



Ampney Park  
Gloucestershire

## Lighting Strategy

Project No. IN381

Issue 2

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Revision	Description	Prepared By	Date
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## 1.0 EXECUTIVE SUMMARY

This report has been produced, taking into account all ecologist and council comments. This report has also been created to show a considered and sensitive approach to the artificial illumination of the site in compliance with all relevant standards and guidance documentation for both internal and external lighting.

The types of luminaire and associated control strategies have been carefully selected to minimise light pollution from the Venue building and external lighting installations, with particular attention paid to the impact on the local wildlife and Ampney Brook, as raised by the Seasons Ecology Impact Assessment.

The Venue internal lighting shall utilise colour temperatures as warm as possible, and not exceeding 2700K to minimise the effect of any light spill from the building on the surroundings. Lighting controls shall also be provided to mitigate the light spill where possible.

The external lighting shall be designed in line with dark sky principles, and with close control of light spill and colour temperatures. The external lighting installation shall comprise of wall mounted building luminaires, low level bollards, and ground mounted luminaires. This will be to provide illumination of the service yard, car park, footpaths and building egress. These luminaires shall utilise photocell technology, presence detection and timeclock control to reduce light spill completely.

It is strongly recommended that the no permanent lighting is to be provided to the Outdoor Ceremony Space.

Luminaire selections and lighting control measures shall also greatly reduce energy usage.

## 2.0 INTRODUCTION

Ampney Park is a Grade II listed country house, with parts of the house dating back to the 16<sup>th</sup> century. The house is situated within the Cotswolds and Ampney Crucis Conservation Area.

Inform Consulting Engineers have been appointed to provide advice on the principles for reducing the artificial lighting impact of the new Venue building and propose a lighting strategy that will be sympathetic to the ecological challenges presented at the Ampney Park site.

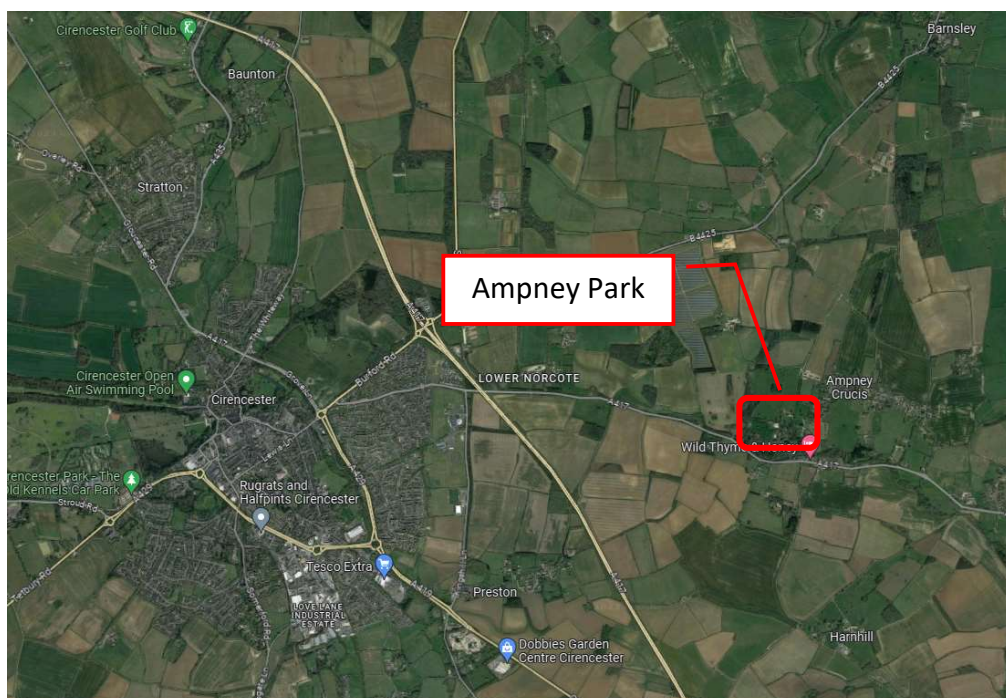
This report details the lighting strategies to be considered to ensure minimal impact on the existing wildlife, whilst maintaining sufficient lighting for the comfort and safety of the guests.

The project is currently at planning stage, and as such is subject to layout, sale, appearance and landscaping changes. For the purposes of this report, the current set of plans and illustrative materials as of 29/08/23 have been used.

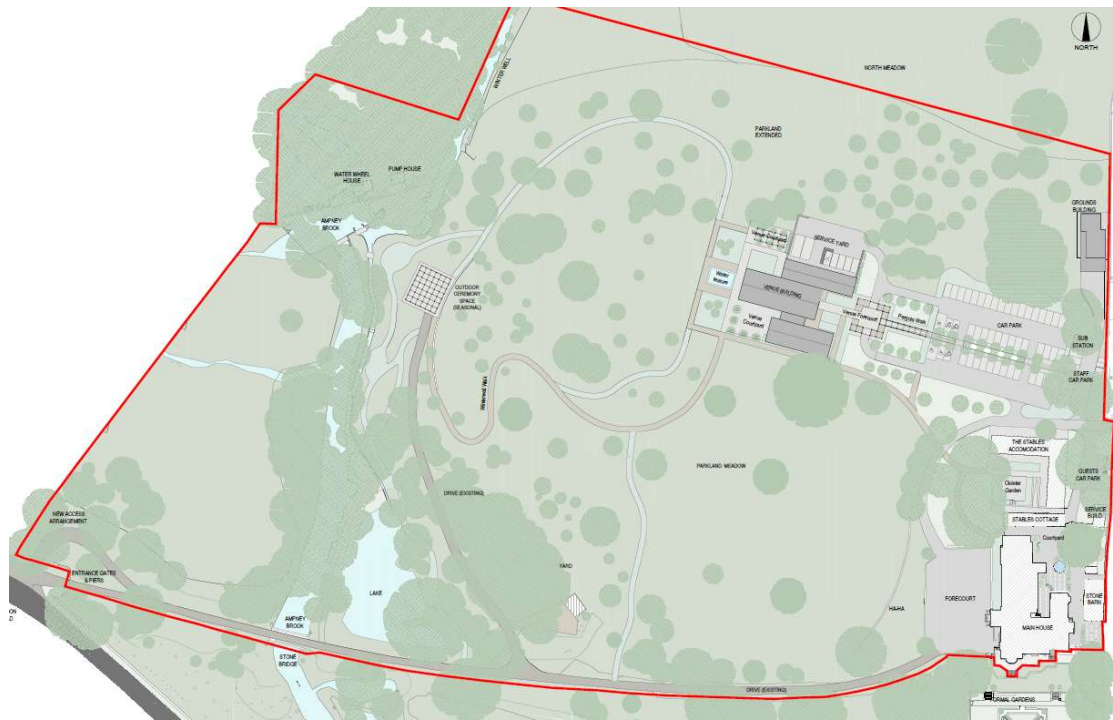
### Site Address:

Ampney Park,  
London Road,  
Ampney Crucis,  
Cirencester,  
GL7 5RY

### Site Location:



**Proposed Layout:**



### 3.0 LIGHTING STRATEGY CONSIDERATIONS

#### 3.1 Existing Site Conditions

Ampney Park is a Grade II listed manor house, set in formal lakeside gardens and surrounded by rolling and wooded parkland, which extends to circa 63 acres at the south-western edge of the village of Ampney Crucis.

The site in the main is currently made up of sheep-grazed and amenity grasslands, woodland, brooks, and lakes.

There is currently a riding school to the North of the site that is due to be demolished as part of the proposed works.

Currently artificial lighting is only present at the riding school and main house areas.

#### 3.2 Ecology

Seasons Ecology have provided an Ecology Impact Assessment on the site, and this should be referred to alongside this report. Should there be any discrepancies pertaining to the ecology of the site, the Seasons Ecology report takes precedence.

The proposed development site has a wide range of habitats, inhabited by a variety of animals and insects. The preparation of the lighting strategy has taken these into account to mitigate any adverse effect on the existing and future wildlife.

Careful consideration has also been taken to ensure no light spill is directed towards the Ampney Brook and woodland areas to maintain the existing wildlife population as much as possible.

Ampney Brook is a habitat of principle importance with the most important ecology including water vole and otters.

The estates parklands and woodlands provide high quality bat habitats and currently support a large variety of bat species.

The following recommendation has been provided by the ecologist to inform the lighting strategy;

*A sensitive lighting scheme will be designed that will avoid light spill onto the important habitats for bats and new roosts.*

#### 3.3 Lighting Design Guidance

The following documents have been considered in the production of this report;

- SLL Lighting Guide 6: The Exterior Environment
- SLL Lighting Guide 18: Lighting for Licenced Premises
- SLL Lighting Guide 21: Protecting the Night-Time Environment
- ILP guidance note 01 and 08

- International Dark-Sky Association five principles for responsible outdoor lighting

### 3.4 The International Dark-Sky Association

The International Dark-Sky Association (IDA) is the recognised authority on light pollution and is the leading organisation combating light pollution worldwide.

The design of the external lighting installation shall follow the five principles for responsible outdoor lighting, as prescribed by the IDA. These are as follows;

<b>USEFUL</b>		<p><b>ALL LIGHT SHOULD HAVE A CLEAR PURPOSE</b></p> <p>Before installing or replacing a light, determine if light is needed. Consider how the use of light will impact the area, including wildlife and the environment. Consider using reflective paints or self-luminous markers for signs, curbs, and steps to reduce the need for permanently installed outdoor lighting.</p>
<b>TARGETED</b>		<p><b>LIGHT SHOULD BE DIRECTED ONLY TO WHERE NEEDED</b></p> <p>Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.</p>
<b>LOW LIGHT LEVELS</b>		<p><b>LIGHT SHOULD BE NO BRIGHTER THAN NECESSARY</b></p> <p>Use the lowest light level required. Be mindful of surface conditions as some surfaces may reflect more light into the night sky than intended.</p>
<b>CONTROLLED</b>		<p><b>LIGHT SHOULD BE USED ONLY WHEN IT IS USEFUL</b></p> <p>Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.</p>
<b>COLOR</b>		<p><b>USE WARMER COLOR LIGHTS WHERE POSSIBLE</b></p> <p>Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.</p>



#### 4.0 INTERNAL LIGHTING

Within the close vicinity of the proposed new Venue building, several species of bat have been identified roosting. It is therefore imperative the internal lighting be considered to reduce any adverse effect on these species.

The proposed Venue building has large areas of glass facades to the East and West elevations. Above ground floor level, these are shaded with brise soleil to reduce solar gains and also help to reduce the light spill towards the brook.

In general, the luminaires selected shall be of as warm a colour temperature as possible, to a maximum of 2700K. All lighting shall be set back from windows in order to reduce any light spill as much as possible, with lux levels meeting the requirements as set out in SLL Lighting Guide 18.

Lighting to areas of infrequent use such as stores, toilets, plantroom, and offices shall be controlled via automatic lighting controls such as presence detection on short timers.

To further mitigate light spill, a lighting control system can be considered to turn off lighting to certain areas at a pre-set 'curfew' time.

The following has been provided within the planning pre-application advice note from the Cotswold District Council;

*"The amount of glazing and light spill also needs to be carefully considered on the 'New Reception Venue' building. CPRE Light pollution and dark skies mapping highlights that this area is under pressure from artificial light sources and care should be taken to not exacerbate this."*

The main hall is proposed to have 3No. large ceiling lights. Consideration should be made for the use of automatic blinds controlled via photocell and time clock to close at appropriate times to reduce the upward light pollution.

## 5.0 EXTERNAL LIGHTING

The external lighting will have the biggest impact on the ecology of the site, and therefore careful consideration is needed by the whole design team.

The following has been provided within the planning pre-application advice note from the Cotswold District Council;

*“Any external lighting will need to be sensitively designed to prevent light spill towards key habitat features such as river tributaries, streams, ponds, lakes, and linear features such as hedgerows. In addition, light spill should not be submitted towards known bat roosts or compensatory roosting features.”*

External lighting shall not be provided unless absolutely necessary to reduce the amount of light pollution created by the redevelopment of the site and minimise impact on the local environment and wildlife.

Where artificial lighting is deemed to be required, this shall not exceed 2700K colour temperature to reduce the amount of blue light that effects bats and insects.

Where possible, there will be no element of uplighting, with all luminaires directing light down and horizontal. The use of timeclocks and motion sensors shall be considered to control the external lighting.

Lux levels shall be kept to a minimum and provided to the appropriate levels as indicated in the SLL lighting guides.

The external lighting shall consist of;

Low-level metal LED steplights with 100% downlight to ‘Winterwell Walk’, with support/back panel to prevent light spill away from footpath. Photocell and time clock controls located at Venue building shall be utilised along with presence detection to prevent the lighting coming on when not required.



Example image only, final selection TBC.

In-ground fixed, 180 degree floor grazer to footpaths. Photocell and time clock controls located at Venue building shall be utilised along with presence detection to prevent the lighting coming on when not required.



Example image only, final selection TBC.

Bollard type luminaires to car parks with directional distribution and 0% uplight to provide safety for guests arriving/leaving the venue. Controlled via centralised photocell and time clock, and PIR detection.



Example image only, final selection TBC.

Wall mounted luminaires to entrance and egress positions of the Venue building, with integral 3-hour emergency battery backup for safe egress in the event of power failure. Controlled via centralised photocell and time clock, and PIR detection.



Example image only, final selection TBC.

Lighting mounted to the pergola walkways should be aimed directly at the floor to allow guests to safely move between the car park and the Venue building whilst also preventing unnecessary uplight.



Example image only, final selection TBC.

Narrow beam flood light type luminaire to existing sycamore tree to illuminate during periods of use. Lighting controls should be provided that can limit the times the tree is illuminated to only when the Venue is in use.

#### External Emergency Lighting

There will be an element of external emergency lighting to the proposed new Venue building. The emergency lighting only operates in the event of a power outage to provide safe egress of the occupants from the building in the event of a power outage. The emergency luminaires are non-maintained and will not illuminate in a standard situation, during day or night. The luminaires only operate in the event of a power failure for up to 3 hours or shut off automatically once power is restored.

## 6.0 LIGHTING MODELLING

In order to calculate the potential light spill of the proposed works, a Relux model has been created.



The luminaires used within this model are indicative only to illustrate the light levels around the Venue building and towards the sensitive habitats around Ampney Brook. These are subject to change during detailed design development.

The report generated from this model can be found at Appendix 1, issued with this document. This report demonstrates the potential lux levels at;

- Ampney Brook
- Car Park
- Service Yard
- The Venue internal light spill

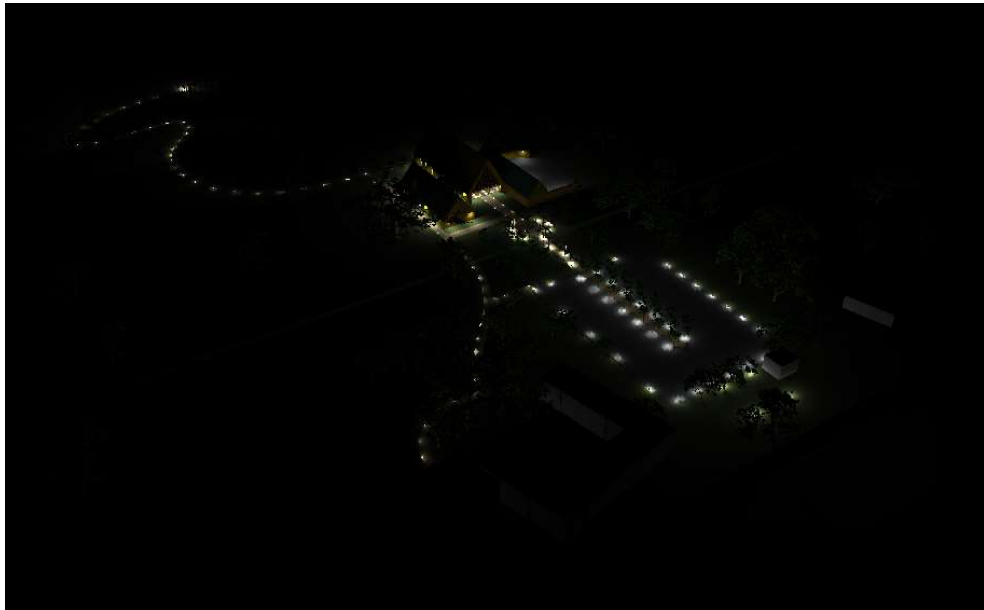
From the Cotswold District Council pre-application advice note;

“Any external lighting will need to be sensitively designed to prevent light spill towards key habitat features such as river tributaries, streams, ponds, lakes, and linear features such as hedgerows. In addition, light spill should not be submitted towards known bat roosts or compensatory roosting features.”

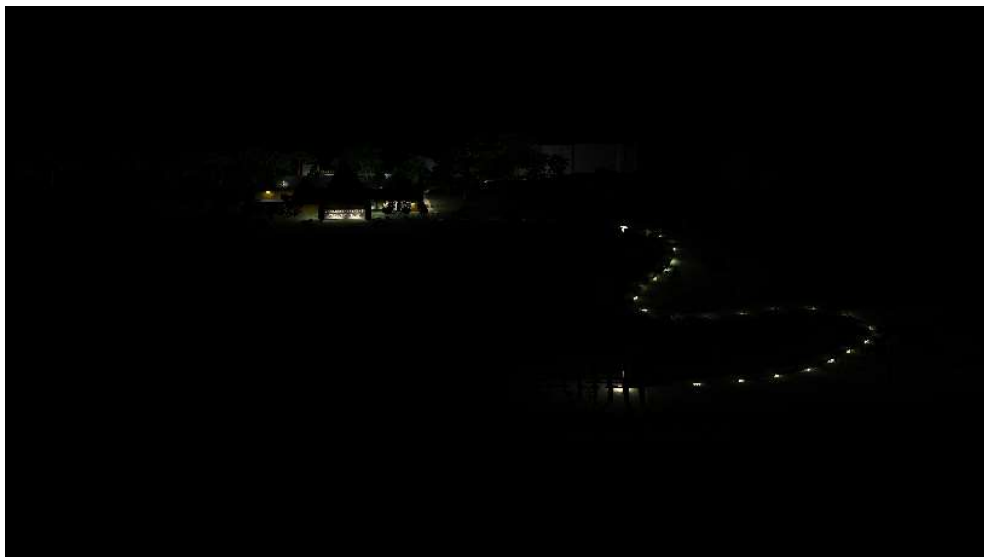
The above has been taken into careful consideration when modelling the use of artificial lighting throughout the site. No luminaires will be directed towards the Brook area, with all light being directed down where possible.

We recommend that no permanent lighting be provided to the outdoor ceremony space to prevent the possibility of light spill towards the sensitive Ampney Brook habitats.

The below images have been provided from the Relux model to demonstrate how the new lighting installation shall be controlled so as to avoid detrimental effects on the local wildlife. Please note, this is worst case, as controls measures will mean not all lighting will be on at the same time.



Overhead view from above Main house looking towards the Venue building.



View from Ampney Brook up towards Venue building.



Service Yard

The luminaires used for the modelling are subject to detailed design.

## 7.0 REPORT LIMITATIONS

The following points shall be considered when considering this report;

- Modelling and report based of a desktop study only.
- Existing flora and/or fauna within the calculation model is estimated only and for illustrative purposes. This may differ from the real world.
- Luminaire output colour within the calculations is fixed and a worst case scenario has been provided.
- Scheme is subject to detailed design development and changes are likely.
- Calculations provided are currently indicative only.
- In real world situations it is unlikely all lighting will be switched on at any one time, model is provided for worst case scenario.