



Project Name - David Lloyd Clubs – Chippenham.

Lighting – 3 x External Padel courts.
1 x MUGA (Multi Use Games Area) pitch.
Car park lighting.

Date – 25th February 2026.

Objective:

This report considers the lighting proposals for the three padel courts, the single MUGA pitch and the car park at the proposed David Lloyd site at Chippenham.

The design has been done using the latest LED Lighting technology and designed to the latest Lighting recommendations, with considerations to Obtrusive light, bio-diversity, Fauna & Flora. (**Fig 1** below shows the existing site off the A350 which is to be developed and **Fig: 2** shows a rendered image of the completed developed site with the padel courts, MUGA pitch and car parking).

Fig 1:



Fig: 2



The topography of the proposed site is predominantly flat and is located to the South of Chippenham in a development called the Southpoint Business Park, just off the A350. The site is bordered by mature trees and hedgerows to the North and Western boundaries. The Eastern boundary is open to the Southpoint development and the South is open farmland.

Padel:

There are to be 3 x padel courts. The proposed lighting will offer 4 x 6m columns per padel court and a 225w floodlight on each column. (900w total per padel court). As recommended by L.T.A. padel court guidance, the colour temperature of the proposed luminaires would be 3000' Kelvin (4000K available), with a peak intensity of the LED light source to be above 550nm. The floodlights are also available with visors to further restrict light distribution in any unwanted directions.

The new padel court lighting is designed to achieve Class 3 regional competition, school and recreational lighting performance of 300 lux and minimum 0.5 uniformity on the padel surface. Again recommended by the L.T.A. padel court guidance.

The floodlights will have asymmetric optics and will be installed with a flat glass (zero tilt angle) position with no direct upward light. They will be installed on a 6m column attached to the padel court frame.

All padel court lighting is expected to operate to a curfew where luminaires will be switched off linked to the club opening hours.

MUGA:

There is a single MUGA pitch with 4 x 8m columns. There will be 2 x 300w LED floodlight to each column (2.4Kw loading for the court). The new MUGA pitch lighting is designed to achieve a minimum performance of 300 lux and minimum 0.5 uniformity on the pitch surface.

The floodlights will have asymmetric optics and will be installed with a flat glass (zero tilt angle) position with no direct upward light. They will be installed on a 6m column attached to the padel court frame.

All MUGA pitch lighting is expected to operate to a curfew where luminaires will be switched off at a time linked to the club opening hours.

Fig 3: shows the proposed luminaires for the Padel and tennis courts. Shields are available for these fittings to further restrict light direction if necessary.

Fig 3:



Car Parking:

The car parking has been designed to achieve 10 – 15 lux maintained average and 25% uniformity across the entire car park. **(Fig: 4)** shows the proposed car park luminaires.

Fig: 4



The calculation **LS-1286 DLC CHIPPENHAM EXTERNAL CAR PARK_MUGA_PADEL** - shows the horizontal illuminance levels measured at the floor for the 3 x padel courts, the MUGA pitch and the car park.

As all proposed luminaire for the site will have asymmetric optics allowing the luminaires to remain flat with no tilt angle to any of the luminaires. An obtrusive light study shows that the proposed luminaires will have zero upward light (ULR = 0).

Considerations:

Drawing: **LS-1286-DLC-CM-DWG-P01** shows the illuminance values and isolines both on and off site from the proposed padel court lighting. The lighting distribution is shown to be largely contained within the site boundary line.

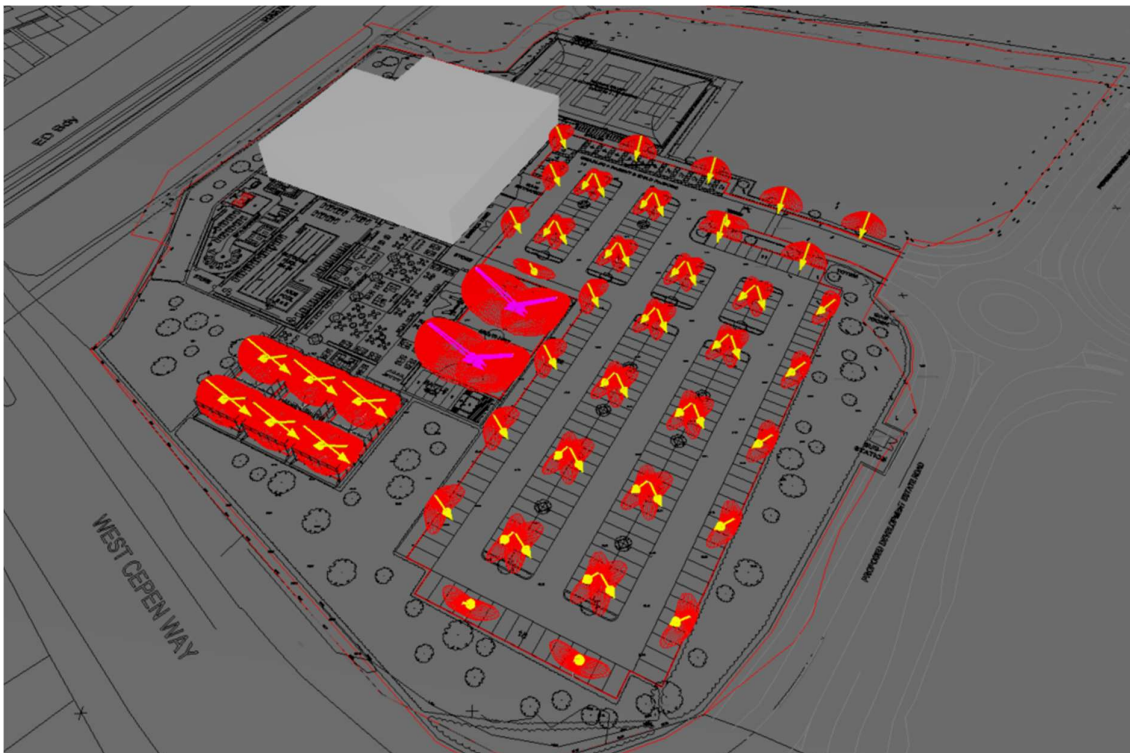
The calculations are carried out with luminaires on the close Padel courts not having any visors. These values don't consider the barrier effect the perimeter trees, shrubbery, fences or other man made or natural barriers will have on light distribution off site. The small area where illuminance values go over the site boundary is close to the roundabout on West Cepen Way. This part of the A350 road directly to the side of the development site has column mounted streetlights installed. **(Fig 5).**

(Fig 5)



Fig 6: shows the proposed layout of the external lighting for the site.

Fig 6

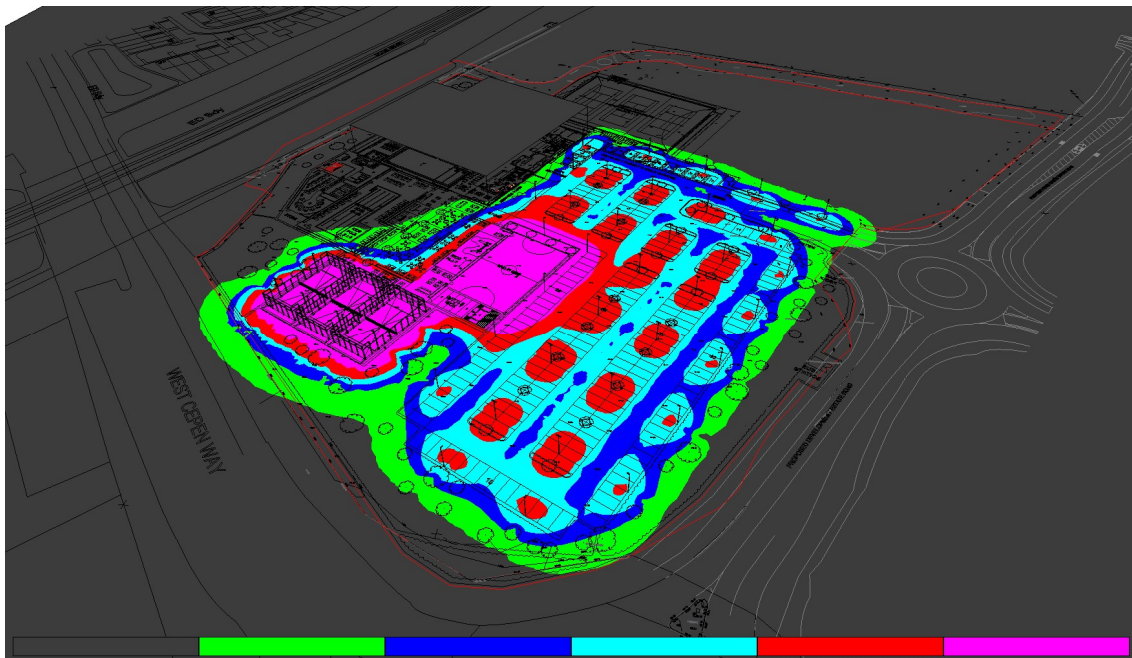


The external lighting has been designed sensitively with efforts made to minimise any impact from the lighting to the surrounding areas and any possible receptors, using LED asymmetric

flood lights, minimising light spill off site and no direct upwards light (ULR) with all the luminaires being mounted horizontally with no upwards tilt. The lighting would be expected to operate with curfew restrictions so no operation past an agreed time limit, linked to the club opening times.

The layout will result in zero direct ULR (Upward light ratio) for an E2 Environmental zone (Scarcely inhabited rural areas) or an E3 Environmental zone (Well inhabited rural or urban settlements) as recommended by both ILP GN01(The reduction of obtrusive light) and CIE 150: 2017 (Guide on the limitation of the effects of obtrusive light from outdoor lighting installations) which the ILP guide is largely based on.

Fig 7 gives an indication of the light distribution around the site from the padel, MUGA pitch and car park installation.



Summary

In summary, the proposed lighting design has been done to good practice considerations, in accordance with current recommendations minimising the impact to the adjacent bio-diversity, Fauna & Flora. The Luminaires light sources are 3000' K Kelvin colour temperature as recommended in the external sports lighting guidelines (Min 3000' K – Ref LG04) to maximise the players visibility when playing using fast paced moving small balls.

The peak intensity of the LED light source spectrum has been considered and is below 550nm.

The recommendations of CIE 150 – Guidance on the Limitation of the effects of obtrusive light from outdoor Lighting installations (From which ILP GN01/21 The reduction of obtrusive light, is largely based around) has been considered in the proposed lighting of the site.

The recommendations of BS 42020:2013 – Biodiversity – Code of practice for planning and development has been considered when proposing the lighting for this site.

Drawing: **LS-1286-DLC-CM-DWG-P01** shows the illuminance values and isolines both on and off site from the proposed external padel floodlight luminaires. The drawing doesn't account for barriers to light from foliage from trees, shrubbery or fences to all site boundaries.