

Seven Sisters RFC - 100lux Training pitch light spill design floodlighting designed using 3000k for reduction in light pollution for bats



All floodlights
to here rear
visors



All floodlights to have
front visors creating 0%
Upward Light Spillage

Seven Sisters RFC – 100 Lux Training Pitch Floodlighting Strategy (3000K Bat-Friendly Design)

The proposed floodlighting scheme for the Seven Sisters RFC training pitch has been designed to achieve an average maintained illuminance level of approximately 100 lux suitable for community rugby training use, whilst minimising ecological impact and reducing light spill into surrounding habitats.

A warm white LED colour temperature of 3000K has been selected in preference to conventional 4000K–5700K sports lighting. The use of 3000K luminaires significantly reduces blue light emissions, which are recognised as having greater ecological impact on nocturnal wildlife, particularly bats and insect populations.

The lighting strategy has been developed with consideration to:

- Bat commuting routes
- Adjacent hedgerows and tree lines
- Reduction of skyglow
- Minimisation of obtrusive light
- Improved visual comfort for nearby residents and ecological receptors
- Key Environmental Design Features
- 3000K Warm White LED floodlights
- Reduced blue spectrum content
- Lower ecological disturbance
- Softer visual appearance compared with standard daylight-white sports lighting
- Asymmetric full cut-off optics
- Precise beam control
- Reduced upward light spill
- Minimal overspill beyond the playing surface
- Targeted 100 lux average illuminance
- Appropriate for training and community-level rugby activity
- Avoids over-lighting associated with higher competition standards
- Column aiming and shielding
- Luminaires angled to prevent horizontal glare
- Spill light carefully controlled at site boundaries
- Lighting controls
- Timed operation
- Ability for dimming or curfew settings
- No unnecessary overnight illumination
- Ecological Considerations

The use of lower colour temperature lighting aligns with current Bat Conservation Trust and Institution of Lighting Professionals guidance advocating the reduction of artificial blue-rich lighting near bat habitats.

Compared with typical 5000K sports floodlighting, the proposed 3000K system:

- Reduces perceived glare
- Lowers skyglow
- Minimises disruption to bat navigation and feeding behaviour
- Lessens attraction of nocturnal insects
- Provides a more environmentally sensitive solution for a semi-rural sports setting

The lighting design therefore represents a balanced approach between operational sports requirements and ecological responsibility.

Proposed Lighting Parameters

- Pitch Use: Rugby Training
- Average Illuminance: 100 lux
- Colour Temperature: 3000K
- Light Source: LED
- Optics: Full cut-off asymmetric floodlights
- Control System: Timed / curfew programmable