

## Artificial Sports Lighting FAQ's

### 1. Is planning permission required for floodlight installations?

Yes. All floodlighting projects require planning permission. The Planning period will vary in programme, but it is recommended to assume a twelve-week period.

### 2. What floodlighting level do we require for our proposed sport?

Each sport has a required minimum light level that depends on the standard of the sport that is to be played. Refer to Sport England's Design Guidance Notes or for competitive use the league or governing body for the proposed sport.

### 3. Do we have an adequate power supply to power floodlights?

A consultant should be employed to establish if the existing infrastructure will suit the proposed floodlighting installation. If it is established that the existing supply does not have enough spare capacity, it will be necessary to obtain a quotation for a new supply.

### 4. We have been informed that our existing supply is not adequate for the additional/new floodlights and that an enhanced supply can not be provided at an economical cost. Can we use a generator?

Yes, generators can be used, though some suppliers will not give warranties on lighting equipment which is supplied from generators. Note that the generator will need to have considerably greater capacity than the required electrical load. Generator suppliers will assess the requirements.

They will need to know the load of the new system and that high wattage discharge lighting is to be used. Cascade switching should be employed to reduce the initial starting load. This will reduce the size of the generator needed.

### 5. How long would an average floodlighting project take to complete?

Following planning approval and contract agreed, the major equipment (i.e. Columns and Floodlights) would generally take 6 weeks to be manufactured and supplied to site. During this period, groundwork and cabling could be installed.

The size of the project governs how long the erection period would take. A Hockey, Football or Rugby pitch should take no longer than two weeks from delivery of the equipment on site.

### 6. Will there be much disturbance on site during the construction?

The amount of disturbance depends on the extent of the works. Generally speaking most floodlighting works can be completed with minimum disturbance.

Groundwork should be carried out with care and routes of cables should not run under the field of play. Surplus spoil from excavations should be removed from site or deposited on site to the client's instructions.

### 7. What height of floodlighting column is needed?

The height of columns depends on the size of the playing area, the characteristics of the floodlight projector and acceptable glare rating.

The CIBSE Lighting Guide LG 4 details a basic method of calculation. For full sized Football, Rugby and Hockey pitches, 15m-16m columns are typical reducing to 8m-10m for smaller MUGA's and courts. The National Governing Body recommendations may differ, especially for higher-level competition.

### 8. Why use raising and lowering type columns?

Although the initial capital cost of this type of column is greater, this is usually outweighed by the lifetime saving on maintenance. Maintenance and lamp changing of floodlights mounted on Static columns would generally need to be accessed using a Tower or 'Cherry Picker'.

Only suitably competent persons should use raising and lowering equipment.

## Artificial Sports Lighting FAQ's continued

### 9. How long will lamps last?

Manufacturers provide data on lamp performance life.

Records should be kept to monitor individual lamps. Modern lamp survival has improved and regular illumination level tests should be carried out to assess the need for bulk lamp changing. Regular cleaning and maintenance of floodlights will improve the output and lengthen the period before lamp changing is required.

Manufacturers also publish lamp survival rates. These refer to the length of time for which a lamp will operate before it fails. Lamps should always be replaced at the end of their performance life.

### 10. How much does it cost to run floodlights, per hour?

You will need to know the cost per kilowatt-hour (from your electricity bill). This can then be multiplied by the number of floodlights and by the size (in kilowatts of each lamp).

Example :

Unit cost of 1 kilowatt (kW) = £0.30

20 Floodlights installed

2 kW per floodlight.

$£0.30 \times 20 \times 2 = £12.00$  per hour

This is not the full running cost calculation as standing charges, cost of maintenance, lamp replacement etc. need to be assessed. As there are a number of variables each project requires a specific calculation, which may require assistance from a consultant or specialist contractor.

### 11. Is LED lighting available to floodlight sports pitches?

Currently LED technology cannot provide sufficient light to illuminate the area of a sports pitch from a relatively small number of column locations. Manufacturers are working on these types of lamps. However, no time scale is yet available as to when these products may be available.

### 12. Can I paint light columns and light fittings?

Columns and fittings can be painted, but this should only be done if it is absolutely unavoidable. Painted columns and fittings will need regular, expensive re-painting.

Columns are typically supplied with a galvanized metal finish but can be painted on site in any RAL colour, green or black being the most common. Light fittings can be factory powder coated to match the column colour.

### 13. What control systems are available to switch lights on and off?

Switches can be located at the side of the pitch in a lockable cabinet or within a sports hall or pavilion. Switch types can vary between push buttons, metal key operated, token operated and card reader units. Lights can also be operated by radio link.

### 14. What if all the lights go out before the players have left the pitch?

Where lights automatically turn off at 'curfew time', one light should be designed to stay on for 10 minutes or so to allow safe egress for users. Alternatively, an additional low-power light can be provided for the purpose.

### 15. I am building a sports pitch and do not have all of the funds for lighting. Can I install the lighting bases and ducting as part of the pitch build, so that I can fit floodlighting columns at a later date?

Floodlighting bases and ducting can be installed in advance of the columns but only if installed in accordance with a lighting design, which has been approved by the project team and has planning approval.