POLARIS LIGHT



FREE GUIDE FOR UK TENNIS CLUBS

Tennis court floodlighting in the UK

LTA lux levels, court layouts, planning permission and converting existing lights to LED, explained for club committees

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Written for club chairs, secretaries, treasurers and facility managers who are planning new tennis floodlights or an LED upgrade.

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Who this guide is for, and how to use it

Floodlights decide how many hours a tennis court can be used, how even the light is for play, and whether neighbours and the local authority will accept the scheme. Getting them right starts with the LTA standard you need to meet.

This guide brings together the performance standards, layouts and planning advice in the Lawn Tennis Association's Floodlighting Guidance Note 2026. Every lux figure, layout height and planning point in these pages comes from that note or from the Polaris product facts listed in the sources. We have not invented numbers, and we have not included prices.

Six steps from idea to lit court



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> **Before you start**
>
> Decide whether you are lighting new courts, replacing metal halide lamps on existing columns, or adding fence-mounted linear fittings that do not need poles. The LTA figures in this guide apply in all three cases. A lux plot will show whether the design meets the recommended or the minimum standard.

More hours, more members, a better winter season

The LTA publishes its own figures on what floodlights do for a club. They are LTA figures, from the Floodlighting Guidance Note 2026, not Polaris measurements, and they are the reason many clubs start this work before the winter season.

> **LTA figures, not Polaris measurements**
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> Venues with floodlights have, on average, 50% more members. Lighting outdoor courts adds 35% more playing time between November and April. An outdoor court is given as 2,500 hours a year without floodlights and 3,500 hours with floodlights, both with a 35% allowance for bad weather.

LED floodlights, compared with metal halide, use less overall power, have a long design life with no lamp replacement, and give instant control and dimming. That combination is why most new schemes, and most conversions, now use LED.

Floodlights also change how a club books and switches courts. Agree how each court will be turned on and off, including any timers or tokens, before you install. The electrical design should make individual court switching possible where the layout allows it.

Recommended and minimum lux levels

The figures below are the LTA's Appendix A performance standards. They are maintained average illuminance, measured at playing surface level, after the usual reduction in output over the life of the installation. We have not changed them.

Standard	Principal play area (PPA)	Total play area (TPA)	Uniformity (PPA / TPA)
Recommended	**500** lux	**400** lux	**0.7 / 0.6**
Minimum	**400** lux	**300** lux	**0.7 / 0.6**

The **principal play area** (PPA) is the area bounded by the doubles court lines. The **total play area** (TPA) is the PPA plus the run-backs of 4.5 m and the side-runs of 2.5 m. Courts should be switched individually or in blocks.

For outdoor LED designs the LTA uses a minimum maintenance factor of 0.9, which is a 10% reduction from initial output. Some schemes close to neighbours use a factor of 1.0 so the design also shows the maximum effect when the lights are first switched on.

The LTA asks for 45 readings on the principal play area and 117 readings on the total play area, taken at playing surface level. A design that only quotes a single average, with no grid and no uniformity, is not enough to show that the court meets the standard.

> **What this means in practice**
>
> If your club can meet the recommended figures, that is the better target. If neighbours, column height or the existing supply make that difficult, the minimum standard is still a defined LTA level, not an informal reduction. A lux plot will show which of the two your court can meet.

3. LED AND EXISTING LIGHTS

New LED schemes, and converting metal halide

A new scheme should be designed in LED from the start, with the right optic at the right height, a lux plot and a light-spill drawing. A conversion from metal halide can often reuse the existing columns, which keeps the visual impact closer to what already has consent.

If you keep the existing planning consent, check that it was discharged. If the columns are more than 20 years old they need a structural check before new fittings are mounted on them. If the court is within 30 m of houses, the LTA asks for a specialist design with fully dimensioned plans and a model of vertical light trespass.

If the new LED design meets the existing consent, you can apply for a non-material amendment. If it does not, you need a new planning application. Do not assume that swapping lamps for LED fittings is automatically permitted.

Fence-mounted linear fittings, such as PS-TENNIS, avoid new lighting columns altogether. That can be a simpler route on courts that already have a suitable fence, provided the design still meets the LTA lux and uniformity figures and the planning authority is satisfied on spill and glare.

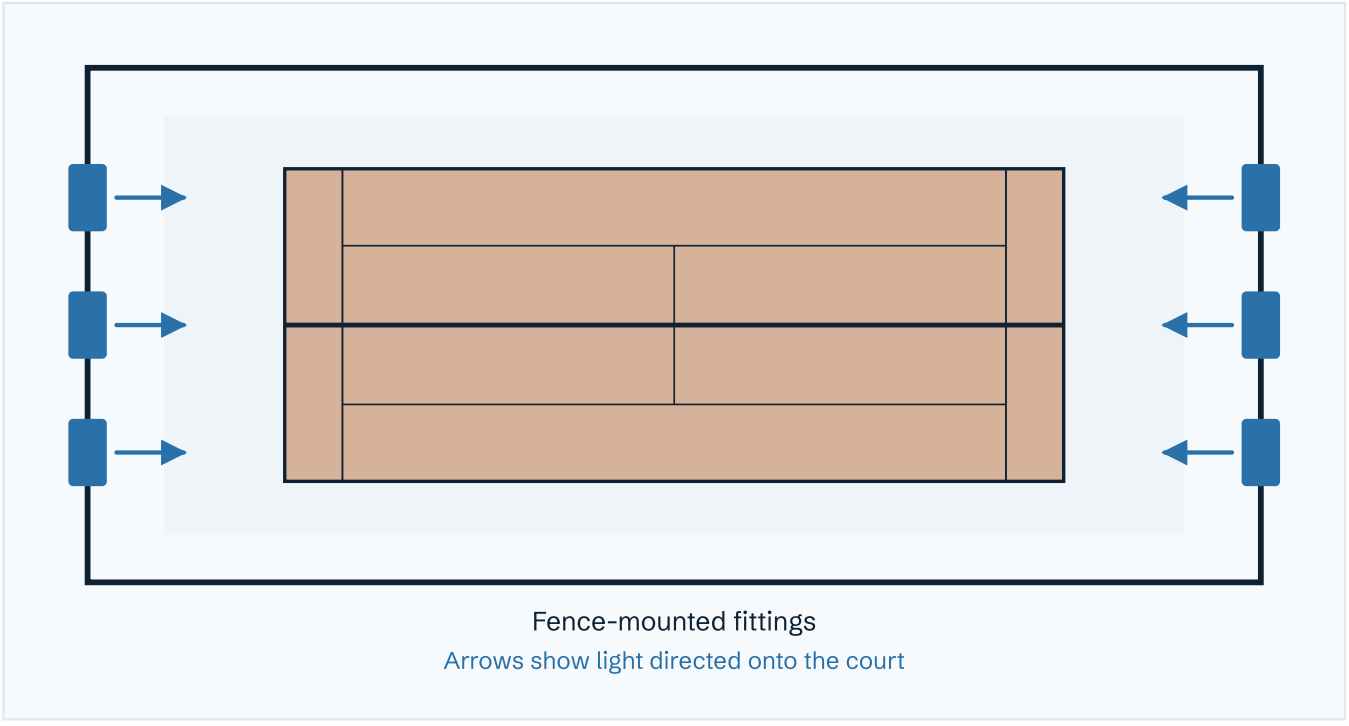
Side lit, corner lit, and corner and side lit

The LTA's general advice is to use column heights of 6 m to 10 m, to keep the front glazing of each fitting at a tilt of less than 35 degrees to the surface, and to add louvres or shields if the court is close to neighbours. The aim is good colour rendition, with minimum glare, sky glow and spillage.

Three layouts are described in the guidance note:

Layout	Typical column height	What the LTA notes
Side lit	Typically 10 m	Higher wattage fittings. Less glare and good spill control. Hard to switch courts individually unless there is 6.1 m between courts. Usually at least three columns on each side.
Corner lit	Typically 10 m, minimum 8 m	Better for three or more courts if you want to switch courts individually. Fewer columns. Greater risk of glare and of fittings being aimed incorrectly.
Corner and side lit	Typically 6.7 m or 8.0 m	The lowest columns and lower wattage fittings. More columns and more fittings, which can cost more.

Those heights and remarks are the LTA's, not a Polaris specification. The right layout depends on how many courts you have, whether you need to switch them one at a time, how close neighbours are, and whether you are using columns or fence-mounted fittings.



A generic fence-line layout. It is not a site design and does not show lux levels.

A lighting design should show both the performance on the court and a limited effect on the surroundings. The LTA mentions specialist software, such as AGI 32, for this work. Polaris prepares the lux plot and the light-spill drawings that go with a planning application.

Every UK floodlighting scheme needs consent

The LTA is direct on this point: all floodlighting schemes in the UK will require formal planning consent from the local authority. Designs should show that the scheme performs on the court and has a limited environmental impact. Incomplete or inaccurate submissions can jeopardise that consent.

If you are converting an existing scheme, start with the current permission. As set out earlier, a design that stays within it can go forward as a non-material amendment; a design that does not will need a new application. Proximity to houses, column height and light trespass are the points authorities look at most closely.

Polaris produces the lux plot and the light-spill drawings, and handles the planning application. The survey, the design plan and the application are the practical first steps, before any fittings are ordered.



PS-TENNIS on a court fence at night. An existing product photograph, not a named project.

From the first site visit to a tested court

The LTA sets out a clear project order, which we follow here without adding commercial claims:

1. Appoint a specialist designer or contractor.
2. Review the site: the existing power supply, neighbours, trees and wildlife.
3. Prepare an initial design and share it with the community and the planning authority.
4. Obtain at least three tenders from NICEIC or ECA contractors, or similarly approved firms.
5. Complete the final design, with plan and elevation drawings, for the formal application.
6. Discharge any planning conditions before work starts on site.
7. Test the installation after it is complete.
8. Hand over operation and maintenance manuals.

The existing electrical load must be checked. The LTA says a club with up to two or three courts may be able to use the existing single-phase supply. More than three floodlit courts usually needs a three-phase supply. Ducting and draw pits should sit outside the court block, or at least outside the playing area.

Once the lights are in, a lux survey on the LTA grid confirms that the court meets the standard you designed for. Keep the design file, the consent and the manuals with the club's records, because you will need them for any later alteration.

PS-TENNIS and PS-POWER

Two Polaris product families are used on tennis courts. The facts below are taken from the current product pages. We have not added wattages, lumens or lux claims that those pages do not state.

PS-TENNIS is a fence-mounted linear LED for tennis and padel courts. Adjustable brackets mean the fitting can be mounted on the existing fence, so lighting poles are not required. An adjustable visor tilts to control spill and glare. Optics are available as P30, P40 and P50. A knob dimmer is built in, and DALI, Zigbee, 1-10 V and photocell control are optional. The fitting is IP65, at 150 lm/W, with an Osram driver and Philips LED chips. The input is AC 100 to 277 V or 200 to 480 V, CRI is Ra greater than 70, and the operating range is -30 C to +45 C. The housing is die-cast ADC12, powder coated aluminium, with a polycarbonate lens. The fitting has a 5-year warranty.

PS-POWER is an anti-glare sports floodlight for use on columns or masts. It is offered at 150 W, 240 W and 400 W, with 25,500 lm, 40,800 lm and 68,000 lm respectively, at 170 lm/W. The tennis optic is 120 x 45 degrees at 4000K. A Sosen driver is fitted, with a power factor greater than 0.95, and a DIP switch for 100%, 80%, 60% or 40% output. An optional visor is available for glare and spill, and a stainless steel mesh option is rated IK10. The fitting is IP66 and IK08, with 6 kV surge protection (10 kV or 20 kV as an option), an operating range of -40 C to +45 C, and an L70B10 life of more than 108,000 hours. The fitting has a 5-year warranty.



PS-TENNIS with adjustable bracket and visor. Product render, not a site photograph.

Polaris carries out the site survey, prepares the lux plot and lighting design plan, produces light-spill drawings, handles the planning application, and supplies and installs the fittings. We have not included named tennis club projects in this guide, because none are published on our projects page.

Before you go to planning or tender

- [ ] Decide whether you are aiming for the LTA recommended standard (500 / 400 lux) or the minimum (400 / 300 lux), with uniformity of 0.7 on the PPA and 0.6 on the TPA.
- [ ] Record the number of courts, whether they must switch individually, and how close the nearest houses are.
- [ ] If you have existing columns, check their age, the current planning consent, and whether it was discharged.
- [ ] Have a lux plot and a light-spill drawing prepared before you apply for consent.
- [ ] Confirm the incoming power: single-phase may serve up to two or three courts; more than three floodlit courts usually needs three-phase.
- [ ] Plan ducting and draw pits outside the playing area.
- [ ] Obtain at least three tenders from NICEIC or ECA contractors, or similarly approved firms.
- [ ] After installation, test the court on the LTA grid (45 readings on the PPA, 117 on the TPA) and keep the operation and maintenance manuals.

Free floodlighting survey

Tell us about your courts. We survey the site, produce the lux plot and light-spill drawings, handle the planning application, and supply and install the fittings.

Every Polaris product carries a 5-year warranty.

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Sources

Lawn Tennis Association, *Floodlighting Guidance Note 2026*, PDF published on lta.org.uk (author Mike Piggford; file dated 27 October 2026). All lux levels, PPA and TPA definitions, maintenance factor, reading counts, layout heights, planning statements, member and hours figures, LED advantages, conversion advice and power guidance in this document are taken from that note. We have not reproduced the LTA's cost tables.

Polaris product pages, as published at polarislight.com/products/ps-tennis and polarislight.com/products/ps-power, November 2026. Service description (survey, lux plot, light-spill drawings, planning application, supply and install, 5-year warranty on fittings) as already stated on polarislight.com.

The LTA note also refers to Institute of Lighting Professionals guidance. We have not quoted ILP figures in this edition, because we have only cited documents we have read in full. Polaris Light Ltd, polarislight.com. Edition 1, November 2026. This guide does not replace the LTA note, a lighting design or a planning decision. Figures may change if the LTA updates its guidance.