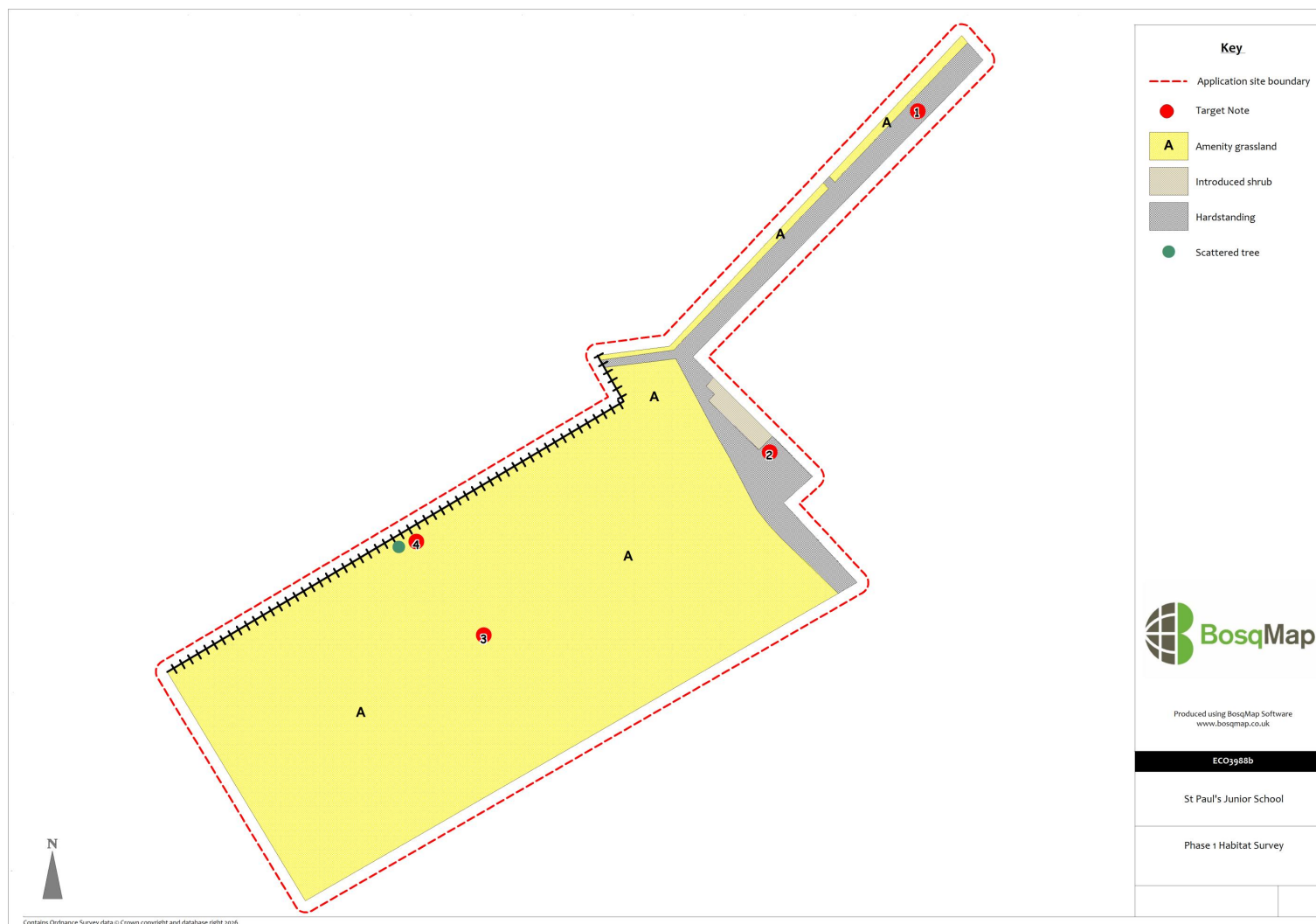
Ecological enhancements

- 5.8. In accordance with paragraph 193 of the NPPF it is recommended that any new planting comprises predominantly native and wildlife-friendly species. It is also recommended that ecological enhancements such as bird and bat boxes, bricks or tiles are built into the new building.

APPENDIX 1 - EXTENDED PHASE 1 HABITAT MAP AND TARGET NOTES

Target Notes

- (1) Hardstanding pathway leading from the front of the school to the playing fields.
- (2) Small introduced shrub bed.
- (3) Part of a large, short-cut grassland field with gazebos above. The grass is dominated by perennial rye grass (*Lolium perenne*), with other species including yarrow (*Achillea millefolium*) and daffodils (*Narcissus* spp.).
- (4) Small willow (*Salix* spp.) tree to be removed to facilitate the development.



APPENDIX 2 – PHOTOGRAPHS

Photos 1 and 2 – Grassland field within the application site boundary



Photos 3 and 4 – Small willow tree at the northern boundary of the application site (adjacent tree to the left on the photo below is located outside of the application site).



Photos 5 and 6 – Areas of hardstanding



Photos 7 and 8 – The pond located approximately 5m from the northern boundary of the application site



Photos 9 and 10 – Four likely disused mammal holes located within the woodland approximately 50m west of the application site



Photo 11 - Disused mammal hole located within the woodland approximately 10m north of the application



Photos 12 and 13 – Areas of woodland and scrub outside the northern boundary of the application site



APPENDIX 3 - LEGISLATION AND PLANNING POLICY

Planning Authorities have a legal duty to consider biodiversity when assessing planning applications. Where there is a reasonable likelihood that a planning application might affect important protected sites, species or habitats, information on the species, habitat or site likely to be affected, together with an assessment of the impacts of the proposals, will almost certainly be required.

The legal duty for Planning Authorities to have regard to the conservation of biodiversity was introduced in the 2006 Natural Environment and Rural Communities Act (The NERC Act). This act clarified existing commitments with regard to biodiversity, raised the profile of biodiversity and aimed to make the consideration of biodiversity a natural and integral part of policy and decision making.

In addition to the NERC Act there is also national and international biodiversity legislation. This includes legislation in relation to protected species and sites which operates outside of the planning system. Local Authorities and developers have a duty to comply with this legislation.

National planning policy

Paragraph 99 of the government Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within the Planning System (referred to in the National Planning Policy Framework) states that:

‘It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision.’

As such, in line with national planning policy, most planning authorities will ask for this information to be provided before a planning decision is made and in many cases before it is registered.

Local planning policy

In addition to national planning policy, most councils have planning policies to protect biodiversity, and to enhance it where practicable within and adjacent to development sites.

European protected species

The United Kingdom hosts a number of European Protected Species (EPS) of animals (table 1) and plants (table 2). These species receive special protection under UK law and it is an offence under the Wildlife and Countryside Act 1981 (as amended) and the European Habitats and Species Directive (92/43/EC), enacted in the UK through The Conservation of Habitats and Species Regulations 2010, to deliberately or recklessly destroy or damage their habitat, or to disturb, kill or injure the species without first having obtained the relevant licence from Natural England.

Planning Authorities have a statutory duty under these regulations to have regard to the requirements of the Habitats Directive and need to be satisfied that the development is likely to receive a licence from Natural England, and therefore comply with the Habitats Directive, before granting planning permission.

Table 1 – European Protected Species of Animal found in the UK

Common name	Scientific name
Bats, Horseshoe (all species)	<i>Rhinolophidae</i>
Bats, Typical (all species)	<i>Vespertilionidae</i>
Butterfly, Large Blue	<i>Maculinea arion</i>
Cat, Wild	<i>Felis silvestris</i>
Dolphins, porpoises and whales (all species)	<i>Cetacea</i>
Dormouse	<i>Muscardinus avellanarius</i>
Frog, Pool	<i>Rana lessonae</i>
Lizard, Sand	<i>Lacerta agilis</i>
Moth, Fisher's Estuarine	<i>Gortyna borelii lunata</i>
Newt, Great Crested (or Warty)	<i>Triturus cristatus</i>
Otter, Common	<i>Lutra lutra</i>
Snail, Lesser Whirlpool Ram's-horn	<i>Anisus vorticulus</i>
Snake, Smooth	<i>Coronella austriaca</i>
Sturgeon	<i>Acipenser sturio</i>
Toad, Natterjack	<i>Bufo calamita</i>
Turtles, Marine	<i>Caretta caretta</i>
	<i>Chelonia mydas</i>
	<i>Lepidochelys kempi</i>
	<i>Eretmochelys imbricata</i>
	<i>Dermochelys coriacea</i>

Table 2 – European Protected Species of Plant found in the UK

Common name	Scientific name
Dock, Shore	<i>Rumex rupestris</i>
Fern, Killarney	<i>Trichomanes speciosum</i>
Gentian, Early	<i>Gentianella anglica</i>
Lady's-slipper	<i>Cypripedium calceolus</i>
Marshwort, Creeping	<i>Apium repens</i>
Naiad, Slender	<i>Najas flexilis</i>
Orchid, Fen	<i>Liparis loeselii</i>
Plantain, Floating-leaved water	<i>Luronium natans</i>
Saxifrage, Yellow Marsh	<i>Saxifraga hirculus</i>

Nationally protected species

Many species of animal are protected under the 1981 Wildlife and Countryside Act (as amended). 'Full protection' applies to EPS and some non EPS species such as the water vole. This prohibits the intentional killing, injuring or taking (capture. etc); possession; intentional disturbance whilst occupying a 'place used for shelter or protection' and destruction of these places; sale, barter, exchange, transporting for sale and advertising to sell or to buy. Many species, such as common species of reptile and amphibian, are protected from intentional killing and injuring and trading.

Badgers

Badgers and their setts are protected under the 1992 Protection of Badgers Act and the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally or recklessly kill, injure or take badgers

or to interfere with a badger sett. Interference with a sett includes blocking tunnels, or damaging the sett in any way, and could include blocking a badger pathway if it were to stop badgers entering or leaving a sett. Penalties for offences can be severe, with fines of up to £5,000 plus up to six months' imprisonment, for each illegal sett interference, badger death or injury.

Work that disturbs badgers occupying a sett is illegal without the appropriate licence from the relevant statutory authority being held. Natural England issue licences for reasons including science, education or conservation, for development such as the building of houses and for investigation of offences against badgers. They also issue licences for the prevention of serious damage to land, crops or other form of property, as well as for agriculture, forestry, drainage operations and prevention of the spread of disease.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), whilst they are actively nesting or roosting. Section 1 of this Act makes it an offence to kill, injure or take any wild bird, and to intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built. It is also an offence to take or destroy any wild bird eggs.

In addition, bird species listed under Schedule 1 of the Act receive extra protection. The Act states that 'it is an offence to intentionally or recklessly disturb any wild bird listed in Schedule 1 while it is nest building, or at (or near) a nest containing eggs or young, or disturb the dependent young of such a bird'.

In practice this means that in areas where birds are likely to be nesting works should not be undertaken during the nesting season, which is generally considered to be March to September, although this very much depends on weather conditions, habitats and the species involved. If works cannot be avoided then areas should first be checked for nesting birds. Habitats likely to host nesting birds include trees, hedgerows and dense scrub, buildings, reedbeds and riverine habitats and open areas with tussocky vegetation.

APPENDIX 4 – BADGERS

Badger ecology

The European Badger (*Meles meles*) is one of Britain's most well loved and charismatic mammals. They can grow to a metre in length and weigh up to 14 kilos. They are Britain's largest meat eating mammal, having a diverse omnivorous diet consisting of a wide variety of foodstuffs from fruit and cereals to small mammals and invertebrates, though the mainstay of their diet is earthworms and insect larvae.

Badgers belong to the Mustelidae family and close relatives include otters, mink, weasels and stoats. They are found throughout Britain and historically have been persecuted by badger baiters and diggers, which is unfortunately still the case.

Badgers are creatures of habit, with most living in a social group (or family) occupying a distinct territory. Social groups are normally around 5 or 6 adults in size; however groups of more than 20 animals have been recorded, and in areas where badger numbers are low, pairs of animals or single individuals may be encountered.

Badgers are territorial and a social group's territory is normally well defined and demarcated by dung pits. Territory size depends on habitat quality and ranges from 25 – 150 hectares, with a typical territory being around 60 hectares.

Badger cubs are born between December and July; the majority in March and April. Most social groups produce one litter per year although larger groups may produce more. Normally 3 -4 young are born per litter with around 40% surviving to adulthood.

Badgers sleep and rear their young in underground complexes known as setts. Setts may be used for decades and the large piles of excavated earth and soil can significantly alter the local landscape. Sett entrance holes are approximately 25cm in diameter and can be mistaken for holes used by rabbits or foxes; indeed badgers will sometimes co-habit with other species. Each sett comprises tunnels and chambers and can have several entrance holes. Badger setts can extend to 20m from the entrance holes and several metres underground.

Social groups have a number of setts throughout their territory with each sett performing a different function. They can be classified as follows:

- **Main setts:** These are continuously used, well established and often have extensive piles of spoil at their entrance. There is usually only one main sett per social group, which tends to be located close to the centre of the group's territory and is likely to have well-worn paths leading to it. The number of entrance holes can vary between 3 and 180, however a typical main sett has between 7 and 20 entrance holes. The majority of cubs are born in the main sett.
- **Annexe setts:** These are usually located within 150m of the main sett and linked by well used paths. They consist of several holes, but are not necessarily in use all the time. Cubs are sometimes born and raised in these setts.
- **Subsidiary setts:** These usually have more than three holes, are usually at least 50m from a main sett, and do not have an obvious path connecting them with another sett. They are not continuously active but are often well used.
- **Outlier setts:** These usually only have one or two holes, have no obvious path connecting them with another sett, and are not usually in constant use.

The degree of usage of an entrance hole varies, but the following classification has been used in this report:

- Well used holes: clear evidence of regular use such as bedding material, recent excavations and/or fresh footprints
- Partially used hole: these holes are not in regular use and usually have some debris such as twigs or leaves in the entrance.
- Disused holes: these holes will not have been used for some time, and possibly have collapsed entrances with significant amounts of debris covering the hole.

For badgers, with their powerful claws and legs for digging and moving earth, opening up new setts and maintaining and extending old setts is a constant occupation, with bursts activity at certain times of the year. Although the pattern of sett use by badgers usually remains constant it can also change: either slowly, over a period of years, or suddenly, in response to changes in the environment such as drought or flood, in which situation new setts can be opened up relatively quickly (sometimes in a matter of days).

Legislation

The legislation relating to the protection of badgers is mainly contained within the Protection of Badgers Act 1992 ('The Act'), with some protection also given under the 1981 Wildlife and Countryside Act [as amended]. The Act fully protects badgers and their setts and makes it an offence to kill, injure or take a badger, to cruelly ill-treat a badger or to interfere with a badger sett (defined "any structure or place that displays signs indicating current use by a badger."). Under The Act Natural England has the authority to issue licences to interfere with badger setts for the following purposes:

- For development purposes;
- To prevent serious damage to land, crops, poultry or any other form of property (e.g. house, garden, road etc);
- Any agricultural or forestry operation;
- Any operation to maintain or improve any existing watercourse or drainage works, or to construct new works required for the drainage of land, including works of defence against sea or tidal water;
- To prevent the spread of disease.

Licences will only be issued where it is demonstrated that all three of the following tests are met:

- A licence is required (e.g. the badgers or their setts subject to the application are causing or are likely to cause a serious problem or are preventing legitimate operations);
- There is no alternative to issuing a licence (e.g. other methods of managing the problem or carrying out the operation have been shown to be ineffective or impractical and not just difficult to implement)
- The activity to be licensed is likely to resolve or to contribute to resolving the matter for which it has been issued.

Sett closures

Under certain circumstances badger setts may be excluded and destroyed under licence from Natural England as long as certain tests are met (see above). Sett closure involves fitting one-way gates over entrance holes with galvanised wire pinned to the ground around the gate, sometimes backed up by electric fencing to stop animals entering the exclusion area. Once fitted the gate is left open to allow animals to become accustomed to it and then closed so that animals can leave but not-re-enter the

sett. After a period of no activity (usually 3 weeks) the setts are filled in and the sett can be considered closed. Sett closures can only be carried out between 1 July and 1 December, and a period of 6 weeks (to allow for any unforeseen circumstances) should be set aside for sett exclusion. In certain circumstances (where a main, annexe or subsidiary sett is being closed) it may be necessary to provide an artificial sett prior to the sett exclusion

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JOMAS ASSOCIATES LTD

Unit 24 Sarum Complex

Salisbury Road

Uxbridge

UB8 2RZ

CONTACT US

Website: www.jomasassociates.com

Tel: 0333 305 9054

Email: info@jomasassociates.com