

Green light for night games?

As television turns sport into entertainment and then demands it be packaged between teatime and bed, outdoor sports have been forced to develop floodlit versions; even cricket is now played in the dark and there is a floodlit race in the F1 calendar. As well as offering new opportunities and challenges to each sport it touches, what ecological challenges does floodlighting pose and how is the industry responding? *The Leisure Review* reports.

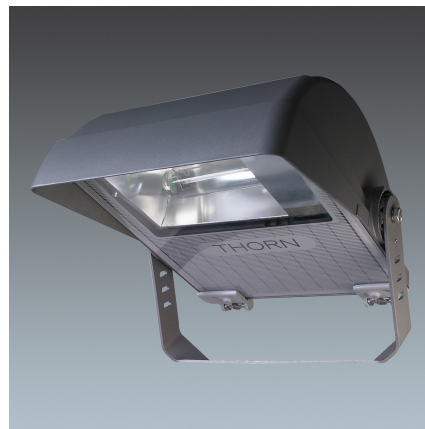
The demand for floodlighting is not just being driven by television, of course. As community and commercial venues compete for the leisure pound, more and more traditional day-time games are moving into the evening. With the Football Foundation pouring money into plastic pitches and the arms race between schools for the best sporting venues to match their academic provision escalating, the manufacturers of lighting equipment have never been busier. But as planners and public body commissioners respectively fret about the environment and the bottom line, how ecologically friendly can a light on a pole get?

In leafy Oxford, less than eight minutes from where Roger Bannister changed the athletics world in an afternoon, one of the first challenges faced by anyone wanting to lighten their sporting darkness – that is, how will the superstructure required affect the visual amenity of the environment to which it is being added – has been met with an ironically ugly, if functionally effective, approach. Headington School is on one of the main radial routes out of the city of dreaming spires but is surrounded on three sides by a combination of mature woodland and middle-class housing. Both posed planning problems when the school wanted to install an all-weather surface because while nobody objected to a grass hockey pitch becoming a plastic hockey pitch a number of groups were concerned about the visual impact of 40-foot towers. Following the rejection of the original planning application, in August 2008 an appeal was finally successful but it came with conditions. The suitably ingenious compromise solution for a school whose alumni include Hermione Grainger actress, Emma Watson, was extendable columns; by day, stubby lamp posts but by night, and as if by magic, 13-metre pillars illuminating the darkness and allowing another generation of toffs' children to dominate the county hockey scene.

The next most obvious impact of lighting rigs that can turn night to day is the amount of electricity required to keep them bright. It is a concern that the industry has taken seriously, with East Sussex company Marshall Tufflex Energy Management offering an innovative way to reduce usage. Simply put, their Voltis voltage optimisation system matches power demand to power supply, reducing electricity bills by 15% to 25%. Jeremy Dodge, business manager at MTEM, went into more detail: "In basic terms, Voltis is an interface between the main electrical feed and the facility it serves. In the UK electricity is supplied at 230V or more. Equipment works most efficiently at around 220V. Basic maths tell us there is an over-supply here of 10-30V or more. This extra, unused, power dissipates as heat and vibration within machinery and equipment. Research suggests that an over-supply in voltage of 10% (ie 220V to 242V) will reduce the life of electrical/electronic equipment by up to 90%, delivering another benefit from investing in VO in addition to the reduction it produces in CO2 emissions."

The impact on wildlife of using floodlights may seem to be negligible but in certain circumstances it can be significant. Writing in *The London Naturalist* in 2006, bat expert Alison Fure is concerned that bats, which rely more on vision than is generally understood, have their ability to hunt compromised by the use of floodlighting. Bats, it seems, prefer to hunt in the gloaming and when floodlights are turned on as dusk falls they are robbed of that opportunity. Fure is splendidly caustic about "departures from good practice" in both planning and enforcement arenas, arguing that far more care should be taken when constructing sports facilities, especially on floodplains. "Our rivers should be maintained, without fail, as dark corridors," she says. And she is baleful for the future: "Recently there has been a surge in lighting applications in the London region, perhaps due, in part, from release of funds from the Heritage and Sports Lottery Fund. No doubt this pressure will increase as the 2012 Olympic Games draw near."

The effects on bats, badgers and other creatures of the night may seem localised and, on a case-by-case basis, trivial but the increase in the amount of floodlighting – and one of sport's challenges is that it is lumped in with supermarkets, streetlight installers and security companies – is seen as an increasingly serious problem. The Campaign for Rural England, writing about the problem a full decade ago, noted that "during the 1990s, the area in England with pure, dark skies reduced by some www.theleisurereview.co.uk



Shedding light: can floodlighting meet environmental expectations?

Image courtesy of Thorn Lighting

"Floodlighting is used in a myriad of contexts, not just sport. The difference is that sport is an entirely elective option and therefore carries a greater responsibility to reduce and manage its impact."



27%". They listed three types of light pollution: sky glow, light trespass and glare. The first, when the sky over towns and cities turns orange with upwardly directed and reflected light, and the last, where lights are excessively bright or misdirected, can at one extreme only be solved by a national response and at the other be relatively easily resolved locally. The challenge of light trespass however is one that has exercised the floodlighting industry and pressure groups alike. The situation at Bath University, which has been building a sporting reputation to rival the likes of Loughborough, had been described by the Campaign for Dark Skies thus: "For years, local sports lighting has made the site the source of the worst local light pollution." By working with local council officials, and one suspects university managers and floodlighting suppliers, the campaign is confident that "the relighting of the Bath University campus [can] be carried out in compliance with ILE Zone 1 recommendations", which for the uninitiated means "zero upward light".

Floodlighting is used in a myriad of contexts, not just sport. The difference is that sport is an entirely elective option and therefore carries a greater responsibility to reduce and manage its impact. The good news is that many suppliers, facility operators, planners and commissioners are embracing this obligation and making floodlighting greener.

The Leisure Review, September 2010

© Copyright of all material on this site is retained by *The Leisure Review* or the individual contributors where stated. Contact *The Leisure Review* for details.

The Leisure Review is supported by:



International Experts in Safety Training Solutions

The Leisure Review is written,
designed and published by:

tlr.comms
TLR Communications Limited