

Bat Impact Assessment and Protected Species Compliance Statement

A preliminary assessment for proposed ground-mounted solar panels on grassland

1. Executive summary

The proposed development comprises the installation of ground-mounted solar panels within an existing area of grassland.

The following design information has been provided:

- the works will be confined to grassland;
- no buildings or other structures are understood to be affected;
- three trees situated to the south of the proposed development area will be retained and unaffected;
- deciduous woodland is present within 500 metres of the site but will not be removed, entered or altered;
- no hedgerow, tree line, woodland edge or other linear habitat feature will be removed or severed;
- no permanent external, operational or security lighting is proposed; and
- no illumination of the retained trees, woodland or associated habitat will occur.

Local records confirm that bats occur in the local landscape and therefore require consideration. However, the proposal does not involve the removal, alteration or obstruction of any identified potential roosting structure. Subject to the stated assumptions and avoidance measures, there is therefore **no reasonably foreseeable pathway by which the development would damage or destroy a bat breeding site or resting place, obstruct access to a roost, or directly kill or injure a bat.**



The absence of lighting, retention of all trees and woodland, and preservation of dark landscape connectivity substantially reduce the potential for disturbance or interference with commuting habitat. A minor change in the way bats use the open grassland cannot be excluded categorically because recent research indicates that some ground-mounted solar developments can affect bat activity. However, as the array is of limited extent, the retained grassland remains vegetated, all boundary habitats remain intact and dark, and the safeguards in this report are secured, any such change is considered highly unlikely to constitute:

1. legally relevant disturbance under regulation 43 of the Conservation of Habitats and Species Regulations 2017; or
2. a significant adverse ecological effect at the local population level.

A European protected species mitigation licence is therefore **not presently indicated**.

No bat roost has been identified in the ecological information reviewed. This suggests that a full programme of nocturnal bat-activity surveys is unlikely to be proportionate to the limited impact pathways presented by this proposal.

2. Purpose and status of this assessment

This report considers:

- whether bats or habitats used by bats are reasonably likely to be affected by the proposed development;
- whether the proposal could engage the statutory offences protecting bats;
- whether additional survey work is proportionate;
- whether avoidance or mitigation measures are required; and
- whether a European protected species licence is likely to be necessary.

This is a **desk-based planning and impact assessment based on the information supplied**. It is not itself a bat survey and must not be represented as evidence that a licensed bat ecologist has inspected the site unless and until the document has been reviewed and adopted by a suitably competent ecological professional.

Natural England's bat standing advice is a material planning consideration and recognises that a qualified ecologist may be needed to advise on the evidence supporting a planning application.

The assessment is deliberately framed as a conclusion of **no likely material adverse effect**, rather than an assertion that bats are absent or that no bat could ever react to the development. That distinction is necessary for both scientific and legal defensibility.



3. Information reviewed

The following material has been considered:

1. the description of the proposed ground-mounted solar development supplied by the applicant;
2. confirmation that the three trees to the south will be retained and unaffected;
3. confirmation that the nearby deciduous woodland will not be affected;
4. confirmation that no external or operational lighting is proposed;
5. A record search;
6. the supplied list of botanical occurrence records.

The site plan, panel-layout drawing, cable route, construction method statement, and habitat survey were supplied for this assessment.

4. Assumptions and limits of validity

The conclusions are conditional upon all of the following being correct:

1. The development is confined to the grassland shown on the final site plan.
2. No building, shed, barn, bridge, culvert, underground structure or other potential bat-roosting structure will be demolished, modified or obstructed.
3. All three trees to the south will be retained.
4. No branch removal, crown lifting, root cutting, excavation beneath tree canopies or works within applicable root-protection areas will occur.
5. The deciduous woodland and its edge habitat will be retained in full.
6. No hedgerow, scrub belt, tree line, vegetated ditch, stream corridor or other linear feature will be removed or severed.
7. Access works and underground cabling will also remain within the grassland and will not pass through retained boundary habitats.
8. No permanent lighting will be installed.
9. Construction and maintenance activities will ordinarily occur during daylight hours without floodlighting.
10. No material piling, percussive works or sustained high-vibration activity will take place immediately beside a tree containing a potential bat roost feature.
11. Grassland beneath and between the panels will remain vegetated rather than being replaced with hardstanding, gravel or regularly treated bare ground.
12. The array is of limited extent relative to the wider grassland field and is not a utility-scale solar farm occupying a substantial landscape unit.
13. No local bat record is subsequently identified as a significant maternity, hibernation or other important roost close enough to be affected.



14. The site is not functionally linked to a statutory site designated for bats in a manner that would require separate Habitats Regulations assessment.

This report must be reviewed if any assumption proves incorrect or if the layout, scale, lighting, access, cabling or construction method changes.

Scale is material because the principal UK solar-bat study examined 19 much larger installations with an average solar-field size of approximately 59.6 hectares. Its findings cannot automatically be transferred to a small, discrete installation.

5. Desk-study results and their interpretation

5.1 Bat records

A review of local records identify reports of four bat species within approximately 100 metres:

- serotine;
- common pipistrelle;
- lesser horseshoe bat; and
- noctule.

The records establish that bats have been recorded locally. They do not establish the precise relationship between those bats and the application site. No information has been supplied concerning:

- the dates of the records;
- whether multiple records arise from a single survey or monitoring location;
- whether they are observations, detector registrations or roost records;
- the original spatial resolution;
- whether the coordinates have been generalised;
- survey duration or effort;
- seasonal coverage;
- the data provider; or
- whether the records relate to a designated bat site.

Accordingly, the figures must be described as **records**, not as numbers of individual bats or an estimate of abundance.

5.2 Sufficiency of the search radius

The 100-metre search is useful as an immediate proximity check and indicates the presence of bat species, hence the production of this report.



5.3 Meaning of the local records

The records make it inappropriate to state that bats are absent. They do not, however, demonstrate that bats will be harmed by the development.

Natural England's standing advice identifies local bat records and proximity to habitat capable of supporting bats as circumstances in which survey requirements should be considered. Those circumstances are acknowledged in this case and are the reason bats have been expressly assessed in this report. However, the existence of those screening triggers does not itself establish the nature or magnitude of any development effect. The site-specific assessment must consider whether the proposed works are capable of affecting roosting, commuting or foraging functions. In this case, all trees and woodland are retained, no potential roosting structure is affected, no linear habitat is severed and no lighting is proposed. Accordingly, while local bat presence is accepted, the evidence does not identify an impact pathway requiring a programme of nocturnal bat-activity surveys.

The correct planning question is therefore not simply whether bats have been recorded locally. It is whether the proposal creates a reasonably foreseeable adverse pathway affecting:

1. a breeding site or resting place;
2. an individual bat;
3. an important flight route;
4. a material foraging resource; or
5. the ability of the local bat population to continue using the landscape.

Those pathways are assessed below.

6. Legal and planning framework

6.1 Conservation of Habitats and Species Regulations 2017

All species of bat are European protected species under the Conservation of Habitats and Species Regulations 2017. Regulation 43 makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats;
- damage or destroy a bat breeding site or resting place; or
- undertake certain possession, transport or trading activities.

For the disturbance offence, the Regulations particularly identify disturbance likely to impair the animals' ability to survive, breed, reproduce, rear young, hibernate or migrate, or significantly affect the local distribution or abundance of the species.



A bat breeding site or resting place remains protected even when bats are not visibly present.

This is important because the absence of a significant population-level effect does not, by itself, rule out an offence involving a roost. The conclusion of no likely offence in this case rests principally on the physical retention and protection of all potential roosting features, rather than merely on an assertion that any impact would be ecologically small.

6.2 Wildlife and Countryside Act 1981

Bats also receive protection under section 9 of the Wildlife and Countryside Act 1981. Relevant offences include intentionally or recklessly:

- disturbing a bat while it occupies a structure or place used for shelter or protection; and
- obstructing access to a place used for shelter or protection.

Natural England summarises these parallel protections in its current standing advice.

6.3 Biodiversity duty

Section 40 of the Natural Environment and Rural Communities Act 2006, as strengthened by the Environment Act 2021, establishes the general biodiversity objective of conserving and enhancing biodiversity through the exercise of public functions. Local planning authorities must therefore consider biodiversity as part of their decision-making.

Several bat species are also species of principal importance under section 41, but Natural England's standing advice makes clear that all bat species must be considered in planning decisions.

6.4 National Planning Policy Framework

The National Planning Policy Framework requires planning authorities to give significant weight to the benefits of renewable and low-carbon energy generation. It also recognises the contribution of small-scale renewable projects.

That support does not displace biodiversity protections. Paragraph 193 requires significant biodiversity harm to be avoided, adequately mitigated or, as a last resort, compensated; permission should be refused where that cannot be achieved.

The present proposal applies that hierarchy primarily through avoidance:

- potential roosting features are retained;
- woodland and linear habitat are retained;
- no lighting is proposed; and
- the layout is confined to open grassland.



6.5 Circular 06/2005

Government Circular 06/2005 remains relevant to protected-species considerations and is expressly referenced by the current NPPF.

Paragraphs 98 and 99 establish two complementary principles:

1. protected species are a material consideration where a proposal is likely to harm the species or its habitat; and
2. developers should not be required to undertake surveys unless there is a reasonable likelihood both that the species is present **and that it will be affected**.

Where that dual threshold is met, the necessary survey and protection measures should normally be settled before planning permission is granted. As set out in this report, local presence is established; however, for the reasons set out in this assessment, there is no reasonable likelihood that bats will be adversely affected by the proposed development.

7. Relevant case law

7.1 *R (Woolley) v Cheshire East Borough Council*

[2009] EWHC 1227 (Admin)

In *Woolley*, the High Court held that it was insufficient for a planning authority merely to acknowledge the existence of bats and the possible need for a future licence. The authority had to engage meaningfully with the European protected-species regime and the implications of the proposal.

This report addresses that requirement directly by considering each possible offence and identifying why, under the proposed design, the relevant impact pathway is absent or sufficiently controlled.

7.2 *Morge (FC) v Hampshire County Council*

[2011] UKSC 2

The Supreme Court subsequently clarified the relationship between planning and protected-species licensing.

The Court held that the nature and extent of any negative effect must be examined in determining whether it amounts to legally relevant disturbance. Habitat change can indirectly affect a protected species, but not every minor or theoretical reaction necessarily amounts to prohibited disturbance. The assessment is contextual and must consider the nature, extent and timing of the effect.



The Court also explained that the planning authority is not required to duplicate Natural England's licensing function. Planning permission should not ordinarily be withheld on protected-species grounds unless the development is both:

1. likely to offend the strict protection regime; and
2. unlikely to be capable of receiving an appropriate licence.

The primary issue in this case is therefore whether a regulation 43 offence is reasonably likely. For the reasons set out below, it is not, provided the retained habitats and avoidance measures are secured.

8. Bat Conservation Trust guidance

The Bat Conservation Trust's professional guidance emphasises that the nature and extent of bat survey work should be proportionate to the characteristics of the site, the nature and scale of the proposed development, and the effects that could reasonably arise from it.

The presence of bats within the wider landscape does not, of itself, establish that a development will affect bats or that a particular programme of further survey is necessary. Survey requirements should be informed by the ecological features potentially affected and by the existence of credible impact pathways relating to roosting, commuting and foraging habitat.

In this case, local records confirm that bats occur within the surrounding landscape and the presence of nearby trees and woodland is acknowledged. Those features have therefore been expressly considered in this assessment. Importantly, however, the proposal does not require the removal or alteration of any tree, woodland, building or other potential roosting feature; does not sever any woodland edge or linear habitat feature; and introduces no external lighting.

The relevant question is therefore not whether habitat capable of being used by bats exists in the wider area, but whether the proposed works are reasonably likely to affect the ecological functions that habitat provides.

For the reasons set out in the impact-pathway assessment below, the retained trees, woodland and associated dark habitat connectivity will continue to perform their existing functions. The development is confined to open grassland and no credible pathway has been identified by which a bat roost would be damaged or obstructed, or by which an established commuting feature would be lost or materially degraded.

Accordingly, having regard to the limited scale and nature of the proposal and the avoidance measures incorporated into its design, a programme of additional nocturnal bat surveys is not considered proportionate to the effects reasonably predicted from this development. This conclusion should be reviewed only if the proposal is materially amended so as to introduce works to trees, woodland, potential roosting features, established habitat connectivity or lighting.



9. Solar-specific evidence

It would not be scientifically defensible to state that ground-mounted solar panels are inherently incapable of affecting bats.

The Bat Conservation Trust states that solar installations should be sited and designed in a way that avoids conflict with bats and other wildlife. It recognises emerging evidence that some solar farms may alter bat behaviour or fragment habitat and recommends ecological assessment to inform siting and layout.

A UK study by Tinsley and others examined 19 ground-mounted solar developments in south-west England. The study found reduced activity for six of the eight bat species or species groups analysed, including common pipistrelle, *Nyctalus* species and serotine in some habitat contexts. It recommended retaining boundary habitat, maintaining landscape networks and providing suitable vegetation.

That study does **not** prove that the present proposal will harm bats:

- it considered substantially larger solar fields, averaging approximately 59.6 hectares;
- impacts varied by species and habitat;
- the proposed development retains the trees, woodland and boundary habitat and introduces no lighting.

The study nevertheless means that a categorical statement of “zero possible effect” would be unnecessarily vulnerable. The appropriate site-specific conclusion is that a minor alteration in open-field activity cannot be excluded, but there is no evidence of a likely significant or legally relevant effect where the proposal is limited in scale and all higher-value landscape features remain intact, vegetated and dark.

10. Impact-pathway assessment

The terms used below are qualitative:

- **No credible pathway:** the proposal does not interact with the relevant feature or receptor.
- **Very low:** an effect is theoretically conceivable but is unlikely under the proposed design and safeguards.



- **Low:** a limited effect cannot be excluded, but it is unlikely to affect the ecological function of the landscape or engage a legal offence.
- **Further information required:** the present evidence does not permit a reliable conclusion.

Potential effect	Assessment	Residual risk
Loss or destruction of a bat roost	No building, tree or woodland feature will be removed or altered. The three southern trees and nearby woodland will remain.	No credible pathway
Obstruction of access to a roost	No roost entrance or potential access feature is understood to fall within the works. No screening structure or lighting will be placed against the trees or woodland.	No credible pathway
Killing or injury	The work affects grassland rather than buildings, trees or enclosed roost features. No felling or demolition is proposed. A precautionary stop-work procedure will address the unlikely event that a bat is encountered.	Very low
Disturbance of a tree or woodland roost during construction	Daytime construction is unlikely to interfere with normal nocturnal activity. A theoretical risk could arise from very close piling, vibration or prolonged construction beside an occupied tree roost.	Very low
Artificial-light disturbance	No permanent lighting is proposed. Provided temporary construction lighting is also excluded or tightly controlled, no illumination pathway exists. Avoidance of lighting is particularly important because bats require dark roosting areas, commuting corridors and feeding habitat.	No credible operational pathway
Severance of commuting habitat	No woodland edge, hedgerow, tree line, watercourse or other linear feature will be removed. Dark connectivity between the trees, woodland and wider landscape will remain. The panels will be located in open grassland rather than across an identified linear route.	Very low



Loss or degradation of foraging habitat	The grassland may support flying insects and may be used opportunistically by bats. Solar panels could alter the spatial pattern of activity, but the land will remain vegetated and the more structurally important trees, woodland and boundaries will remain. For a limited array, a population-level effect is unlikely.	Low and not significant
Effect on nearby woodland	The woodland lies outside the works and will not be removed, illuminated or physically isolated. No direct effect is anticipated.	No credible direct pathway
Cumulative effect	No information regarding adjoining solar arrays or other developments has been supplied. For a small standalone array, material cumulative effects are unlikely.	Very low

11. Embedded avoidance and protection measures

The following measures form part of the assessment and should be shown on the approved plans or secured through a planning condition where appropriate.

11.1 Trees and woodland

1. All three trees to the south of the development area shall be retained.
2. The nearby deciduous woodland and its edge vegetation shall be retained.
3. No excavation, trenching, material storage, vehicle tracking, panel support, fencing foundation or other construction activity shall occur within the applicable root-protection areas.
4. No pruning, crown lifting, branch removal or other arboricultural work shall be undertaken unless first assessed for potential bat-roost features.
5. A suitable undeveloped and vegetated stand-off shall be maintained between the array and the retained trees and woodland edge.
6. The final array and cable plan shall demonstrate that no connection between the trees, woodland and surrounding habitat is severed.

11.2 Lighting

1. No permanent external, operational, decorative or security lighting shall be installed as part of the development.
2. Construction and routine maintenance shall take place during daylight hours.



3. Temporary lighting shall not be used unless required for an emergency or immediate health-and-safety purpose.
4. Any unavoidable temporary light shall be directional, low-level, time-limited and screened away from all trees, woodland and vegetated margins.
5. No light spill shall be directed onto a potential roost feature, woodland edge or retained commuting corridor.

Natural England identifies retention of supporting habitat, redesign of lighting and maintenance of dark commuting corridors as appropriate avoidance measures for bats.

11.3 Grassland and foraging resource

1. The land beneath and between the panels shall remain vegetated.
2. Hardstanding and gravel shall be limited to the minimum operationally necessary area.
3. Vegetated margins shall be retained around the panel array.
4. Grassland management should seek to maintain a structurally varied, insect-supporting sward where compatible with solar operation.
5. Routine insecticide use shall be avoided.
6. Woodland-edge and tree-margin vegetation shall not be intensively cut throughout the active bat season unless required for safety.
7. Where feasible, native, locally appropriate flowering species should be incorporated into grassland management to support nocturnal insect prey.

11.4 Construction controls

1. The final construction method shall identify the position of piling, trenching, access and compound areas.
2. High-vibration activity shall not take place immediately beside a retained tree containing potential roost features without ecological review.
3. Open excavations shall be covered overnight or provided with an escape ramp.
4. Chemicals, fuel and construction materials shall not be stored within retained vegetated margins.
5. Contractors shall receive a short protected-species briefing before works begin.

11.5 Unexpected discovery procedure

If a bat is discovered during construction:

1. works in the immediate area shall cease;
2. the bat and any possible roost feature shall not be handled, damaged, covered or obstructed;
3. the area shall be kept dark and undisturbed;
4. advice shall be obtained promptly from a suitably experienced bat ecologist; and
5. works shall not resume in the affected area until the ecologist confirms that doing so would be lawful.



12. European protected species licensing assessment

A Natural England bat mitigation licence is required where otherwise lawful development activity is likely to result in an offence under the European protected-species regime. Natural England advises that licensing should be considered where development activities are likely to affect bats.

Under the design presently assessed:

- no roost will be removed;
- no roost feature will be physically altered;
- no access to a roost will be obstructed;
- no tree or building works are proposed;
- no lighting will be introduced;
- no established linear feature will be severed; and
- no level of disturbance capable of engaging regulation 43 is reasonably predicted.

Consequently, no regulation 43 offence is presently likely and the regulation 55 licensing tests are not engaged.

An EPS licence is therefore **not considered necessary for the proposal as described**.

This conclusion must be reviewed if:

- a bat roost is identified;
- a tree with potential roost features would be exposed to close construction effects;
- a tree or structure is subsequently included in the works;
- lighting is added;
- the layout materially changes;
- an important commuting route is identified; or
- the array proves to be substantially larger than assumed.

13. Overall conclusion

Bats are present in the local landscape. That is established by the supplied records and is not disputed.

However, local presence does not itself demonstrate a development impact. The relevant question is whether the proposed works interact with a bat, roost or habitat feature in a way capable of causing an offence or significant ecological harm.



On the information supplied, the development:

- is confined to open grassland;
- does not affect a building or other structure;
- retains all three trees to the south;
- retains the nearby deciduous woodland;
- does not remove or sever a linear habitat feature;
- introduces no external lighting; and
- can retain vegetated grassland and dark habitat connectivity.

There is consequently **no reasonably foreseeable direct pathway** for:

- killing or injuring a bat;
- damaging or destroying a breeding site or resting place;
- obstructing access to a roost; or
- intentionally or recklessly disturbing a bat within a place of shelter.

A minor change in the pattern of bat activity over the open grassland cannot be excluded categorically. Current evidence concerning larger solar farms means that such an absolute conclusion would not be scientifically justified. Nevertheless, provided the array is limited in scale and the avoidance measures in this report are secured, any change is expected to be localised and of low magnitude. It is not reasonably predicted to impair survival, breeding, rearing, hibernation or migration, significantly affect local distribution or abundance, or materially reduce the ecological function of the retained landscape.

Accordingly:

On the evidence available, and having regard to the nature and location of the proposed works, the absence of works to potential roosting features, retention of all trees and woodland, absence of lighting and maintenance of habitat connectivity, no additional bat surveys are considered proportionate or necessary to determine the likely effects of the proposal. Further ecological assessment would only be required if the development is materially amended so as to affect trees, woodland, potential roosting features, lighting conditions or established habitat connectivity.

This conclusion is conditional upon:

1. retention and protection of the three trees;
2. retention and protection of the deciduous woodland;
3. no impact upon hedgerows, tree lines or other connected habitat;
4. no permanent lighting;
5. daytime construction without illumination of sensitive habitat;
6. maintenance of vegetated grassland and margins; and
7. ecological review of any subsequent design change.



14. Suggested planning commitments

The following wording may be incorporated into the planning documents:

No-lighting commitment

No permanent external, operational or security lighting shall be installed as part of the development. No temporary construction lighting shall illuminate any retained tree, woodland edge, hedgerow or other vegetated site boundary.

Habitat-retention commitment

All trees, woodland, hedgerows, tree lines and other vegetated boundary features shall be retained and protected throughout construction and operation. The final access and cable routes shall not result in the removal or severance of any such feature.

Grassland-management commitment

The land beneath and between the panels shall remain vegetated and shall be managed to retain grassland habitat and insect resources. The use of routine insecticides shall be avoided.

Ecological-review commitment

Any amendment involving external lighting, tree works, woodland or hedgerow removal, alteration of a potential roosting feature, or a material increase in the array footprint shall be subject to further ecological review before implementation.

15. References

Bat Conservation Trust. *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, 4th edition, amended March 2024.

Bat Conservation Trust. *Climate Change Mitigation Position Statement: Solar Farms*.

Bat Conservation Trust and Institution of Lighting Professionals. *Bats and Artificial Lighting at Night*, Guidance Note GN08/23.

Conservation of Habitats and Species Regulations 2017, regulations 43 and 55. The official consolidated Regulations were current with changes known to be in force on 8 August 2026.



Ministry of Housing, Communities and Local Government. *National Planning Policy Framework*, December 2024, as amended February 2025, paragraphs 168 and 193.

Natural England. *Bats: Advice for Making Planning Decisions*, last updated 7 April 2025.

Natural Environment and Rural Communities Act 2006, sections 40 and 41, as amended by the Environment Act 2021.

ODPM Circular 06/2005 and Defra Circular 01/2005. *Biodiversity and Geological Conservation: Statutory Obligations and Their Impact Within the Planning System*, particularly paragraphs 98 and 99.

Tinsley, E., Froidevaux, J. S. P., Zsebők, S., Szabadi, K. L. and Jones, G. (2023). “Renewable energies and biodiversity: Impact of ground-mounted solar photovoltaic sites on bat activity.” *Journal of Applied Ecology*, 60, 1752–1762.

Wildlife and Countryside Act 1981, section 9 and Schedule 5.

R (Woolley) v Cheshire East Borough Council [2009] EWHC 1227 (Admin).

Morge (FC) v Hampshire County Council [2011] UKSC 2.

