

NEW SMART LIGHTING FOR A REAL TENNIS COURT

Executive Summary

The Hyde Tennis Club Ltd near Bridport in Dorset installed new 'smart' lighting for their court in November 2010 in order to reduce the expenditure on electricity for which the club was responsible. They replaced their 27 sodium halide suspended lamps with 27 x 4ft Modular Eluma (light fittings) enclosed with sensors (light level and movement reactive). These are similar to two fluorescent tubes with highly reflective backing (see below) in a four foot metal casing suspended from the ceiling and connected to the original electrical feeds.



The installation of the new lights took hours - the acquisition took months!

Much of the capital cost of the installation (in round terms £14,000) was paid from an interest free loan from the Carbon Trust (CT) (of about £9,250) which was paid during the installation process and has to be repaid over an agreed term (in the Hyde's case 3 years) calculated to be about the cost of the electricity saved by the new lighting. The difference between cost and loan is mainly the VAT which in our case could not be included and by the quantity of CO₂ that should be saved, which determines the size of the CT Loan. (This is not fully apparent at the outset). The Hyde now makes repayments of £256 per month for 36 months to pay off the loan.



The resultant lighting of the court is every bit as good as the original lighting with the added bonuses of power saving by the luminosity levels being kept automatically constant with the varying natural daylight on court and the automatic switching off of individual light fittings if no movement is detected after a set period of time (8 minutes). On switching on, light levels are gained almost immediately. The cost and guaranteed life (3 years) of the fluorescent tubes (£1.09 each) makes replacement far less costly than sodium halide bulbs. It is recommended that all fluorescent tubes be replaced after about 4 years. If individual tubes go after the guarantee period the others' intensity should all increase slightly to maintain the set light levels.



Only 3 months has elapsed since installation and therefore it is premature to report actual power savings but simple science, (sodium halide vs neon), the Installers and the CT, all assure the Club that the electricity costs will approximately halve. Thus the pure financial savings may not be felt until the CT loan is paid off but should be significant in the long term. The process of replacing the lighting was unnecessarily protracted and frustrating and hopefully the Hyde's experience will ease and shorten other Clubs' acquisition of new lighting.

The Process

Somar International Ltd (Somar) (www.somar.co.uk) was the prime contractor throughout. Based in Truro, Cornwall this company was the cause of most of our frustration. **Alternate suppliers might be (but were not) researched.** We found the sales team infuriatingly difficult to contact; the installation engineers very slow to react and the accounts and administration division sloppy and, until a late stage, clearly did not understand the organisation and requirements of a Real Tennis Club and court. Their paperwork constantly needed close checking and considerable prompting for actions was necessary. Once individuals were identified and direct telephone numbers obtained this became much easier and, on reflection, **a visit to Truro to meet these individuals** (after a game or two at the Hyde to see the end result) **is strongly advised.** The actual engineering of the installation was subcontracted to Dunstan House Electrical Ltd from Somerset, a perfectly reasonable small firm but poorly briefed by Somar as to the court in terms of accessibility for cherry pickers and loss of court income. **Demand face-to-face meetings with the electrical engineers who will actually install the new light units.**

The Carbon Trust (www.carbontrust-online.co.uk) is a government backed organisation which has access to funds to promote any energy saving scheme to businesses by loans and advice. They are entirely 'web-based' and are thus rather pedantic in their precise requirements but again, once a specific email contact is made, were fairly responsive and very helpful. Time online looking at their website would not be wasted. A single point of contact is necessary and required. Once the loan application is made, the CT will 'investigate' your club's financial viability, organisation and even personal authority to conduct the business in order to satisfy itself that the loan will be repaid. This was mostly done by subcontracted service companies over the telephone and posed no problems. The loan is made in 3 online payments once the delivery, installation and commissioning are proved (by specific documents) This was promptly and efficiently done. The interest free loan has to be repaid monthly over the designated period by Direct Debit arrangement.

Suggested Step-by-Step Process (based on The Hyde experience)

Step A. Ask Somar to come and see the site and provide a quotation for the replacement of your lighting with an appropriate smart lighting suite. The Club Pro should be there to meet the sales representative; satisfy himself that the lighting will meet the needs of the court and so that he is part of the process of replacing the lighting. Make sure Somar are aware that you will be using a CT Loan for part financing this installation. Somar can supply other smart lighting for club rooms and changing rooms.

Step B. You should receive a written proposal in the form of a short report within a few days which will provide you with the statistics (KWhrs and CO₂ tonnage savings) and costs which will be central to the CT loan request. This quotation will have 30 days validity (this lasted for several months for The Hyde).

Step C. Contact Dr Bob Hardwick of LEAN ENERGY, Five House, Thomson Close, Bridport DT6 5EU Tel: 01308 420632 who seems to be able to secure a further 5% reduction in the costs involved. (drbobhardwick@leanenergy.co.uk) It seems Bob Hardwick advises and has secured some agreements and discounts for Sports facilities and the lighting thereof.

Step D. At this stage, I would advocate a face-to-face meeting with Somar to discuss realistic costs, time scales, contractors, installation arrangements (closing the court or night time installing) and precise points of contact within the Somar organisation. Get this written down and agreed by both parties. They do not seem to respond quickly or seriously until they have received a firm commitment and money, such was our experience.

Step E. Internally get the agreement of your 'management board' to go ahead, making clear the obligations of the loan arrangements; the processes anticipated and any capital costs that may be incurred outside the CT Loan arrangement. However you may still not be sure of the precise costs nor size of CT Loan at this stage.

Step F. Contact the Carbon Trust through its website. (www.carbontrust.co.uk); clarify any queries and make the Loan Application on-line. Note the reference numbers (e.g. CTL12345) as this is essential in any further e-correspondence. It may be worth copying the application to Somar so that they can check figures and entries (they have to supply some of the information anyway) and the CT will come back to you fairly soon acknowledging the application. There will now be a period of some weeks while they do the background checks on Club viability, authority of signatories and any other factors that might impinge on the granting of the loan. This may be done unseen or over the telephone (as was the case for us) or face-to-face, by independent companies such as Economic Energy Ltd (John Carden at www.economic-energy.com)

Step G. CT will make a formal offer of a loan and the repayment period. There will be a great deal of paperwork to read: Loan Terms and Conditions; Loan Details; State Aid Declaration; and precise instructions as to how to fill in the necessary forms and when. These will indicate the three staged payments of the loan and the dates by which these should be made (Initial or Deposit – 30% of the total cost; the Delivery instalment 60% and the final or Commissioning Invoice 10%) Whilst the dates given seem set in iron they can and will vary due to problems of the actual installation (our original dates were set for June/July – we commissioned in October!) but so long as the CT is kept informed they remain fairly happy.

Step H. Installation. Somar subcontracted the installation of the new lighting to a different electrical engineering firm and a few days later to yet another firm (D.A. Wright & Co.) Make sure that this firm visits the site and is aware of the heights of the lights and fittings and access for available and suitable cherry-pickers etc. Agree timings for the work to be done – after 2 attempts to close our court during the playing day, our Pro got stropky and insisted the work be done at night and this was readily agreed. It took 2 periods overnight for the work to be completed.

Step J. Burn-In period. The lights (each tube) have to be 'burned-in' at full brilliance for 100 hours before final commissioning when the final light level can be adjusted to the requirements of the Pros and any other adjustments made. This becomes the Commissioning date and the commencement of the guarantee period for the tubes (3 years). At this stage, an excellent electrical engineer - **Peter Howard (07866 549414)** became involved and proved to be invaluable and in the light of our experiences (we think) will become more involved at an earlier stage of the installation. He works for Somar but technically he understands deeply the electrical and engineering aspects of the lighting and will do the light level adjustments etc. We have subsequently called on him for a problem and he willingly attended at short notice although his 'patch' is southern England.

Step K. Final Commissioning Invoice is paid to Somar and a copy of the invoice together with a Certificate of Commissioning (or Somar's Satisfaction Note) sent to the CT to release the final 10% of the loan. The Direct Debit repayments start in the month following this final payment.

Main Somar Contact

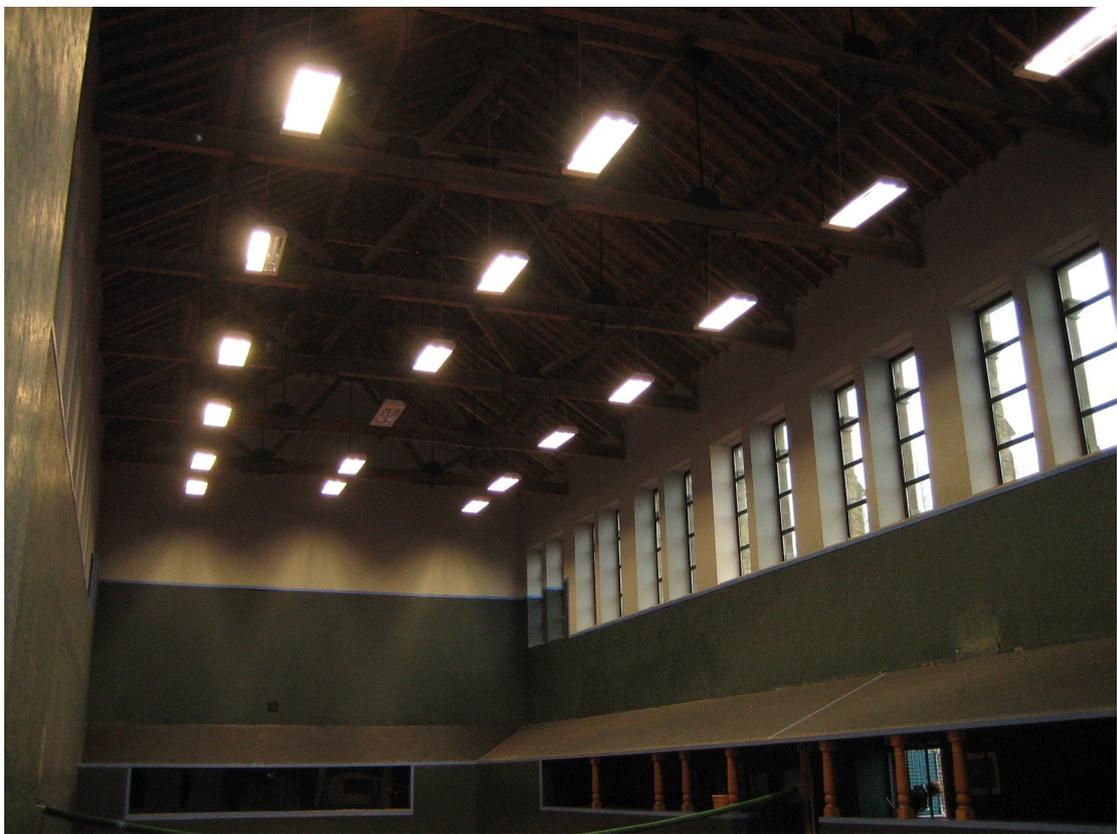
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One of the old sodium halide lamps that was replaced by the new lighting. The present cost of these units is over £450 and therefore there may be a second hand market value to these.



Jo Bartlett was the best contact at Somar once committed. Benji in accounts seemed switched on.



Another view of the new lighting—there are 27 light units (2 are not needed and therefore are spare but can be switched on if necessary).

Any questions ? Try contacting:

John Pearson (Treasurer HTC) 01305 259431 Ben Ronaldson Club Pro 01308 420777

February 2011