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Preliminary Ecological Appraisal

for
2 Whitemoss Road,
Blackley,
Manchester,
M9 6EA

June 2026



bringing **e**cological **e**xcellence **t**o **l**ocal **e**nvironments

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1.0 Introduction

1.0.1 Whistling Beetle Ecological Consultants were commissioned in June 2026 to undertake a Preliminary Ecological Appraisal on a site located at 2 Whitemoss Road, Blackley, Manchester, M9 6EA Grid Ref = SD86050334

The purpose of the assessment is to identify any potential ecological constraints to any proposed works at the earliest opportunity, to minimise future delays to potential works and provide advice as to how works on site will avoid breaching any UK or European nature conservation legislation.

1.0.2 The proposal is for the removal of the building on site and the potential development of a small residential site. The current building on site is a single storey constructed of brick under a flat roof of corrugated material and bitumen sealed areas. There has been significant damage internally to the building's interiors due to fires. Access to the interior spaces was not available due to H&S concerns and no Asbestos Surveys had been carried out.

1.0.3 The ecological appraisal results are presented in this report, together with the current ecological status of the site, and:

- Any potential significant ecological constraints that may affect the development proposal:
- Recommend further survey/ potential mitigation if needed.

1.0.4 The survey was carried out during daytime on the 9th June 2026 and was supervised by Principal Ecologist Graham Workman who has over forty-five years professional experience in the ecology field. He has the specialist knowledge and ecological skills to undertake and complete all the surveys contained within this report. He was accompanied by a team of three ecological surveyors all are experienced in carrying out ecological assessments and surveys

1.0.5 Taking into consideration the species information provided by a MAGIC (Multi-Agency Geographic Information for the Countryside) data search the site was also assessed for its potential to sustain any protected or notable species.

1.0.6 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site based on the suitability of the habitat and results of the surveys. It should not be taken as providing a full and definitive survey of any protected species group. Additional surveys may be recommended if on the basis of the preliminary assessment or during subsequent surveys, if it is considered reasonably likely that protected species may be present.

1.0.7 The species taken into consideration and surveyed at the site following the desk search and the initial detailed and considered appraisal were –

- Bats. A Preliminary Roost Assessment was carried out as part of the site assessment. (due to H&S issues re asbestos presence and the building had been set on fire the PRA focused on the external elevations of the building. The wider environment provided sub-optimum opportunities for foraging, feeding and roosting.
- Breeding Birds (the building and trees to the north of the building had some very limited potential for bird nesting.



1.0.8 The site was assessed as having no Habitats of Principal Importance present within its boundaries.
There are no waterbodies on the site that would support breeding amphibians.

1.0.9 To determine likely presence or absence of protected species can require multiple visits at suitable times of the year. As a result, the surveys focused on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to the National Planning Policy Framework (NPPF, 2012), especially those species given protection under UK or European wildlife legislation.

1.0.10 **This report provides an assessment of the ecological interest recorded during the site surveys and highlights areas where further survey work may be recommended if felt necessary.**

1.0.11 Following the site appraisal carried out on the 9th June it was confirmed that a Biodiversity Net Gain assessment was necessary and would be completed and accompany the other documents submitted to the Local Authority Planning Department.

2.0 Site Description

2.0.1 The site is located directly off Whitemoss Road, Blackley, Manchester, M9 6EA, GR SD 86050 03340
The site covers an area of approximately 0.4Ha with a perimeter of 275m

An aerial view of the site including the building locations and surrounding environs is located in Appendix 1, WR/PEA/WB/PS01.

A photo sheet of the site and its habitats is in Appendix 2

- Photo sheet WM/SD/WB/PS01

2.0.2 The immediate area surrounding the site is primarily urban with a linear woodland on its northern boundary. In the wider area tracts of woodland and open countryside is present.

2.0.3 There are no permanent waterbodies present on site that could provide opportunities for aquatic species.

2.0.4 The habitats present within the proposed development site are dominated by developed land and sealed surfaces. Other habitat types present were other calcareous grassland, Scattered trees (native and non native species) and a linear strip of bare ground.

2.0.5 All habitats present within the proposed development site were searched for obvious signs of faunal activity, e.g. mammal tracks or herpetofauna under refugia. All mature and semi mature trees were visually examined from the ground to identify features with the potential to support roosting bats or nesting birds.

2.0.6 The building was inspected externally for evidence of, or potential for roosting bats or breeding birds. The building was assessed by the Principal Ecologist for their potential to provide roosting opportunities for bats.

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2.0.7 **UK BAP species**
Some of the habitats recorded on site have potential to support the foraging activities of European hare (Lepus europaeus), West European hedgehog (*Erinaceus europaeus*), Noctule Bat (*Nyctalus noctula*) Soprano Pipistrelle (*Pipistrellus pygmaeus*), Brown Long – eared Bat (*Plecotus auritus*), bird species Hedge Accentor (*Prunella modularis*), Song Thrush (*Turdus philomelos*), House sparrow (Passer domesticus), Eurasian tree sparrow (Passer montanus), Common starling (Sturnus vulgaris), and herptile species such as Common Toad (*Bufo bufo*). It is considered likely that all these species have the potential to be occasionally present within the site and the surrounding area.

2.1 Desk Study

2.1.1 A search was made of Natural England's interactive, web-based MAGIC (Multi-Agency Geographic Information for the Countryside) database for presence of statutory and non-statutory nature conservation designations and protected and notable species within 1km of the site boundary.
The data searches covered:

- Statutory nature conservation designations, such as National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Natura 2000 sites;
- Non-statutory nature conservation designations, such as Local Wildlife Sites (LWS) or Sites of Biological Importance (SBI's);
- Protected species, such as badgers, great crested newts and bats;
- Notable species, such as those listed in the local Biodiversity Action Plan (BAP).

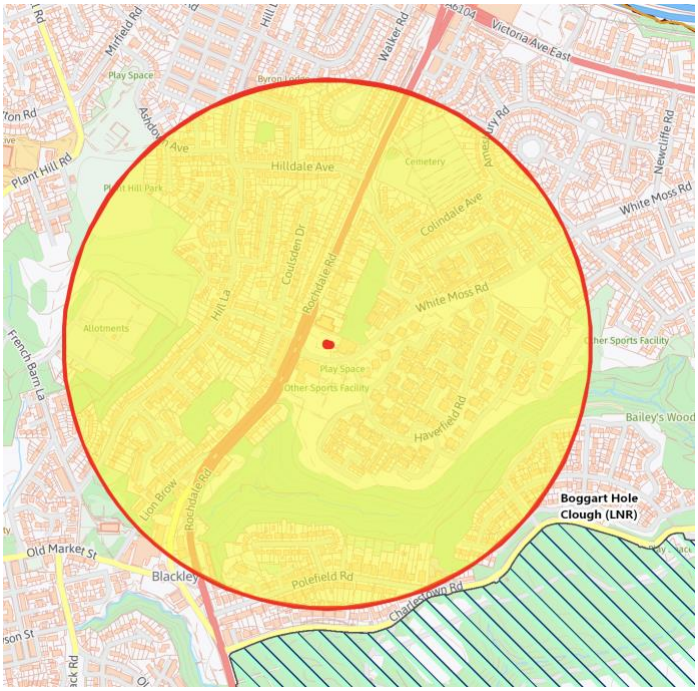
The data search does not cover:

- Tree Preservation Orders (TPOs); or
- Conservation areas designated for their special architectural and historic interest.

2.1.2 Site Check Results
Site Check Report generated on Tue Jun 16 2026
The following features have been found in your search area:
You selected the location: Centroid Grid Ref: SD86050334
Parishes (GB) NAME. DESCRIPTION Non-Civil Parish or Community
FILE NAME. MANCHESTER DISTRICT (B)
HECTARES. 10910.595
Parliamentary Constituencies (England)
NAME. Blackley and Broughton Boro Const

Great Crested Newt Pond Surveys 2017 - 2019
No Features found
Great Crested Newt Class Survey Licence Returns (England)
No Features found
Granted European Protected Species Applications (England)
No Features found
Registered Parks and Gardens (England)
No Features found
Registered Parks and Gardens (England) - points

No Features found
Sites of Special Scientific Interest (England)
No Features found
Sites of Special Scientific Interest (England) - points
No Features found
Sites of Special Scientific Interest Units (England)
No Features found
Sites of Special Scientific Interest Units (England) - points
No Features found
Proposed Ramsar Sites (England)
No Features found
Proposed Ramsar Sites (England) - points
No Features found
Local Nature Reserves (England)
No Features found
Local Nature Reserves (England) - points
No Features found
Counties, Metropolitan Districts and Unitary Authorities (GB)
No Features found
Country Parks (England)
No Features found
Country Parks (England) - points
No Features found



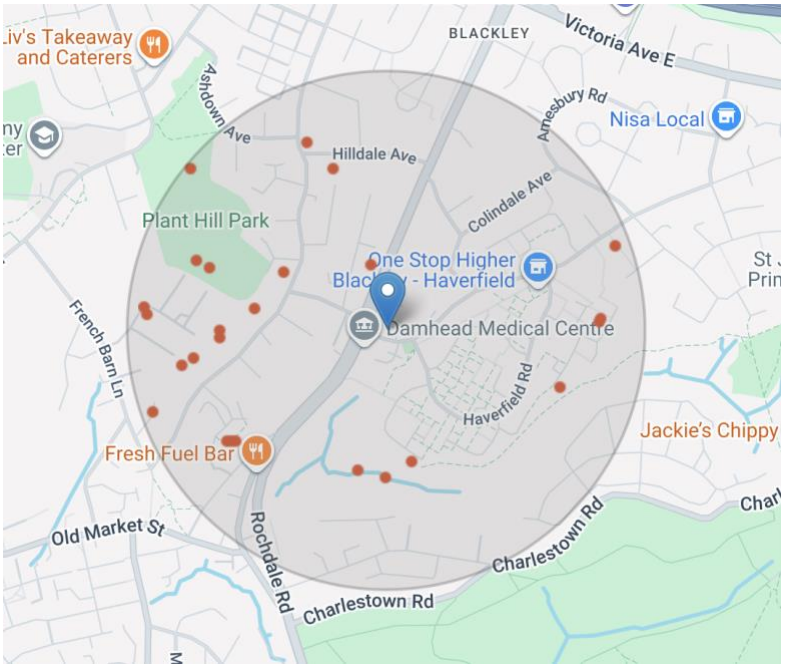
The site and a 500m buffer zone

2.1.3 Due to its location and the surrounding environment any proposed development within the footprint of the present site will not adversely impact on any nature conservation sites.

2.1.4 On the border of the buffer zone the Local Nature Reserve Boggart Hole Clough (LNR). The proposed development on the Whitemoss Road site will have no impact on the LNR.

2.1.4 A search on the National Biodiversity Network Atlas provided these species records within 500m of the site.

Amphibian 0
Birds 32 – No birds will be negatively impacted by the proposed development
Mammals 1 Hedgehog
Reptile 0
(see detailed map below)



The site showing locations of species recorded within a 500m buffer zone.

2..1.5 If any clearance works are scheduled between April to September a Breeding Bird Survey should be carried out.

2.2 Habitat Descriptions within the proposed development footprint



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2.2.1 **Other Neutral Grassland.**
Due to the lack of management in some of the areas communities of tall ruderal vegetation has colonised areas of the site. Some early species diversity has begun to develop in some areas of unsealed and sealed surfaces. Some areas are dominated by common nettle (*Urtica dioica*) rosebay willowherb (*Epilobium angustifolium*) bramble (*Rubus fruticosus*), broad-leaved dock (*Rumex obtusifolius*) and cleavers (*Galium apari)* Other species recorded across the site included creeping buttercup (*Ranunculus repens)*, annual meadow grass (*Poa annua)*, cocksfoot (*Dactylis glomerata*), broad leaved plantain (*Plantago major)*, ribwort plantain (*Plantago lanceolata)*, chickweed (*Stellaria sp.),* red clover and meadow buttercup (*Ranunculus acris)* foxglove (*Digitalis sp*.) hogweed (*Heracleum sphondylium*) and ground elder (*Aegopodium podagraria*).

2.2.2 **Other Woodland broadleafed**
Scattered trees are present primarily on the northern boundaries. Species recorded include oak (*Quercus sp.),* ash (*Fraxinus excelsior*), birch (*Betula sp.)*, hawthorn (*Crataegus monogyna*) and holly (*Ilex sp.*).

2.2.3 **Developed Land Sealed Surface**
There are a single building and a small brick structure on site. The building is in poor condition due to vandalism and two fire events which has resulted with the internal spaces being inaccessible.
Several large areas of sealed and unsealed surfaces are present on site. These are located around the building and connecting car parking areas.

2.2.4 **Mixed Scrub**
A small area of mixed scrub is present on the site boundary adjacent to the building. The scrub is dominated by Bramble (Rubus fruticosus) and Dog-rose (Rosa canina).

2.2.5 **Bare Ground**
A narrow strip, rectangular in shape is present in the area of other neutral grassland. This is due to a mixture of sand and arisings from the childrens playground being deposited by the local authorities grounds maintenance contractoes.

2.2.6 The potential development of the site will have no significant negative impact on the local biodiversity. The inclusion of some significant biodiversity enhancements as part of the proposal such as the provision of bat and bird boxes in the new buildings, inclusion of nectar producing plants within new ‘wild flower areas’ and fruit bearing shrubs within existing hedgerows will provide a significant increase in opportunities to enhance the sites biodiversity value.

2.2.7 The Biodiversity Net Gain Report will identify and describe all habitats on site and their condition will be assessed.

3.0 Bat Roosting Potential – Site Opportunities

3.0.1 The site had some potential low level roosting opportunities, so a separate Preliminary Roost Assessment and Dusk Emergence and Activity Survey was recommended and carried out. A report of the survey findings has been developed and is available.



4.0 Breeding Bird Potential – Site Opportunities

4.0.1 The site was assessed for potential habitats in which birds could nest. Similar as the bat potential there are some potential low-level opportunities present.

4.0.2 As all wild birds, their nests, eggs and young are protected under the Wildlife and Countryside Act 1981 (and subsequent amendments) during the bird breeding season any vegetation removal works must be undertaken outside this period (April to September inclusive).

4.0.3 Please note that birds can nest outside the bird-breeding season and therefore should any nests be identified or suspected to be present on site at any time, then works should cease and an ecologist contacted to attend site and provide advice on appropriate working methods.

4.0.4 A bird nesting survey should be undertaken directly prior to works commencing at a site. A survey is undertaken to ensure that there are no active nests present. A negative result allows site contractors to proceed with works with no unlawful actions. It should also be noted that when nests are present, works would have to be delayed until all chicks had fledged. Therefore, ideally vegetation removal should be timed to be undertaken. outside the bird-nesting season (March to September, inclusive).

5.0 Hedgehogs

5.0.1 Legislation

Hedgehogs are listed as a UK 'Priority Species' under S41 of the NERC Act (2006). They also have limited protection under Schedule 6 of the Wildlife and Countryside Act (1981) as amended, which means they cannot be caught or trapped without a licence. The Wild Mammals (Protection) Act (1996) prohibits cruel activities and mistreating of hedgehogs.

The timing and method of habitat clearance has an impact on hedgehogs but will need to be balanced with other biodiversity needs.

Bramble disturbance is least hazardous in autumn to avoid the bird breeding season, the bulk of hedgehog breeding, and hibernation. Hedgehogs are generally absent from long grass in winter, making this the least hazardous time for cutting, but this isn't necessarily the best time to cut wildlife meadows. Rotational cutting is recommended so that there's always an area left unstrimmed for insects to feed on and hedgehogs to nest in.

A high-cut, low-cut method allows nest checks in-between, and increasing the blade height of mowers will minimise risks. Ensure all machine users are trained to be hedgehog aware.

Areas of well-connected native hedging, scrub, bramble, shrubs, dead hedging and piles of dead wood become important nesting and foraging sites. Keeping fallen leaves on the ground or in accessible leaf stores is especially useful for breeding and winter nest building. Mosaic grass management provides the mix of long grass, short turf, open soil and tussocks needed for foraging and day nesting. Developing nectar sources and herbaceous vegetation provides the diverse microhabitats needed for the invertebrates hedgehogs rely upon. Edge habitat is especially important as hedgehogs often navigate landscapes by following linear features

5.0.2 Hedgehog Highways

Link parcels of land by ensuring boundaries are permeable to hedgehogs. Hedging or hedgehog-sized holes in fencing or walls help create Hedgehog Highways. Ground-level boundary holes should measure 13x13cm and should link as many neighbouring pieces of land as possible. These are easy to include for most fencing contractors, and both wooden and concrete



hedgehog-friendly gravel boards can be purchased from some suppliers ready-made. Cinder blocks or piping can be used to deter use by pets.

In the interest of best ecological practice, between October and March, any piles of wood or suitable materials should be checked for hibernating hedgehogs before disturbance. Any hedgehogs found should ideally be left alone. If this is not possible, the hedgehog should be carefully and safely relocated to suitable habitat away from the development site.
(see Appendix 3 for Hedgehog Info)

6.0 Overall Conclusions and Recommendations

6.0.1 **The behaviour of animals can be unpredictable and may not conform to characteristics recorded in current scientific literature. This Report, therefore, cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.**

6.0.2 Results and findings from all the surveys conducted on the site indicate that- **no further survey effort is deemed necessary.**

6.0.3 The size and limitations of the proposed development of the site will have no significant negative impact on the biodiversity of the area.

6.0.4 **Biodiversity Enhancement Measures**
To ensure that the sites biodiversity value is significantly enhanced a series of ecological improvements will be developed and implemented.

6.0.5 To increase the potential opportunities for Bats using the site once development has been completed access provision/opportunity for bats should be included within suitable buildings either through external bat boxes or bat bricks (see Appendix 3: Bat Box Information by BCT)

6.0.6 To increase the potential opportunities for roof nesting birds (Swifts, House Sparrows, Starlings etc) See Appendix 3 House Sparrow Terraces

6.0.7 Mammal Ramps
During construction works any excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape.

6.0.8 Vegetation Removal
It is recommended that the removal of all woody vegetation (including bramble) be conducted outside of the bird nesting season, which usually encompasses March to September. If this is not possible and removal works are required to take place during the nesting season, nesting bird survey/s will be required. Removal of woody vegetation outside of the nesting season is therefore strongly recommended.

6.0.9 To prevent any adverse impacts on biodiversity within and adjacent to the site as a result of development activities it is recommended that:

- A safe system for the correct storage of materials/chemicals should be implemented to ensure that materials are stored in a suitable manner as to avoid potential impacts on vegetation and watercourses adjacent to the site.



- Although the presence of construction waste is unavoidable, it is recommended that waste is removed at the earliest opportunity to avoid contamination of ground and possible disturbance to wildlife. Contractors should also avoid leaving construction waste within the site.

7.0 Closure

This report has been prepared by Whistling Beetle Ecological Consultants Limited with all reasonable skill, care and diligence. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

The information presented in this report provides guidance to reduce the risk of offences under UK law. However, Whistling Beetle Ecological Consultants Limited is not a legal practice and disclaims any responsibility to the client and others for actions that lead to offences being caused, whether or not the guidance contained in this report is followed. Interpretation of UK legislation is presented in good faith; however for the avoidance of doubt, we recommend that specialist legal advice is sought.

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Froglife (1999), Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

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http://www.magic.gov.uk/MagicMap.aspx

Conservation of Habitats and Species Regulations 2010:
http://www.opsi.gov.uk/si/si2010/uksi_20100490_en_1

Wildlife and Countryside Act 1981:
www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810069_en_1

Countryside and Rights of Way Act 2000:
www.legislation.hmso.gov.uk/acts/acts2000/20000037.htm

Natural Environment and Rural Communities Act 2006:
http://www.opsi.gov.uk/acts/acts2006/ukpga_20060016_en_1

Planning Policy Statement 9:
www.communities.gov.uk/documents/planningandbuilding/pdf/147408

Appendix 1



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Project

Preliminary Ecological Appraisal

Site Location

2 Whitemoss Road,
Blackley,
Manchester,
M9 6EA

Former Vasa Club building

Approximate area covered in the Preliminary Ecological Appraisal

Photo Sheet	WR/PEA/WB/PS01.
Date	June 2026
Scale	N/A

Appendix 2



1. The site showing area dominated by unmanaged grass which has developed into Other Neutral Grassland (ONG)



2. All areas of former formal grass is now unmanaged



3. Example of ONG colonising the site



4. Example of ONG colonising the site



5. Example of ONG colonising the site



6. Example of ONG colonising the site



7. Scattered trees west of building



8 Trees and tall ruderal vegetation adjacent to site boundary



9. Scattered trees on site adjacent to Fire Services buildings

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Project

Preliminary Ecological Appraisal
Whitemoss Road, Blackley,
Manchester, M9 6EA

Title

Photos of Site

Photo Sheet WM/SD/WB/PS01

Date June 2026

Scale N/A

Appendix 3

House Sparrow Nest Boxes
Type 1: Woodcrete
Supplier: Wildcare Ltd





Woodstone House Sparrow Box
This house sparrow terrace nesting box is manufactured from a mix of concrete and wood fibres. WoodStone® nest boxes safeguard against attacks from predators including woodpeckers, cats and squirrels. The material insulates the nest which creates a more consistent internal temperature than an ordinary wooden box. The sparrow terrace can be built into brickwork or fixed onto a garden wall etc.

House sparrows will nest in groups and colonies, this sparrow box has two chambers, you can add / build-in more sparrow nesting boxes to create colony nesting. This sparrow terrace is suitable for house sparrow and tree sparrows.

Sparrow Terrace Box Specifications:

Hole Size: oval
Width 29cm
Height 21cm
Length 16cm
Weight 7.0kg
Material Woodstone
10 Year Manufacturers Guarantee

Contact details

Website: https://www.wildcare.co.uk

Telephone: 01451 833 181

Email: For sales & enquiries: sales@wildcare.co.uk

House Sparrow Nest Boxes
Type 2: Brick
Supplier: Bird Brick Houses



The Standard box
Our Standard nesting boxes are suitable for House Sparrows and members of the Tit family. The single entrance hole allows the entire internal area to be available for nesting and roosting. The aperture size will vary according to the target species (see The Design) and box fronts can be removable (4 stainless steel screws) if required.



Sparrow terrace box
This has the same external dimensions as the standard box but has two entrance holes and two separate compartments – ideal for the sociable nature of house sparrows. The terrace box is also suitable for Redstarts, Black Redstarts and Wagtails.

All boxes can be supplied with bricks fitted in stretcher bond (half bond) and quarter bond (Flemish, English, both standard and garden wall bonds). Boxes can also be supplied without bricks for fitting into render walls and incorporating into stonework. The fronts have a stainless steel mesh to aid adhesion and are retained with stainless steel screws. All boxes have drainage holes.

Contact details

Website: https://www.birdbrickhouses.co.uk

Telephone: 01323 488732 / 483227

Email: enquiries@birdbrickhouses.co.uk



Hedgehog ecology and land management



Hedgehogs are declining

Hedgehogs are one of the few wild mammals we sometimes encounter up close and are a firm favourite of the British public. Sadly, we're seeing concerning population declines across the UK. Between 2000-14 hedgehog populations declined by over half in our countryside and nearly a third in our cities and suburbs.

Easy actions can have a big impact

But there's hope! Our recent analyses suggest the decline, at least in urban areas, may be slowing, possibly even turning around. The concerted efforts of communities could be working. Sympathetic green-space management and design by local authorities, businesses and private land managers whether it be schools, cemeteries or golf clubs, has the potential to really help bolster urban hedgehog populations. And, what's good for hedgehogs is good for many other species, including us.

This guide outlines several ways to better manage land to help hedgehogs:

- Reduce habitat loss and fragmentation by connecting up green spaces
- Remove hazards from the site
- Think about roads and controlling hedgehog access to busy or dangerous areas
- Consider limiting predator access to certain areas of the site where hedgehogs are most vulnerable
- Keep an eye out for disease or illness in local hedgehog populations

Ecology and behaviour of hedgehogs

There are three main habitat requirements to consider when managing green space for hedgehogs:

- A range of nesting opportunities
- High quality feeding areas
- Ensuring varied habitats are well-connected

Nesting

Hedgehogs nest year-round and produce different types of nest for day-time resting, breeding and hibernation. Day-time nests are a retreat during the active season, and are often temporary, flimsy and found in areas of rough grassland, loose leaf piles or garden vegetation.



Breeding nests are made by females and are used to raise young. They tend to be more robust, like hibernation nests. Winter nests can be used for several months to hibernate through periods of cold weather and low food availability.

The most sturdy nests rely on medium-sized deciduous leaves and a structure to hold the leaves in place. Bramble patches, log piles and open compost heaps are common locations for breeding nests and hibernacula.

Feeding
Hedgehogs are omnivores, but the bulk of their diet consists of macro-invertebrates such as beetles, worms, slugs, earwigs, caterpillars and millipedes. In urban areas, supplementary food in the form of cat, dog or formulated hedgehog food can make up a significant part of their diet. Access to water is also very important.

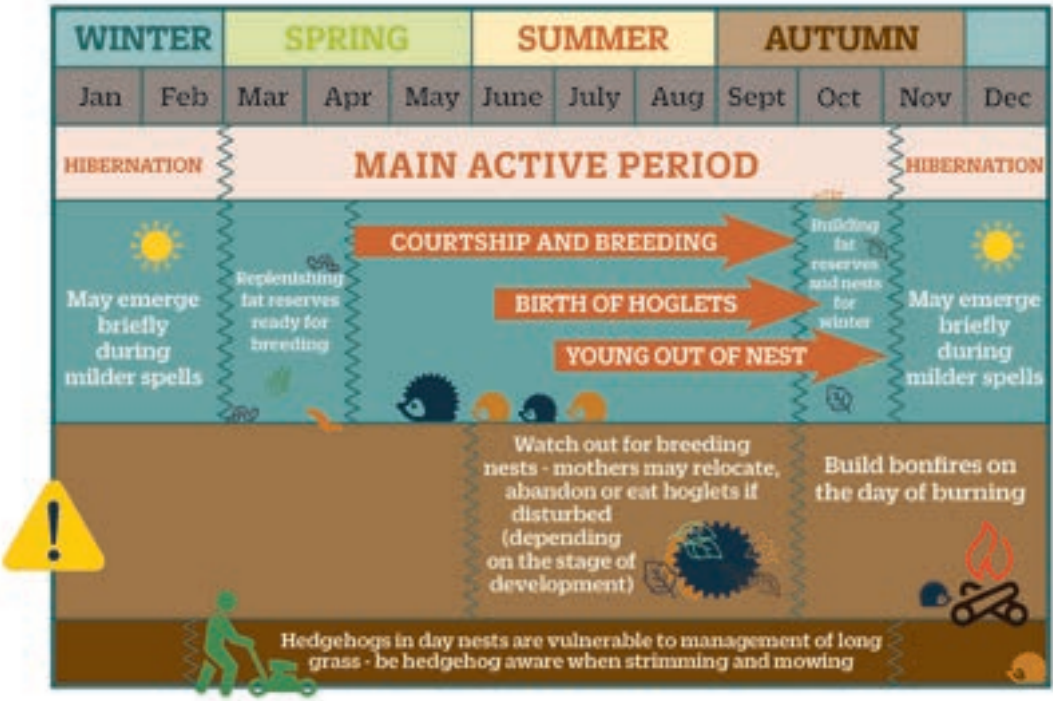
Habitat
Hedgehogs are highly active and range widely. They need to be able to move freely through a well-connected range of habitats to find food, mates and areas to nest. Radio-tracking studies show that hedgehogs can travel around 2km in a night in urban areas, and up to 3km a night in rural landscapes, though distances differ between the sexes. A viable population of urban hedgehogs is thought to need around 0.9km^2 of well-connected habitat.



The hedgehog's year

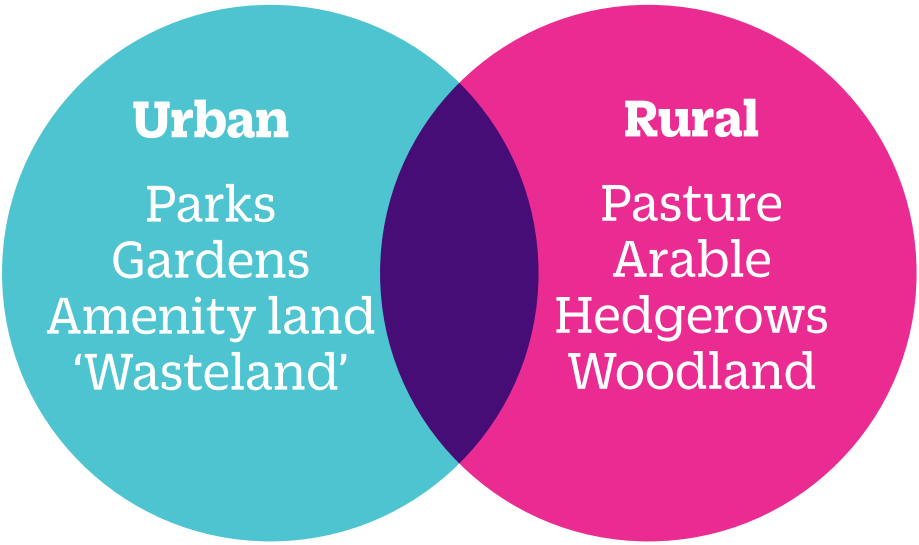
Hedgehogs are nocturnal animals, so despite their charismatic spiny appearance they are often difficult to find. They're solitary creatures, don't hold territories and rely mainly on their hearing and sense of smell. Hedgehogs are also generalists, meaning they have a varied diet and are widespread, but generally absent from moors, marshes and pine forest.

Timings of many hedgehog behaviours are dependent on temperature, gender and the body condition of the individual hedgehog. Actions at particular times of year will, however, help reduce hazards and help hedgehogs thrive.



Why are hedgehogs declining?

Hedgehogs face a multitude of natural and anthropogenic threats, many of which act together and some of which are still being understood. Whilst habitat loss and fragmentation are major issues across both urban and rural habitats, the reasons differ between the two landscapes. But many of the threats are man made and can be reduced through simple changes in land management, providing an opportunity for green-space managers to make a real difference for local hedgehogs.



Impermeable boundaries
Tidy gardening
Slug pellets
Bonfire burning
Dangerous ponds
Strimming

Habitat fragmentation
Fewer invertebrates
Road traffic
Refuse e.g. plastic
Climate change

Land use change
Pesticides (indirect)
More badgers
Flailing or tilling
Gamekeepers

Roads

Roads can act as barriers to hedgehog movement, may have genetic impacts on populations and are a large source of mortality. It has been estimated that between 167,000 – 335,000 are killed on our roads in Great Britain every year.

The solution

Road signs could alert drivers in areas of high hedgehog density, and green-space fencing could help channel hedgehog movement away from major roads. Well-connected green spaces, linked with surrounding gardens, will also reduce the need for hedgehogs to cross roads.

Road mitigation such as overbridges, underpasses and culverts are likely beneficial, as long as they are maintained and not permanently water logged or water filled.



Habitat loss & fragmentation in the countryside

Evidence shows that hedgehogs are fairing particularly poorly across agricultural landscapes. This is due to a range of factors, including; habitat fragmentation from loss of hedgerows, larger field sizes, increased pesticide use and limited areas of scrub, decaying wood or nectar rich planting. All these factors increase hedgehogs vulnerability to predation. Many farmers across the UK already do fantastic work for wildlife, but if hedgehogs are to thrive in our countryside they need a sustained effort from us all.

The solution

- Hedgerow planting and management
- Field margin management
- Reduced field sizes
- Reduced ploughing and tilling rates
- Keeping areas of scrub and decaying wood

Countryside Stewardship schemes can also help hedgehogs and other desirable wildlife.

More detailed information can be found in our farmers advice guide that can be obtained for free by contacting hedgehogs@ptes.org or by downloading it electronically from our website www.hedgehogstreet.org/farmersadvice



Habitat loss & fragmentation in our cities and suburbs

Despite covering just 6% of land, urban landscapes are increasingly important for hedgehogs. The matrix of gardens and green spaces in towns and cities can support the highest densities of hedgehogs and may act as a refuge from agricultural practices and high predator density.

Habitat loss from new developments, in-filling of gardens with housing, roads, impermeable boundaries and 'over-management' of green-spaces and gardens are all, however, threats.

The solution

Hedgehog Highways

Link parcels of land by ensuring boundaries are permeable to hedgehogs. Hedging or hedgehog-sized holes in fencing or walls help create Hedgehog Highways. Ground-level boundary holes should measure 13x13cm and should link as many neighbouring pieces of land as possible. These are easy to include for most fencing contractors, and both wooden and concrete hedgehog-friendly gravel boards can be purchased from some suppliers ready-made. Cinder blocks or piping can be used to deter use by pets. Hedgehog Highway plaques can be purchased from both People's Trust for Endangered Species (PTES) and British Hedgehog Preservation Society (BHPS) online stores to raise awareness and mark the purpose of these gaps to curious neighbours.



Wild areas for nesting and feeding

Areas of well-connected native hedging, scrub, bramble, shrubs, dead hedging and piles of dead wood become important nesting and foraging sites. Keeping fallen leaves on the ground or in accessible leaf stores is especially useful for breeding and winter nest building. Mosaic grass management provides the mix of long grass, short turf, open soil and tussocks needed for foraging and day nesting. Developing nectar sources and herbaceous vegetation provides the diverse microhabitats needed for the invertebrates hedgehogs rely upon. Edge habitat is especially important as hedgehogs often navigate landscapes by following linear features.









Hazards

Pesticides, herbicides and rodenticides

Pesticides, herbicides and rodenticides can be highly toxic, can impact non-target species, and can have both direct and indirect impacts on hedgehogs.

Herbicides can directly reduce earthworm density and reduce the varied ground cover needed for foraging. Slug pellets are potentially lethal if directly ingested and also reduce important prey sources.

The full impacts of many chemicals are still unknown but any product reducing the number of invertebrates also reduces the number of hedgehogs that can survive.

The solution

Avoid chemicals where possible and use organic alternatives where necessary. Wool pellets, nematode treatments, salt, seaweed, broken egg shells or coffee grounds are popular alternatives for slug control.

Encourage natural predators of pest invertebrate species, such as hedgehogs, frogs and toads, by installing Hedgehog Highways, wild areas and wildlife ponds.



Machinery

Hedgehogs have no flight reflex and nest year round, making them vulnerable to machine injury.

The solution

The timing and method of habitat clearance has an impact on hedgehogs, but will need to be balanced with other biodiversity needs.

Bramble disturbance is least hazardous in autumn to avoid the bird breeding season, the bulk of hedgehog breeding, and hibernation. Hedgehogs are generally absent from long grass in winter, making this the least hazardous time for cutting, but this isn't necessarily the best time to cut wildlife meadows. We recommend rotational cutting so that there's always an area left unstrimmed for insects to feed on and hedgehogs to nest in.

A high-cut, low-cut method allows nest checks in-between, and increasing the blade height of mowers will minimise risks. Ensure all machine users are trained to be hedgehog aware. BHPS offer free waterproof stickers for machines to remind operatives to check for hedgehogs.



Drowning

Ponds and lakes are excellent habitat and provide an important water source for hedgehogs in times of drought. Hedgehogs are good swimmers, but even small ponds are a hazard if they can't climb back out.

The solution

Ensure there are entry and exit points to water bodies by designing wildlife friendly ponds with shallow beaches. Reduce hazards to existing water bodies by creating ramps out of bricks, logs or sand bags. Ramps should ideally be 20cm wide and no steeper than 30 degrees.



Entanglement

Litter, wire fencing and loose or fine vegetable netting poses a risk to hedgehogs. Cricket nets and football goals are also common places for entrapment.

The solution

Information boards and adequate bins around sites will encourage responsible litter disposal. Tie up sports netting when not in use and keep fruit netting tight. Replace fine diameter thread with thicker netting or use a rigid structure instead.



Bonfires and compost heaps

Bonfires and compost heaps are attractive nesting sites for wildlife but can be particularly hazardous to hedgehogs who lack a flight mechanism.

The solution

Relocate the bonfire material from it's storage location to a new pile on the day of burning, so it's thoroughly checked before being lit. Where this isn't possible, fence the pile using steep plastic sheeting. Reptile fencing used by a local ecological consultant is suitable for this purpose.



Consider leaving an open compost heap for wildlife and maintaining an active compost heap in an enclosed container, inaccessible to hedgehogs.

Disease, injury and ailments

Thousands of hedgehogs are admitted to vets and rescue centres across the country every year. Hedgehogs are well known for their association with ticks and fleas, but can also carry and suffer from diseases such as salmonella, lungworm and ringworm. The population-level impact of these diseases on wild hedgehogs is still being researched.

Hedgehog fleas are species-specific, and the presence of ticks is normal unless they're carrying a particularly high burden, which can be indicative of ill-health. Hedgehogs seen out in the day exhibiting non-purposeful behaviour may require further assistance, but it's always best to obtain advice before removing a hedgehog from the wild.

The solution

Contact BHPS on 01584 890 801 for further information and advice about injured or ill hedgehogs.

Reports of hedgehogs that are thought to have died from disease can be submitted to Garden Wildlife Health - a collaborative project working to monitor the health and identify disease threats to British wildlife based at ZSL: www.gardenwildlifehealth.org. They can also conduct autopsies on preserved specimens, but please contact them before sending any samples.



GWH
Garden Wildlife Health

Predation

Foxes and dogs

Foxes and dogs can cause hedgehog mortality, but there's no indication that they impact hedgehog populations as a whole. Small populations may be more vulnerable.





Badgers

Badgers are the main natural predator of hedgehogs and also compete for similar prey. It's thought that the two species can coexist as they have for thousands of years, so long as there's enough feeding and nesting habitat for them both.

The solution

A good network of hedging, scrub and bramble provides nesting habitat for hedgehogs and cover from predators. Fence off prime natural nesting sites in public areas to reduce disturbance from dogs, ensuring the fencing is hedgehog permeable. Whilst not advised as a replacement for natural habitat, purpose-built hedgehog houses can provide additional protection from predators. Tunnels and small entrance holes (13x13cm) are best for these. See our hedgehog housing leaflet for tips www.hedgehogstreet.org/hedgehog-homes

Legislation

Hedgehogs are listed as a UK 'Priority Species' under S41 of the NERC Act (2006). They also have limited protection under Schedule 6 of the Wildlife and Countryside Act (1981) as amended, which means they cannot be caught or trapped without a licence. The Wild Mammals (Protection) Act (1996) prohibits cruel activities and mistreating of hedgehogs.

No legislation currently addresses the causes of decline in hedgehog populations.



How to detect hedgehogs

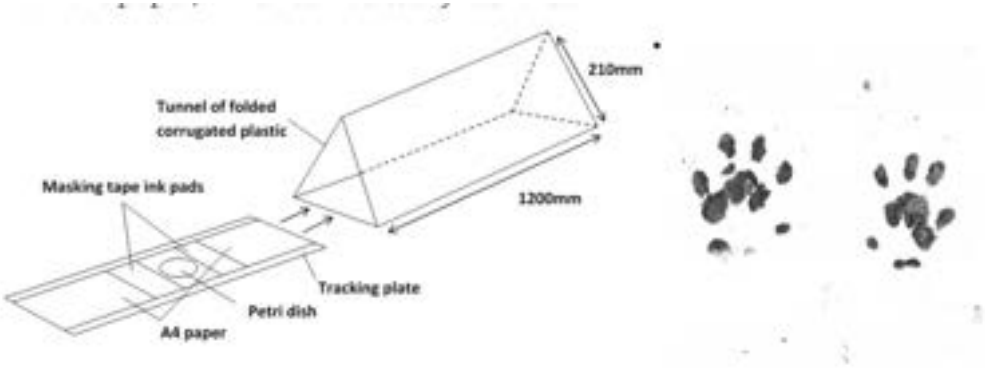
Check the Big Hedgehog Map for records local to you: www.bighedgehogmap.org, or add your own sighting. If hedgehogs have been recorded locally and suitable habitat is present, it's likely that the area will be used in some form due to their wide-ranging behaviour.

If you'd like to know whether hedgehogs are using your green-space, footprint tunnels or trail cameras are the easiest and most cost effective way of monitoring.

Footprint tunnels are cheap and easy to construct, and can be placed along linear features such as hedgerows, fences and walls. Pieces of A4 paper are attached to the inside of the tunnel, alongside two strips of non-toxic ink and a handful of meaty flavoured cat, dog or hedgehog food. The tunnels can be kept in place for up to five nights, with paper and bait being replenished daily.

If you manage to detect hedgehogs then a trail camera is a brilliant way of observing behaviour and sharing your successes with the local community. Place these around 20cm from the ground on a wooden stake, or lock them discretely to fencing or trees.

For more advice about conducting a hedgehog survey, please contact hedgehogs@ptes.org. We're giving away a free tunnel to the first 20 land managers who get in touch.



This handbook accompanies the more extensive *Hedgehog Ecology & Management Course for Practitioners*, run by PTES and BHPS. This is a one-day course aimed at land managers and consultants to inform green-space management.

For more information and to locate your nearest course leader, visit www.ptes.org/hedgehogtraining

HEDGEHOG STREET
CITY OF WILDLIFE

Hedgehog Street is a joint project run by People's Trust for Endangered Species and the British Hedgehog Preservation Society.

hedgehogs@ptes.org **www.hedgehogstreet.org**

We'd like to thank Ali North at Suffolk Wildlife Trust for her contribution to this guidance booklet.

people's trust for endangered species

020 7498 4533
enquiries@ptes.org
www.ptes.org
registered charity no. 274206

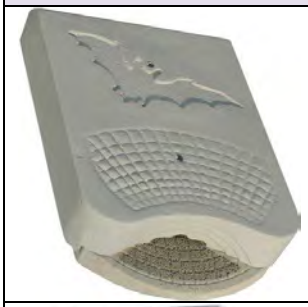
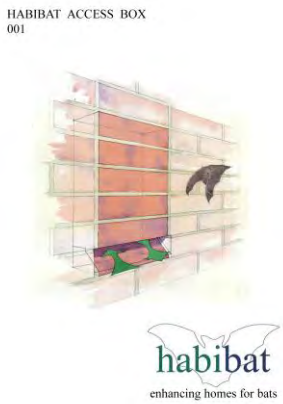
British Hedgehog Preservation Society

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www.britishhedgehogs.org.uk
registered charity no. 1164542

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Bat Conservation Trust

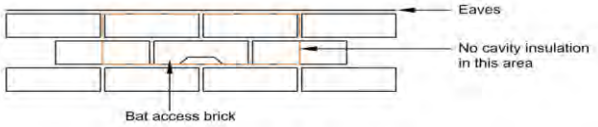
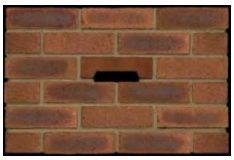
Below is a list of bat related products that may be used for bat enhancement. However, please be aware that BCT does not endorse any particular product or brand as very little evidence is available to demonstrate that they are successful.

Bat Boxes	**In situ**	**Description**	**Company**	**Estimated price**
For external surfaces of buildings:				
		**Schwegler 1 WQ Summer & Winter Roost** Dimensions: 580 H x 380 W x 120 D Weight: 22Kgs	Alana Ecology Jacobi Jayne The Code Store	£90 to £139
		**Schwegler 1 FQ Bat Roost** Dimensions: 600H x 350W x 90D mm Weight: 15.8 Kgs	Alana Ecology Jacobi Jayne NHBS The Code Store	£70 to £90
	Internal or external 	**1 Schwegler FE Bat Access Panel** with optional back plate External Dimensions: H 30 x W 30 x D 8 cm Weight: 7.8 kg	Alana Ecology Jacobi Jayne NHBS The Code Store	£38 to £49
To integrate into walls:				
	Can be built with timber, brick or stone facing to match walls. *BCT is using the Habibat as a research and monitoring tool.	**Habibat** Dimensions: 215 x 215 mm Or 215 x 290 mm	Habibat NHBS	£82.50 to £129

		**Schwegler 1FR Bat Tube** Dimensions: H 475 x W 200 x D 125 mm Entrance W 150 x D 20mm Weight: 9.5kg	Alana Ecology Jacobi Jayne NHBS	£72 to £75
		**Schwegler 2FR Bat Tube** The 2FR bat box is based on the same design as the 1FR, but with the addition of holes in the sides. This allows multiple tubes to be placed next to each other to form a much larger bat roost.	Alana Ecology Jacobi Jayne NHBS	£72 to £76
		**Ibstock enclosed bat box**	Ibstock	
For trees:				
	Trees or flat surfaces	**Schwegler 1FF Bat Box** Dimensions: 430H x 270W x 140D mm. Entrance hole: 120 x 240mm	Alana Ecology Jacobi Jayne NHBS	£56 to £60
	Trees	**Schwegler 2F Bat Box** (General Purpose) Woodcrete 33cm H x diameter 16cm Note: location of access hole means that box is not self-cleaning.	Alana Ecology NHBS	£27.95

	Trees	**Schwegler 2FN Bat Box** The 2FN Bat Box has two entrances - one at the front and one at the rear against the tree. It has a domed roof to form clusters and an increased internal height. 36cm H x diameter 16cm 4.3kg	NHBS Nature Counters	£34.95
	Trees	**Schwegler 1FD Bat Box** The 1FD is a large general purpose bat box. Effectively it is a larger version of the Schwegler 2F bat box, with the addition of two roughened wood panels inside the box which simulate crevices. Note: location of access hole means that box is not self-cleaning.	Alana Ecology NHBS	£49 to £55
Wooden bat boxes				
	Fitted to walls, other flat surfaces or trees	**Kent Bat Box** Materials to be made from untreated rough-sawn timbers. Timber should be 20mm thick. The box should be rainproof and draught-free. Crevices can be between 15 & 25mm wide	Self constructed. Instructions from BCT.	

Bat Conservation Trust

Access tiles or bricks	In situ	Description	Company	Estimated price
		**Tudor Bat access tile set**	**Tudor Clay Roof Tiles**	
		Ventilation tiles that can be adapted for bat access	Aspect Roofing	
		**Bat access brick**	Tamworth Property Services t) 01827 310475 chris@bat-survey.co.uk	
		**Ibstock bat roost entrance arch brick**	**Ibstock**	
		**Bat access slate**	JD Products **Owens Slate Service** Summit Slate	**£40-80**
		**Habibat Roof Access Tile**	Dreadnought Tiles Habibat	

Positioning considerations:

Aspect

Temperature is known to be the major factor influencing successful uptake of artificial roost by bats. In general, bats seek warm spaces to help them with rearing young. For this reason, bat boxes should be located where they will receive the maximum amount of sunlight. In the northern hemisphere this will be the southerly aspects/orientation (south, south-west and south-east). However, it is helpful to install bat boxes in more than one aspect to allow a choice of roosting conditions. Bat boxes located on a shady side will remain cooler and will be more suitable for use during the hibernation period (winter) or by male bats all year round.

Height

Position the bat boxes a minimum of 2 meters above ground. Avoid placement above windows, doors and wall climbing plants, thereby reducing the likelihood of predation by cats. A position near the eaves or gable apex of the property would be preferable.

Other considerations

To make the bat box a potential roost for a wider range of bat species, it is helpful to consider whether there is nearby linear vegetation features such as hedges. This is because some bat species use these features for navigation between their roosting site and feeding ground and to avoid flying in open and exposed areas.

Resources:

- Williams, C. 2010. *Biodiversity for low and zero carbon buildings: a technical guide for new build*. RIBA Publishing, UK
- Bat Conservation Trust, 2010. *Bats in Buildings*. Bats and the Built Environment Series: Volume 1. http://www.bats.org.uk/publications_download.php/247/Bats_and_Buildings_finalDec2010.pdf
- BCT webpages: http://www.bats.org.uk/pages/bats_and_buildings.html

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