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Ref: P10515. Construction of extension at Jacaranda.

To whom it may concern,

The Ecology Co-op undertook a bat scoping assessment at Jacaranda, Emsworth on the 23rd of April 2025. This assessment was undertaken further to a proposal to construct a second storey extension on the eastern and southern elevations. The survey was undertaken in accordance with best practice guidance produced by the Bat Conservation Trust¹.

The site is situated in a semi-rural area. The full address is Jacaranda, Lane End Drive, Emsworth PO10 7JH and the central grid reference of the site is SU 74572 05861.

It comprises a two-storey semi-detached residential property set in an area of hardstanding, modified grassland and introduced shrubs with scattered trees. Residential properties are present to the north, east, south and west. The Solent lies approximately 190m to the east. Given the nature and small scale of the proposals, this assessment has focused upon localised site impacts only. The site location is shown in Figure 1 Appendix 1.

The planned alterations will comprise the construction of a second storey extension to the eastern & southern elevation. The proposals for the site are shown in Figure 22 & 3, Appendix 1.

The building is in good condition. Table 1 below summarises the assessed building's potential suitability for roosting bats..

Table 1. Summary of structures assessed for Potential Roost Features (PRFs) at Jacaranda.

Building section	Description of features	Assessment of suitability for bats ¹
Main house	Brick built two-storey residential property with factory formed tight fitting clay tiled hipped and sloped roof and wooden soffits. No gaps or cracks in brickwork or soffits, no gaps in tiles, no loose or missing tiles. Moss present on roof on northern elevation. No evidence of bats was identified.	None

¹ Collins, J.(ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.

Building section	Description of features	Assessment of suitability for bats ¹
Void space	The dwelling supports a roof void space with no access to the outside. The main void measures approximately 9m (l), 6m (w) and 2m (h). The void is used for storage and is lined with membrane and rockwool insulation, there was no recent signs of disturbance. No gaps or cracks in wooden beams or brickwork. No access points for bats. Cobwebs were present throughout. No evidence of bats was identified within the loft space.	None

Scattered trees and hedgerows in the surrounding area and The Solent to the east are considered to be of value for foraging and commuting bats in the wider area. The proposed works will not impact the Solent directly or indirectly.

There was no suitable habitat in the immediate surroundings to support other protected species.

Overall, the property has no suitability for roosting bats, considering the condition of the building. As such, it is concluded that the proposed development will not impact on roosting bats and no further surveys are recommended in this instance.

To mitigate disturbance to foraging and commuting bats from artificial lighting, the proposed development should include 'ecologically sensitive lighting' in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 3).

The site can be enhanced for bats by placing bat boxes on nearby trees or buildings at a height of 3m or higher, and preferably on a south-facing aspect (examples in Appendix 1, Figure 2).

These enhancement measures will help illustrate that the proposals are in adherence of Paragraphs 187 (d) of the National Planning Policy Framework (NPPF)² and should therefore be considered favourably within the planning process.

If you have any queries about the findings of this assessment, then please do not hesitate to contact me.

Kind regards,



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² National Planning Policy Framework (NPPF) (2024) Ministry of Housing Communities & Local Government. Available at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>

APPENDIX 1 – Figures



Figure 1. Aerial image showing the location of site (indicated with a red outline). Site plan. Image produced courtesy of Google maps (map data ©2025 Google).

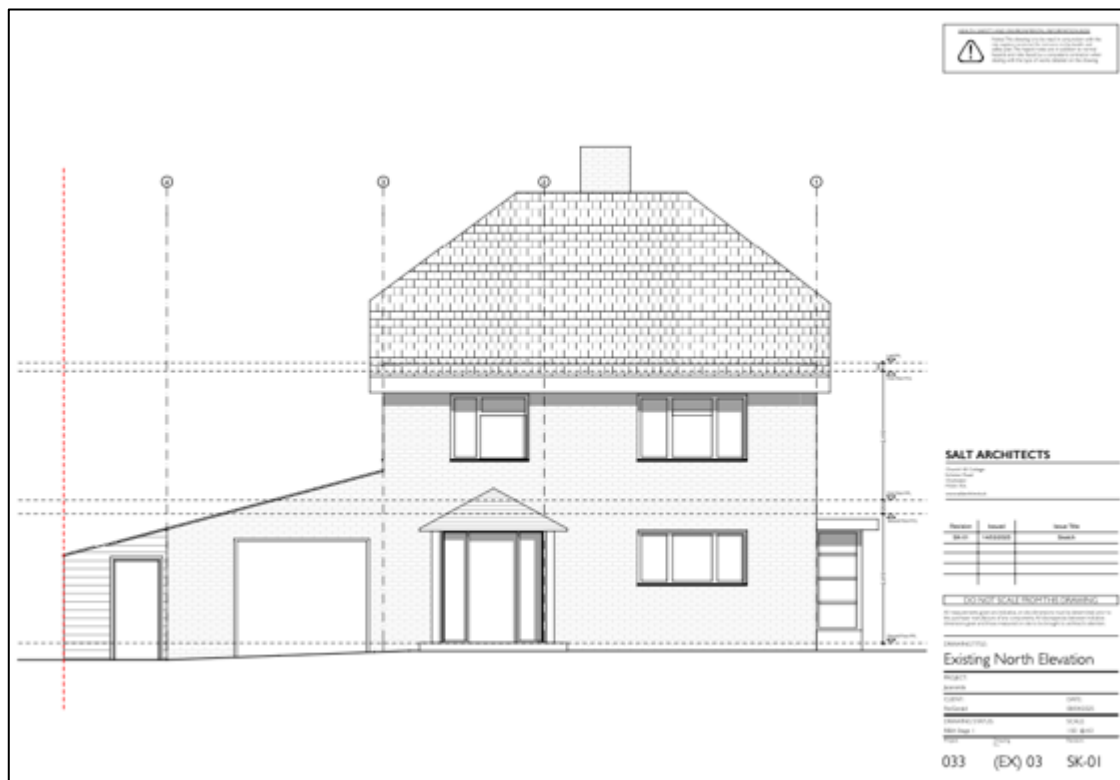


Figure 2. Existing plans (top) & proposed plans (bottom) north elevation. Drawing No's. (EX) 03 & (GE) 01 , courtesy of Salt Architects.

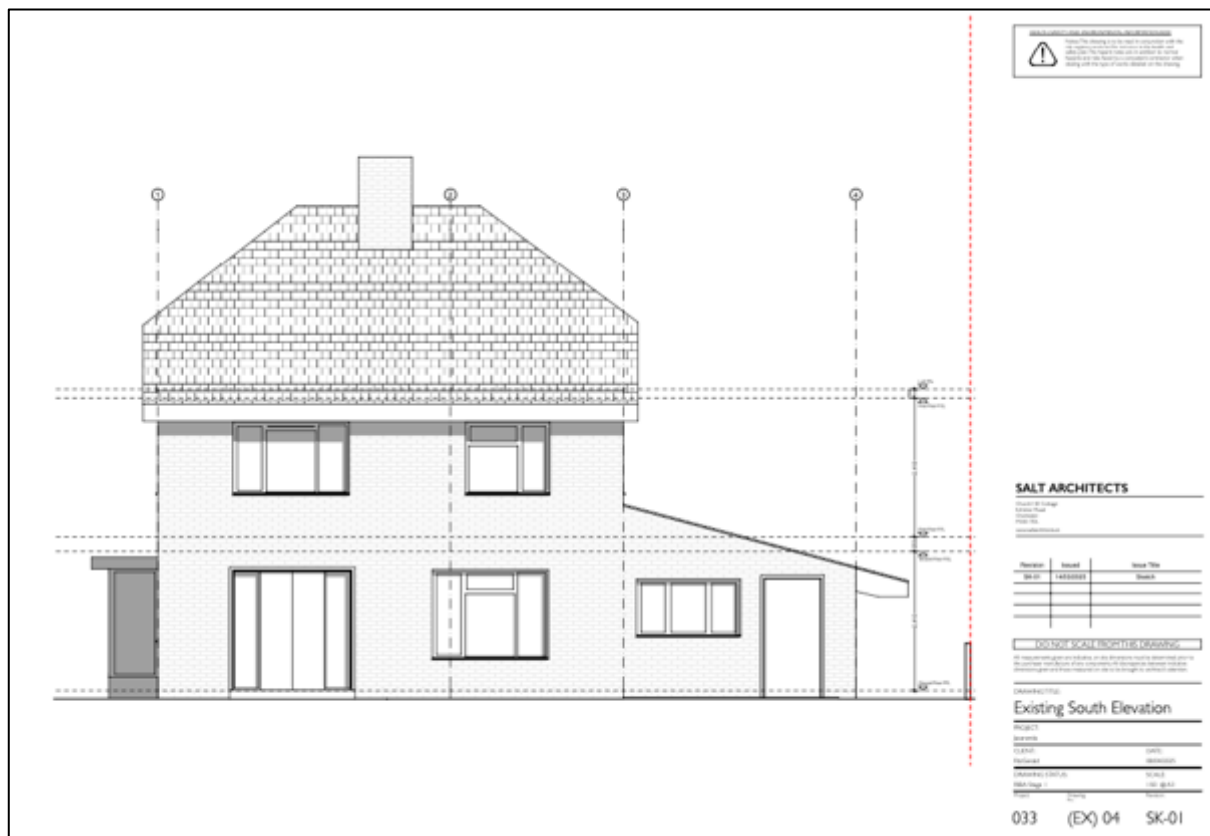
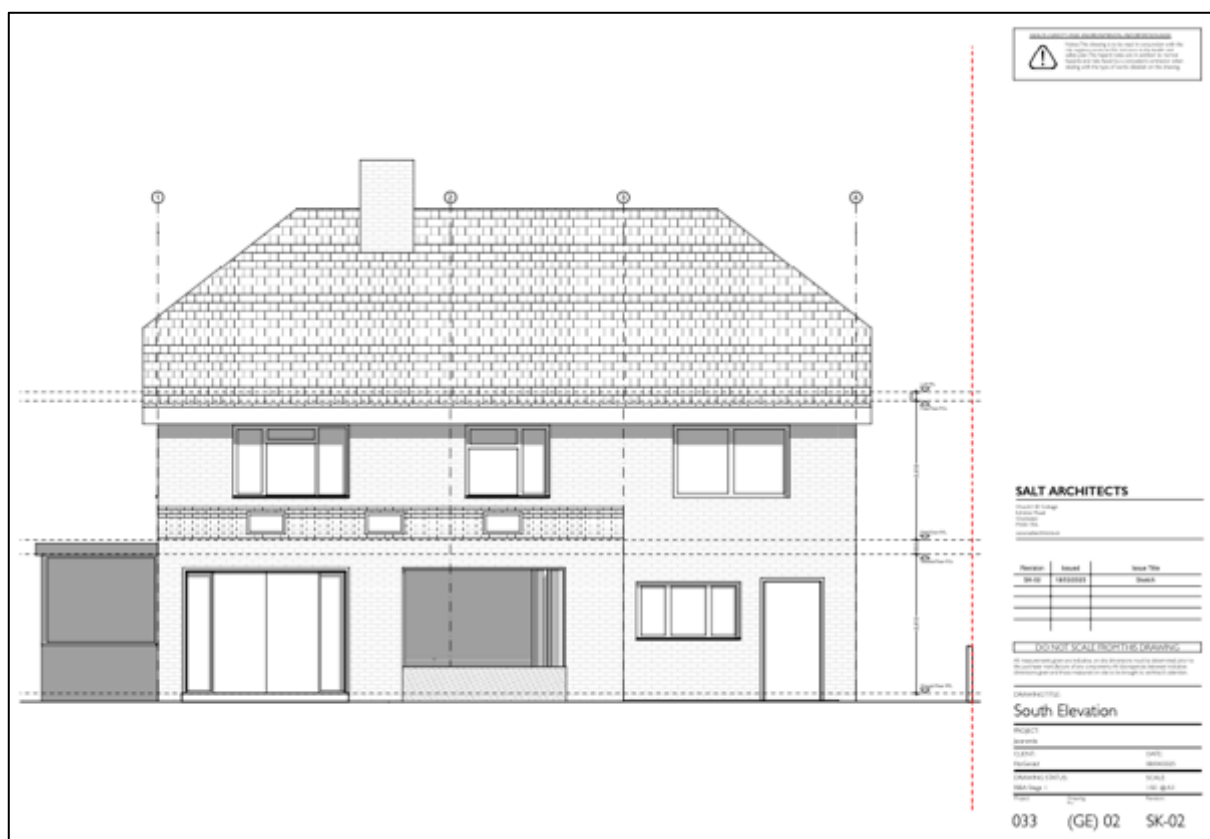


Figure 3. Existing plans (top) & proposed plans (bottom) south elevation. Drawing No's. (EX) 04 & (GE) 02 , courtesy of Salt Architects.



Figure 2. Left to right, the 2F, 2FN and the 1FS bat boxes produced by Schwegler. These and other brands are available at many on-line wildlife stores. These are constructed of 'woodcrete' (a mixture of cement and woodchip) and are designed to be durable and replicate the stable thermal properties of trees and buildings. They may be attached to trees or buildings.

APPENDIX 2 – Site Photographs



Photograph 1. Southern and elevation of residential property (Jacaranda).



Photograph 2. Northern and elevation of residential property (Jacaranda).



Photograph 3. Internal loft space.

APPENDIX 3 – Reducing Impacts of Artificial Light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts to other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness.

Guidelines issued by the Bat Conservation Trust³ should be referred to when designing the lighting scheme. Note that lighting designs in very sensitive areas should be created with consultation from an ecologist and using up-to-date bat activity data where possible. The guidance contains techniques that can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

Avoid lighting key habitats and features altogether

There is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation; however, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species.

Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- dark buffers, illuminance limits and zonation;
- sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill;
- consideration of the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consideration should be given to the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cats eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times;
- screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding;
- glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features;
- creation of alternative valuable bat habitat on site, whereby additional or alternative bat

³ Bat Conservation Trust and Institute for Lighting Professionals (2018) Guidance note 8. Bats and Artificial Lighting. <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development;

- dimming and part-night lighting. Depending on the pattern of bat activity across the key features identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

Demonstrate compliance with illuminance limits and buffers

- *Design and pre-planning phase*; it may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking*; as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

Lighting Fixture Specifications

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- Lighting spectra: peak wavelength >550nm
- Colour temperature: <2700K (warm)
- Reduction in light intensity
- Minimal UV emitted
- Upward light ratio of 0% and good optical control

Further reading:

Buglife (2011) A review of the impact of artificial light on invertebrates.

Royal Commission on Environmental Pollution (2009) Artificial light in the environment. HMSO, London. Available at: <https://www.gov.uk/government/publications/artificial-light-in-the-environment>

Rich, C., Longcore, T., Eds. (2005) Ecological Consequences of Artificial Night Lighting. Island Press. ISBN 9781559631297.

CPRE (2014) Shedding Light: A survey of local authority approaches to lighting in England. Available at: <http://www.cpre.org.uk/resources/countryside/dark-skies/item/3608-shedding-light>

Planning Practice Guidance guidance (2014) When is light pollution relevant to planning? Available at: <https://www.gov.uk/guidance/light-pollution>

Institution of Lighting Professionals (2021) Guidance Notes for the Reduction of Obtrusive Light GN01:2011. Available at: <https://www.theilp.org.uk/resources/free-resources/>

Voigt, C.C., Azam, C., Dekker, J., Ferguson, J., Fritze, M., Gazaryan, S., Hölker, F., Jones, G., Leader, N., Lewanzik, D. and Limpens, H., 2018. *Guidelines for consideration of bats in lighting projects*. Unep/Eurobats. Available at:

https://cdn.bats.org.uk/uploads/pdf/Resources/EUROBATGuidelines8_lightpollution.pdf?v=1542109376