

Preliminary Ecological Appraisal

Including:
UK Habitat Classification Assessment
Bat Scoping Assessment

The Hexagon Theatre
Queens Walk
Reading
RG1 7QF

November 2023

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NON-TECHNICAL SUMMARY

This report assesses the ecological value of the proposed development site at The Hexagon Theatre. The proposed development involves the extension of the current Hexagon Theatre to incorporate a new studio theatre.

The site survey included an assessment of the habitats found within the site and its immediate surroundings and the likely impact of the proposed development on habitats of ecological value and protected and notable species.

This report is broadly considered valid for a duration of eighteen months, although some ecological factors may change within shorter timescales.

Key results:

The site is dominated by a large building and hardstanding habitats.

The site contains potentially suitable habitat for nesting birds.

The proposed development is not due to result in the loss of significant habitats of ecological value, although the recommendations below should be followed to minimise the risk of impact on habitats of ecological value and protected and notable species.

Recommendations (see report for details):

- Trees should be retained or replaced wherever possible. Tree protection areas and methods should be advised by a suitably qualified arboricultural consultant.
- Some of the trees within the site include features suitable for roosting bats. Individual recommendations for each tree are given in Appendix 5.
- To avoid an impact on commuting and foraging bats, it is recommended that lighting is designed to minimise illumination of suitable habitats.
- Vegetation and buildings suitable for nesting birds may only be removed during the nesting season if they have been checked by an ecologist and no nests are present.
- One invasive species was recorded within the site – *Cotoneaster*. These plants are unlikely to cause problems in their current location within the site, but their spread should be avoided.

1 INTRODUCTION

Background

- 1.1 This report has been instructed by Haworth Tompkins.
- 1.2 The proposed development involves the extension of the current Hexagon Theatre to incorporate a new studio theatre.

Purpose of the report

- 1.3 This report assesses the ecological interest of the site and the potential impacts of the proposed development on biodiversity.
- 1.4 Ecological surveys are sequential in nature and any follow up, species-specific reports will supersede the information present in this report, even if both are submitted together.
- 1.5 TMA have been instructed to undertake a Preliminary Ecological Appraisal - a method of ecological assessment outlined in the CIEEM Guidelines for Preliminary Ecological Appraisal (2017). These guidelines state that the aims of the Preliminary Ecological Appraisal are to identify key ecological constraints associated with a project; identify any mitigation measures likely to be required; identify any additional surveys that may be required; and identify opportunities to deliver ecological enhancement.
- 1.6 This report aims to satisfy the requirements of the National Planning Policy Framework (MHCLG, 2021), identifying ecological features or protected species within or near the site that could potentially be impacted by the proposed development and opportunities for incorporating biodiversity enhancements into the development proposals.
- 1.7 This report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM, 2017) and with Biodiversity - Code of Practice for Planning and Development (BSI, 2013).
- 1.8 To provide information to support the ecological assessment, a bat scoping survey has also been undertaken.

Limitations

- 1.9 The site was accessed during September 2023, a time when the majority of plant species would be expected to be evident, particularly extensive stands of invasive species such as Japanese knotweed (*Fallopia japonica*) or giant hogweed (*Heracleum mantegazzianum*). Where further botanical or invasive species surveys are considered necessary, these have been recommended within this report.
- 1.10 All areas of the site were fully accessed with the exception of the flat roof of the main structure which could not be safely accessed. However, this area could be viewed from a roof hatch sufficiently.
- 1.11 As the attributes of the site and its potential for protected, notable and invasive species may change over time, this report is broadly considered valid for a duration of **eighteen months**, after which time it is recommended that an update site assessment is undertaken. In some cases, protected or invasive species' use of a site may change over a shorter timescale, for instance the use of a badger sett by badgers, or the extent of invasive plant species, which may change month to month. In such cases, appropriate precautionary advice or recommendations for update surveys are given within this report. Although invasive plant species have been recorded if observed within the site, we cannot guarantee that all occurrences have been found.

Information supplied

- 1.12 This report has been prepared with reference to the following supplied plans, showing the extent of the site boundary and the proposed development (at this stage):
- Proposed GA Floor Plans - Level 0, BartonWillmore, 27/04/2022 (13000 STC XX 00 DR A 11010. Rev. 4)
- 1.13 Please note, the above-named plans may be superseded or updated without warranting an update of this report, if the changes are insignificant to the impact of the development on biodiversity.

Site location

- 1.14 The location of the proposed development site is urban. The site is surrounded by residential and commercial development. The wider area comprises of parkland, trees, and landscaped areas.

- 1.15 The central grid reference for the site is SU 71119 73263. The surveyed site covers approximately 0.3 hectares.

2 RELEVANT LOCAL PLANNING POLICY

Reading Borough Local Plan November 2019

Policy EN12 – Biodiversity and the Green Network

- 2.1 a) The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:
- Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and
 - Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links. New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.
- 2.2 b) On all sites, development should not result in a net loss of biodiversity and geodiversity and should provide a net gain for biodiversity wherever possible. Development should:
- Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and
 - Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable. In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is “no net

loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.

Policy EN14 – Trees, Hedges and Woodlands

- 2.3 Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal where they are of importance, and Reading’s vegetation cover will be extended. The quality of waterside vegetation will be maintained or enhanced.
- 2.4 New development shall make provision for tree retention and planting within the application site, particularly on the street frontage, or off-site in appropriate situations, to improve the level of tree coverage within the Borough, to maintain and enhance the character and appearance of the area in which a site is located, to provide for biodiversity and to contribute to measures to reduce carbon and adapt to climate change. Measures must be in place to ensure that these trees are adequately maintained.

3 SURVEY METHODOLOGY

Data Searches

- 3.1 The government's MAGIC search tool was searched for statutory sites designated for nature conservation interest within 7 km of the site, and for records of European Protected Species licences within 2 km of the site.
- 3.2 Thames Valley Environmental Record Centre (TVERC) was consulted for records of non-statutory sites designated for nature conservation interest and for historic records of protected or notable species within 2 km of the site.

Site Survey

- 3.3 The survey was undertaken on 5th September 2023 by Brooke Waites of Tim Moya Associates, an experienced Principal Ecologist and Associate Member of the Chartered Institute for Ecology and Environmental Management (CIEEM). During the survey the weather conditions were not considered to pose any limitations to the survey.
- 3.4 The vegetation and habitat types within the site were noted during the survey in accordance with the categories specified for UK Habitat Classification (UKHab Ltd, 2023). Dominant plant species were recorded for each habitat present.
- 3.5 The site was inspected for evidence of and its potential to support protected or notable species, especially those listed under *The Conservation of Habitats and Species Regulations 2017*, the *Wildlife & Countryside Act 1981* (as amended), including those given extra protection under the *Natural Environment and Rural Communities (NERC) Act 2006* and *Countryside & Rights of Way (CROW) Act 2000*, and listed on the UK and local Biodiversity Action Plans. Such species include amphibians, reptiles, bats, badgers, birds, hazel dormice, and water voles. Evidence of badgers was searched for throughout the site, including setts, footprints, feeding signs, hairs, and droppings.
- 3.6 The site was searched for evidence of invasive non-native plant species, especially those listed under Schedule 9 of the *Wildlife & Countryside Act 1981* (as amended), such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*), horizontal/wall cotoneaster (*Cotoneaster horizontalis*) and floating pennywort (*Hydrocotyle ranunculoides*).

Bat Scoping Survey

- 3.7 The bat scoping survey was undertaken in accordance with the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016). The surveyor holds a Natural England licence to disturb bats whilst surveying. The buildings were inspected externally from all angles using binoculars and internally using a high-powered torch to inspect loft spaces (where present). Trees were inspected from ground level, using binoculars where needed and a high-powered torch to inspect potential bat roost features. Where possible, a ladder was used to inspect features within 3 m of ground level. An endoscope was used to investigate cavities where possible. All aspects of each tree were viewed, and wherever visibility was restricted (e.g. due to ivy or foliage), this is stated in the report.
- 3.8 Evidence searched for included bat droppings, feeding remains, staining from urine or grease marks and potential access points into roosting cavities. Features indicating potential for bat roosts included gaps beneath roof tiles, weatherboarding and/or hanging tiles, missing mortar, holes in tree trunks, cracks in tree limbs, loose bark and dense ivy growth.

4 DESK STUDY RESULTS

Designated Sites

- 4.1 The site itself is not covered by any statutory or non-statutory nature conservation designations.
- 4.2 There are 15 statutory designated sites within 7 km of the proposed development and nine non-statutory designated sites within 2 km of the site, as follows:

Table 1. Statutory designated sites of nature conservation interest

Closest statutory site:			
Site name	Designation	Distance and direction from proposed works (km)	Description
Lousehill Copse	LNR	2.5 W	Comprises natural mature woodland, grassland habitat and a pond.
McIlroy Park	LNR	3.1 NW	Comprises a large block of deciduous woodland and a large field of species rich grassland.
Round Copse	LNR	3.2 W	Comprises a small block of semi natural woodland.
Other statutory sites: Nine further LNRs and three SSSIs are located between 3.5 km and 7 km from the proposed development site.			
Key (Refer to Appendix 6 for details): SSSI – Site of Special Scientific Interest LNR – Local Nature Reserve			

Table 2. Non-statutory designated sites of nature conservation interest

Closest non-statutory site:			
Site name	Designation	Distance and direction from proposed works (km)	Description
Holy Brook	LWS	0.4 S	Comprises wetland habitats that support a variety of species.
Other non-statutory sites: Eight further LWSs are located between 0.7 km and 2 km from the proposed development site.			
Key (Refer to Appendix 6 for details): LWS – Local Wildlife Site			

Historic Species Records

- 4.3 Local Ecological Records Centre data searches return hundreds of species records. The table below summarises records of key protected species considered to be most sensitive to impact from proposed developments. Numerous additional notable species records were returned for the 2 km radius, which are considered unlikely to be impacted by the proposed development and are therefore not summarised below. For instance, species for which no suitable habitat is present close to the site (see end of table).

Table 3. Existing protected species records

Species	Local Ecological Records Centre			EPS Licences granted
	Number of records within 2 km	Closest record to site (km) and orientation	Most recent record	No. within 2 km
Badger (<i>Meles meles</i>)	56	0.7 N	2022	N/A
Bat species (<i>Chiroptera</i> sp.)	935 records; 9 species	Common pipistrelle (<i>Pipistrellus pipistrellus</i>), soprano pipistrelle (<i>Pipistrellus pygmaeus</i>), noctule bat (<i>Nyctalus noctula</i>); 0.02 N*	Common pipistrelle; 2022	12 licences granted. The, closest is located 0.5 SW; 2022; allowed damage and destruction of common pipistrelle resting place.
Common Lizard (<i>Zootoca vivipara</i>)	3	0.9 NW	2013	N/A
Grass Snake (<i>Natrix helvetica</i>)	7	0.7 NW	2020	N/A
Great Crested Newt (<i>Triturus cristatus</i>)	1	1.3 NE	2017	None
Hedgehog (<i>Erinaceus europaeus</i>)	50	0.2 S	2022	N/A
Slow-worm (<i>Anguis fragilis</i>)	19	0.9 W	2020	N/A
Stag Beetle (<i>Lucanus cervus</i>)	476	0.07 SE**	2022	N/A
No records were returned of the following key protected/notable species: Adder (<i>Vipera berus</i>), hazel dormouse (<i>Muscardinus avellanarius</i>), white-clawed crayfish (<i>Austropotamobius pallipes</i>)				
Records were returned of the following species (amongst others) but no suitable				

habitat is present close to the site:

Otter (*Lutra lutra*), water vole (*Arvicola amphibius*)

*The closest record for bats does not have a high degree of accuracy, as returned records state that bats were recorded at the Ridgeway Primary School, Willow Gardens, Reading which is located 3.3 km SE outside of the 2 km search radius.

**The closest stag beetle record was recorded at Cusden Walk, Reading, which is to located adjacent to the south of the site.

- 4.4 Granted European Protected Species (EPS) Licences for bats within 2 km comprises four species: common pipistrelle, soprano pipistrelle, brown long-eared bat (*Plecotus auratus*), and Daubenton's bat (*Myotis daubentonii*).

5 RESULTS OF HABITAT SURVEY

Habitats and Vegetation

- 5.1 A Phase 1 Habitat Plan can be found in Appendix 1 illustrating the habitats present. Photographs of the site are contained in Appendix 2.

Table 4. Habitats present within the site

Habitat type	Description	Dominant species plant	Overall biodiversity value*	Habitats of Principal Importance*	Additional Notes
Buildings and hard standing	The site is dominated by a large building with areas of hardstanding surrounding the structure.	None	Negligible, other than potentially for nesting birds	No	Bat roost and nesting bird potential are assessed in Table 5, below.
Introduced shrub	A small area of introduced shrub is present on the north-west of the site.	Tall melilot (<i>Melilotus altissimus</i>), fleabane (<i>Pulicaria dysenterica</i>), and barberry (<i>Berberis sp.</i>)	Low	No	

Habitat type	Description	Dominant plant species	Overall biodiversity value*	Habitats of Principal Importance*	Additional Notes
Unsealed Surfaces/Permeable paving	An area of grasscrete is present on the west of the site, used for parking and access.	Species unknown.	Low	No	
Trees and hedges	The site includes a number of trees. A hedgerow with trees is present to the south-west of the site.	London Plane (<i>Platanus × hispanica</i>), Tree Cotoneaster (<i>Cotoneaster sp.</i>)	Moderate	No	Provide a feeding resource for birds and invertebrates.

*Overall biodiversity value of a habitat is guided by the criteria listed in section 4.6 of the Guidelines for Ecological Impact Assessment (CIEEM, 2018), which include habitats required by rare or uncommon animal or plant species, habitat connectivity and species-rich assemblages of plants.

** Habitats of principal importance included in Section 41 of the NERC Act – for details see Appendix 6.

Protected/Notable Species Potential

- 5.2 Table 5, below, details the suitability of habitats within the site for key protected/notable species.
- 5.3 Species not detailed below are considered unlikely to be significantly impacted by the proposed works.

Table 5. Protected species potential

Species group	Strict Protection*	Species of Principal importance**	General habitat requirements	Suitable habitat within site
Badgers	Yes	No	Woodland, dense scrub, meadows, field edges.	No evidence of badgers was found during the survey, such as setts, footprints, latrines, feeding evidence or hairs. Given the built-up nature of the site, and urban location, badgers are unlikely to be present.
Bats	Yes	Yes – Several species	Roost in buildings, tree cavities, bridges and caves.	The building was assessed as having negligible potential for roosting bats. Refer to Section 6 of this report.
Birds (nesting)	While nesting	Various	Trees, shrubs, scrub, hedgerows, cavities within buildings, waterbodies, arable fields, bare/stony ground.	Flat roofs of the building offer suitable habitat for nesting birds, particularly gulls.
Great Crested Newts	Yes	Yes	Breed in ponds and other waterbodies. Terrestrial habitat includes woodland and grassland.	No ponds within 500 m of the site. No suitable habitat on site.
Hazel Dormice	Yes	Yes	Hedgerows, dense scrub, deciduous woodland with connected canopy and good ground flora.	No suitable habitat on site.

Species group	Strict Protection*	Species of Principal importance**	General habitat requirements	Suitable habitat within site
Hedgehogs	No	Yes	Woodland, hedgerow, gardens, parks	Limited to trees and hedges in the south of the site.
Invasive Plant Species	No	No	Species-dependent: Waste land, railway verges, riverbanks, waterbodies	Cotoneaster was recorded in the southern part of the site.
Other invertebrates	No	Various	Species-dependent. High invertebrate diversity is favoured in sites with a mosaic of habitats and diverse plant assemblage.	Limited to very small areas of ruderal habitat.
Otter	Yes	Yes	Rivers and lakes	No suitable habitats.
Reptiles	Yes	Yes – all reptiles	Long grass, scattered scrub, hedgerows, rubble and log piles.	No suitable habitats.
Water Vole	Yes	Yes	Rivers, streams, wet ditches.	No suitable habitats.
White-clawed crayfish	Yes	Yes	Canals, streams, rivers, lakes, reservoirs and water-filled quarries	No suitable habitats.

*Strict Protection – species for which individuals and/or their habitats are protected against harm/destruction/disturbance by European or UK Law – for details see Appendix 6.

** Species of principal importance included in Section 41 of the NERC Act – for details see Appendix 6.

6 RESULTS OF BAT SCOPING ASSESSMENT

Buildings

- 6.1 Building names and locations are shown on the Phase 1 Habitat Plan (Appendix 1). Target Notes have been used to identify features such as potential bat access points. Full details of the Bat Scoping Survey findings are contained in Appendix 4, including building descriptions and inspection findings.
- 6.2 Roof voids are not the only area of a building that may be used by roosting bats. Bats often roost underneath roof tiles, hanging tiles, wooden cladding, inside cavity walls and amongst brickwork. In these locations, evidence of a bat roost may be concealed.
- 6.3 The roof spaces were accessed internally, although some areas could only be viewed from entranceways due to the lack of boarding.
- 6.4 The main area of flat roof was viewed from an access hatch but was not secure to walk on and therefore the view was limited.
- 6.5 The building was assessed as having **Negligible** potential for roosting bats, due to the absence of suitable roosting features.
- 6.6 A small number of crevices below lead flashing were present on the flat roofs of the northern part of the site, however the features were heavily cobwebbed and exposed to sunlight making them extremely hot in the summer months.
- 6.7 Given the very limited suitability of the features present, and the urban area of the site, the risk of bats being present is considered to be negligible.

Trees

- 6.8 No suitable bat roosting features were present within any trees within the site. As such all trees within the site boundary have been assessed as having **Negligible** bat roosting potential.

Foraging and commuting habitat

- 6.9 The location of the site and the surrounding area is considered to be of low value for commuting and foraging bats. The wider landscape is dominated by major roads and dense urban development. It is likely that foraging or commuting bats use the site itself to a limited extent.

7 CONCLUSIONS AND RECOMMENDATIONS

- 7.1 For any constraints identified, mitigation options should follow the Mitigation Hierarchy as set out in British Standard BS42020 (BSI, 2013). This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures.

Overall Ecological Value

- 7.2 The proposed development is not due to result in the loss of significant habitats of ecological value, although the recommendations below should be followed to minimise the risk of impact on habitats of ecological value and protected and notable species.

Designated sites

- 7.3 The closest designated site is Holy Brook LWS located 400 m south of the site. The works are limited to the extension of the existing theatre. The scale of the proposed works is such that there is unlikely to be a direct impact on these or any other designated sites.

Habitats of Principal Importance

- 7.4 No habitats within or adjacent to the proposed development site are listed as Habitats of Principal Importance under Section 41 of the NERC Act (Refer to Appendix 6).

Other Notable Habitats

- 7.5 The following habitats are not classed as Habitats of Principal Importance, but nevertheless are considered to be of notable biodiversity value in the context of the site and its surroundings:

Trees

- 7.6 A number of trees are present on the peripheries of the site and off-site areas. All existing trees are due to be retained within the proposed development.

- 7.7 Recommendation: Trees should be retained or replaced within the development site wherever possible. Where trees are to be retained, tree protection areas and methods should be advised by a suitably qualified arboricultural consultant.

Protected Species

- 7.8 The following species are protected against harm/destruction/disturbance by European or UK Law – for details see Appendix 6.

Badgers

- 7.9 Badgers are legally protected against killing, injury or disturbance and their setts are protected against interference (see Appendix 6 for details).
- 7.10 Due to the lack of evidence of Badgers within the site, the proposed development is considered unlikely to impact Badgers and no further surveys or mitigation are recommended.

Roosting bats - buildings

- 7.11 All species of bat are legally protected from disturbance or harm and their roosts are protected from damage or destruction (see Appendix 6 for details).
- 7.12 The building within the site has been assessed as having negligible bat roosting potential. As such, no further surveys or mitigation are recommended.

Roosting bats - trees

- 7.13 The trees within the site have all been assessed for their potential for roosting bats. All trees were assessed as having **Negligible** potential to support bats, due to the absence of features such as cracks, crevices or dense ivy growth. These trees can be removed if needed without risk to roosting bats.

Foraging and commuting bats

- 7.14 Due to the habitats present within the site and the local landscape, it is considered likely that foraging or commuting bats use the site to a limited extent. Nevertheless, bats are likely to cross the area occasionally.
- 7.15 The foraging and commuting behaviour of bats is known to be altered by artificial lighting and bats may avoid illuminated areas (ILP, 2018).

- 7.16 Recommendation: To avoid a detrimental impact on bats using the site, there should be no increased light spillage on to suitable habitats, particularly on the periphery of the site, where bats are most likely to forage and commute. Lighting

should be restricted to the interior of the site and should be kept to a low level. The following measures should be implemented within the lighting scheme:

- Minimise light spill through careful aiming, positioning and selection of luminaires and column heights.
- LED luminaires should be used where possible due to their sharp cut off, lower intensity and dimming capacity.
- Lighting must have no upward spill.
- Warm white luminaires with peak >550nm. UV lighting should be avoided.
- Reduce the light intensity to the minimum required for safety and security;
- Where security lamps are used these should use a trigger to illuminate them (e.g. infra-red detector), and switch off after a short period, rather than remaining on all night.
- Further guidance is available in Bats and artificial lighting in the UK (ILP, 2018).
- In some cases a Lighting Impact Assessment may be required to demonstrate that lighting will not have a detrimental impact on bats.

Great Crested Newts

- 7.17 Great Crested Newts are legally protected from killing, injury, capture and deliberate disturbance. Habitats used by Great Crested Newts are also protected (see Appendix 6 for details).
- 7.18 Great crested newts have been recorded within 1.3 km of the site. However, no ponds were identified within 500 m of the site. Therefore, it is considered unlikely that Great Crested Newts will be impacted by the proposed development and no further surveys or mitigation are recommended.

Hazel Dormice

- 7.19 Hazel Dormice are legally protected from disturbance or harm and their breeding sites and resting places are protected from damage or destruction (see Appendix 6 for details).
- 7.20 No records of Hazel Dormice within 2 km of the site have been returned by record centres. Due to the absence of suitable habitats present and poor connectivity with suitable habitats in the local area, Hazel Dormice are considered unlikely to be

present. The proposed development is considered unlikely to impact Hazel Dormice and no further surveys or mitigation are recommended.

Invertebrates

- 7.21 Approximately 400 invertebrate species are listed as 'Species of Principle Importance' under Section 41 of the NERC Act (see Appendix 6) and decision makers must have regard to the conservation of these species.
- 7.22 Due to the common habitats present within the site, it is considered unlikely that the proposed works will significantly impact important populations of invertebrates. Section 8 of this report includes measures to enhance the development for invertebrates.

Reptiles

- 7.23 All species of native reptiles are legally protected against killing or injury. (see Appendix 6 for details).
- 7.24 Slow-worm, common lizard and grass snake have all been previously recorded within 2 km of the site. No areas of suitable habitat are present within the site. The proposed development is considered unlikely to impact reptiles and no further surveys or mitigation are recommended.

Water Vole and Otter

- 7.25 Otters and Water Voles are legally protected from harm, capture and disturbance and their breeding sites and resting places are fully protected (see Appendix 6 for details).
- 7.26 No habitat suitable for Water Voles or otters is present within or adjacent to the site. The proposed development is considered unlikely to impact these species and no further surveys or mitigation are recommended.

White-clawed crayfish

- 7.27 White-clawed crayfish are legally protected from harm, capture and disturbance (see Appendix 6 for details).
- 7.28 No habitat suitable for white-clawed crayfish is present within or adjacent to the site. The proposed development is considered unlikely to impact this species and no further surveys or mitigation are recommended.

Nesting birds

- 7.29 All birds are protected against killing, injury or capture, and eggs and active nests are protected. Some bird species are also protected against disturbance (see Appendix 6 for details).
- 7.30 The site includes flat roofs and trees, all of which are suitable for nesting birds during the nesting season (typically March to August inclusive).

7.31 Recommendation: To avoid destruction of active bird nests, it is recommended that building works and vegetation removal is only undertaken outside the bird nesting season. Building works and vegetation removal may only be undertaken during the nesting season if a careful check by a suitably qualified ecologist can confirm that no active bird nests are present. If bird nests are present within buildings or vegetation to be removed, they must be left in place and not disturbed until all the young have fledged and cease to return to the nest.

Invasive Species

Invasive plant species

- 7.32 *Cotoneaster sp.* was recorded along the southern part of the site.
- 7.33 A number of cotoneaster species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as invasive plant species. It is prohibited to plant or otherwise cause this species to grow in the wild.

7.34 Recommendation: These plants are unlikely to cause problems in their current location within the site, but their spread should be avoided. If removal of these plants is required as part of the works, they should be disposed of responsibly (e.g. mulching, burning on site or removal to landfill) so that the plants cannot spread.

8 BIODIVERSITY ENHANCEMENTS

- 8.1 The following ecological enhancements below are planned within the scheme to help achieve a 10% Biodiversity Net Gain. See Biodiversity Net Gain Report for further details (Tim Moya Associates – Biodiversity Net Gain Assessment- 230374-ED-02a).

Shrub planting

- 8.2 Shrub planting within the site which will increase feeding resources and connectivity for wildlife including bats, birds and invertebrates. Connected corridors of shrubbery within the site will have a larger impact than isolated patches.
- 8.3 Shrub planting should include a variety of species found on the Royal Horticultural Society's 'Plants for Pollinators' lists, such as lavender (*Lavandula* species), heather (*Calluna vulgaris*), common box (*Buxus sempervirens*), common hawthorn (*Crataegus monogyna*), bell heather (*Erica cinerea*), blackthorn (*Prunus spinosa*), knapweeds (*Centaurea* species), guelder rose (*Viburnum opulus*), barberry (*Berberis species*) and honeysuckle (*Lonicera peridymenum*).

Biodiverse Green Roof

- 8.4 A biodiverse green roof makes a significant enhancement to the biodiversity value of a site and the local area without occupying additional land space. Green roofs can be designed to recreate grassland, brownfield or wasteland habitats critical for many rare species, including bird species and invertebrates. Crushed aggregate can be used to provide green roof substrate. Variable substrate grade and depth is encouraged. The green roof should be designed following the principles of Buglife's 'Creating Green Roofs for Invertebrates' Best Practice Guide wherever feasible. A range of native plant species can be plug planted on the roof, as recommended by Buglife to provide a ready resource for invertebrates, particularly during the first few years whilst naturally colonised plants become fully established. A locally-sourced log pile can be installed on the green roof, to provide shelter and nesting sites for invertebrates that burrow into or shelter amongst dead wood. Green roofs also have many additional benefits in terms of building insulation, drainage and roof lifespan.

9 REFERENCES

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10 APPENDICES

Appendix 1- Habitat Plan

Appendix 2- Photographs

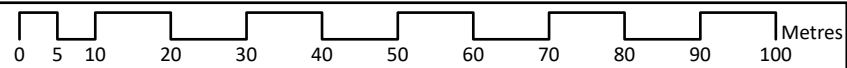
Appendix 3- Target Notes

Appendix 4– Bat Scoping Assessment (Buildings)

Appendix 5– Bat Scoping Assessment (Trees)

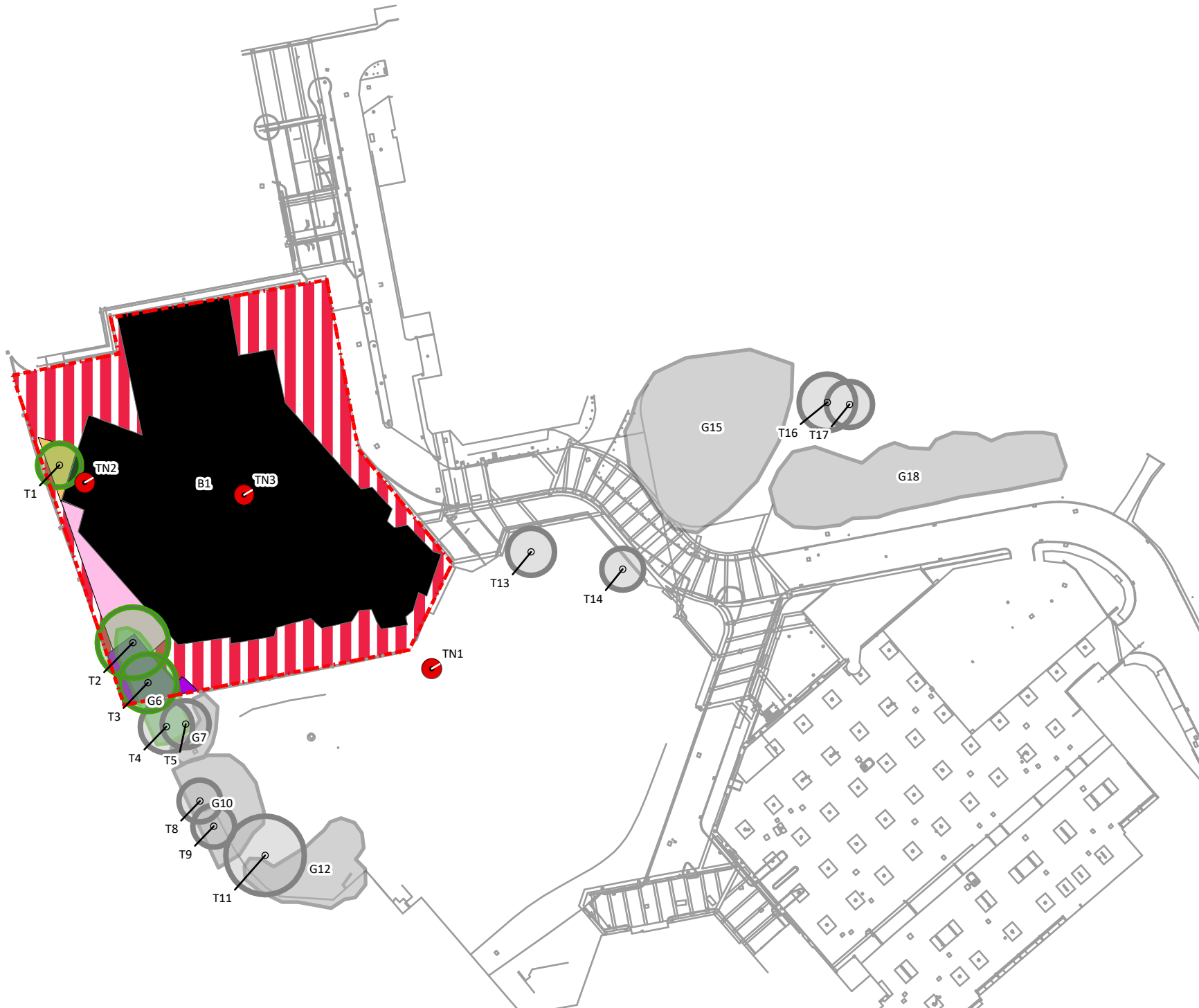
Appendix 6- Wildlife Law and Planning Policy

Appendix 1 - Habitat Plan



Legend

- Site Boundary
- Target Note
- u1b - developed land, sealed surface
- 190 - Hedgerow with trees
- 1160 - Introduced shrub
- 1231 - Permeable paving
- Building
- Tree/Tree Group Bat Potential**
 - Moderate/High Roost Potential or Confirmed Roost
 - Low potential
 - Negligible potential; N - Negligible potential
 - Not Assessed



Title:		
Habitat Plan		
Client:		
Haworth Tompkins		
Project:		
The Hexagon Theatre		
Date	Drawn by	Authorised
22/09/2023	JCF	BW
Drawing No	Rev	Scale
230374-EC-01	-	1:1,000



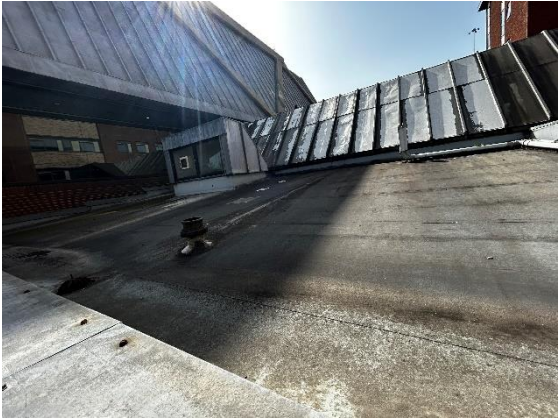
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Appendix 2 - Photographs

Photo 1 – Building overall 	Photo 2 – Site overall 
Photo 3 – Grasscrete and building within the site. 	Photo 4 – Internal view of loft space. 
Photo 5 – Roof of single storey extension to the north of the building. 	Photo 6 – Main roof structure, externally. 

Appendix 3 - Target Notes Schedule

Target Note Schedule

Target notes

Object ID	Type	Notes and findings
TN1	Invasive plant species	Buddleia present in grassland to the south of the site (outside boundary).
TN2	Bird evidence	Pigeons present on lower level flat roof areas. No evidence of nesting at the time, but likely nest within the site during the main nesting season where the flat roofs are sheltered by the main structure.
TN3	Miscellaneous target note	Main area of flat roof not safely accessible, the external areas of the roof was viewed from hatch only.

Appendix 4 – Bat Scoping Assessment (Buildings)

230374 - The Hexagon Theatre COMBINED

230374ED-11

Object ID	Stores	Use of Building	Roof type	Materials	Cellars	Chimneys	Roof void present	Bats evidence	Bat roost potential	Hibernation pot.	Internal Inspection	Potential bat access points	Ecological notes	Recommendations
REF			Condition									Potential bat roost features		

Bat roost and Hibernation potential
C - Confirmed H - High M - Moderate L - Low N - Negligible

230374 - The Hexagon Theatre COMBINED

230374ED-11

Object ID REF	Storeys	Use of Building	Roof type Condition	Materials	Cellars	Chimneys	Roof void present	Bats evidence	Bat roost potential	Hibernation pot.	Internal Inspection	Potential bat access points Potential bat roost features	Ecological notes	Recommendations
1 Hexbox	3	Local theatre	Flat Good	Roof external: Bitumen felt and lead Roof internal: RAAC Wall: Brick and Concrete	N	0	Y	N	N	N	Limited	Roof materials - gaps under lead flashing	The building comprises multiple areas of flat roof. The roof areas are generally well maintained and well sealed offering negligible opportunities for roosting bats. Small crevices are present under lead flashing throughout the structure, but these generally are too small to provide access for bats and heavily cobwebbed. Given the urban location and limited suitability of features present it is unlikely roosting bats will be present. Roosting pigeons present on the roof at the time of the survey, no evidence of nesting seen, although it is likely to occur, particularly on the lower level roofs which are sheltered by the main building. Access on to flat roofs limited. Roof voids inspected where safely accessible, but large areas are unboarded and cannot be safely accessed.	- No further surveys required-

Bat roost and Hibernation potential

C - Confirmed H - High M - Moderate L - Low N - Negligible

Printed on 02/11/23 (Building Assessment)

Appendix 5 – Bat Scoping Assessment (Trees)

Tree bat potential

230374 - The Hexagon Theatre

230374-ED-12

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Recommendations
T1	<i>Platanus x hispanica</i> London Plane	Tree	Negligible	No suitable bat roosting features present.	No further surveys required.
T2	<i>Platanus x hispanica</i> London Plane	Tree	Negligible	No suitable bat roosting features.	No further surveys required.
T3	<i>Platanus x hispanica</i> London Plane	Tree	Negligible	No suitable bat roosting features.	No further surveys required.
T4	<i>Platanus x hispanica</i> London Plane	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
T5	<i>Quercus robur</i> English Oak	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
S6	<i>Cotoneaster</i> sp. Tree Cotoneaster	TreeGroup	Negligible	No suitable bat roosting features present.	No further surveys required.
T7	<i>other</i> Other <i>Acer negundo</i> Box Elder (Ash - Leaved)	TreeGroup		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
T8	<i>Platanus x hispanica</i> London Plane	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
T9	<i>Platanus x hispanica</i> London Plane	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.

230374 - The Hexagon Theatre

230374-ED-12

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Recommendations
S10	<i>Crataegus monogyna</i> Common <i>Sorbus aucuparia</i> Rowan/Mountain Ash <i>Buddleja sp.</i> Buddleja <i>Cotoneaster sp.</i> Tree Cotoneaster	TreeGroup		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
T11	<i>Cedrus deodara</i> Deodar	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
G12	<i>Acer negundo</i> Box Elder (Ash - Leaved) <i>Sorbus aria</i> Whitebeam	TreeGroup		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
T13	<i>Acer saccharinum</i> Silver Maple	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
T14	<i>Acer saccharinum</i> Silver Maple	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
G15	<i>Platanus x hispanica</i> London Plane	TreeGroup		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
T16	<i>Acer platanoides</i> Norway Maple	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.
T17	<i>Acer platanoides</i> Norway Maple	Tree		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.

230374 - The Hexagon Theatre

230374-ED-12

Tree No.	Species	Tree Tree group	BCT Category (explanation at end of schedule)	Notes	Recommendations
G18	<i>Betula pendula</i> Silver Birch <i>Acer pseudoplatanus</i> Sycamore	TreeGroup		Off-site trees. Not assessed for bat roosting potential.	Ground level inspection by a suitably qualified ecologist to inspect for potential bat roosting features if due to be felled or pruned.

Bat Potential

Negligible - Negligible habitat features on site likely to be used by roosting bats.

Low - A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.

Moderate - A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.

High - A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Roost - A known or confirmed bat roost.

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).
The Bat Conservation Trust, London.

Soft-fell method

For some trees (see above), it is recommended that a precautionary 'soft-fell/prune' method is used in order to minimise the risk of harm to bats, as follows:

1. During felling/ pruning, trees or limbs must be lowered carefully to the ground using ropes.
2. If any cracks or fissures are observed, cross-cutting these features must be avoided.
3. Trees and limbs must left on the ground for 24 hours, to allow any bats to escape if present, although this is considered unlikely.

Appendix 6 - Wildlife Law and Planning Policy

Statutes and English Law

Reptiles

All species of native reptiles are protected against killing or injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*) are further protected under The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 against capture or disturbance and the places they use for breeding, resting, shelter and protection are protected from being damaged or destroyed.

Great Crested Newts

The Great Crested Newt and its habitat are protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This legislation makes it an offence to deliberately kill, injure or capture a Great Crested Newt; deliberately disturb a Great Crested Newt; damage, destroy or obstruct access to a structure used for shelter or protection by a Great Crested Newt; or possess or transport a Great Crested Newt.

Bats

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence for anyone intentionally to kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992 which makes it an offence to kill, injure or possess a badger; interfere with, damage or destroy a badger sett including obstructing access to a badger sett; cruelly treat or harm a badger; or disturb a badger in a sett.

Otters

Otters and their resting places are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This legislation makes it an offence to deliberately kill, injure or capture an otter; deliberately disturb an otter in their breeding or resting places; damage, destroy or obstruct access to their resting or breeding places.

Water Voles

Water voles are protected under the Wildlife and Countryside Act 1981 (as amended) from killing or taking by certain prohibited methods. Their breeding and resting places are fully protected from damage, destruction or obstruction; it is also an offence to disturb them in these places.

Hazel Dormice

Hazel dormice are protected under both The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the Wildlife and Countryside Act 1981 (as amended). Dormice and their breeding sites and resting places are fully protected. Without a licence it is an offence for anyone to deliberately disturb, capture, injure or kill them. It is also an offence to damage or destroy their breeding or resting places, to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess or sell a wild dormouse.

Mammals

The Wild Mammals (Protection) Act 1996 prevents crushing of mammal species (amongst other offences).

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to kill, injure or take wild birds; take, damage or destroy the nest of wild birds while it is in use or being built; or take or destroy the eggs of wild birds.

Certain bird species are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (as amended). Under this legislation they are afforded the same protection as all wild birds and are also protected against **disturbance** whilst building a nest, or on or near a nest containing eggs and or unfledged young.

White-clawed crayfish

White-clawed crayfish are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) protecting them from harm, disturbance and capture without an appropriate licence. It is illegal to buy or sell white-clawed crayfish whether alive or dead.

Invertebrates

Three UK invertebrate species are protected under The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – large blue butterfly, fisher's estuarine moth, little ramshorn whirlpool snail. It is an offence for anyone to deliberately disturb, capture, injure or kill them. It is also an offence to damage or destroy their breeding or resting places, to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess, or sell these species.

Approximately 400 further invertebrate species are listed as 'Species of Principle Importance under Section 41 of the NERC Act (see below).

Invasive Plant Species

It is prohibited to plant or otherwise cause to grow in the wild any species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The Environmental Protection Act 1990 also classifies certain invasive plants as controlled waste which must be disposed of safely at an appropriately licensed landfill site (e.g. Japanese knotweed).

Under section 57 of the Anti-social Behaviour, Crime and Policing Act 2014, if an individual or an organisation fails to control an invasive plant species which is having a detrimental effect on the quality of life of those in the locality. A notice can be issued after a mandatory written warning has been served. Breach of this notice, without reasonable excuse, would be a criminal offence, subject to fixed penalty notice (a penalty of £100) or prosecution. On summary conviction an individual could be liable to a level 4 fine and an organisation (e.g. a company) could be liable to a fine not exceeding £20,000.

Planning Policy

In addition to the statutes described above, various planning policy imposes duties upon planning applicants to take account of protected species and habitats at sites of proposed development and in particular, protected species. The objective of this

policy is to prevent a net loss of species and habitats diversity identified as priorities for the U.K. as a consequence of development activity.

National Planning Policy Framework (NPPF)

The National Planning Policy Framework is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution.

Planning policies should promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

Natural Environment and Rural Communities Act (NERC Act)

[Section 40 of the Natural Environment and Rural Communities Act 2006](#) places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity.

Priority Habitats and Species

Priority habitats and species are defined (NPPF, 2021) as ‘Species and Habitats of Principle Importance included in the England Biodiversity List published by the Secretary of State under Section 41 (S41) of the Natural Environment and Rural Communities Act 2006 (NERC Act)’. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Fifty-six **habitats** of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and subtidal sands and gravels.

There are 943 **species** of principal importance included on the S41 list. These are the species found in England which were identified as requiring action and which continue to be regarded as conservation priorities under the UK Post-2010

Biodiversity Framework. In addition, the Hen Harrier has also been included on the list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

ODPM Circular 06/2005

This Government Circular entitled 'Biodiversity and Geological conservation – Statutory obligations and their impact within the planning system' (ODPM, 2005) provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

The potential effects of a development, on habitats or species listed as priorities under Section 41 of the NERC Act, and by Local Biodiversity Partnerships, together with policies in the England Biodiversity Strategy, are capable of being a material consideration in the preparation of regional spatial strategies and local development documents and the making of planning decisions.

The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. 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. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development. Where this is the case, the survey should be completed and any necessary measures to protect the species should be in place, through conditions and/or planning obligations, before the permission is granted.

Statutory and Non-Statutory Sites

Name	Statutory/Non-statutory	Definition
SAC – Special Area of Conservation	Statutory	Strictly protected sites designated under the EC Habitats Directive, which will make a significant contribution to conserving habitats or species identified in Annexe I and II of the Directive (as amended).
SPA – Special Protection Area	Statutory	Strictly protected sites classified in accordance with Article 4 of the EC Birds Directive. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive).
SSSI – Site of Special Scientific Interest	Statutory	SSSIs provide statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features.
NNR – National Nature Reserve	Statutory	NNRs contain examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats or to provide opportunities for scientific study.
LNR – Local Nature Reserve	Statutory	LNRs are declared and managed for nature conservation, and provide opportunities for research and education, or simply enjoying and having contact with nature.
Ramsar – Ramsar Site	Statutory	Ramsar sites are wetlands of international importance designated under the Ramsar Convention.
LWS – Local Wildlife Site	Non-statutory	Areas of land with significant wildlife value for the local area.
SINC – Site of Importance for Nature Conservation	Non-statutory	Areas of land with significant wildlife value for the local area.
CWS – County Wildlife Site	Non-statutory	Areas of land with significant wildlife value for the county.



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