

## The Barn Partnership

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'BLUE SKY THINKING ON A SOLID GREEN FOUNDATION'



## Nine years in Buckinghamshire

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The Barn Partnership, formed in 1999, is celebrating nine years serving clients in the building services sector with its vast wealth of experience.

Based in High Wycombe centre the practice is easily placed to access all parts of the South East and beyond.

Located only 35 minutes from the centre of London it's no wonder that many architects and developers in the city make Barn their first choice.

The four existing Partners, were joined in June this year by a fifth Partner, Craig Taylor, adding further to the considerable experience the partnership have amassed, with over 125 years combined ex-

perience in Building Services.

We are all mature professional engineers who have spent most of our entire working life within the building services consultancy industry.

The Partners are all hands on engineers who are directly involved in the projects at all stages.

We have joined in Partnership to provide a Professional, Efficient, Reliable and Cost Effective service to Clients.

Our experience enables us to guide our clients safely through the construction process which is why they come back to us repeatedly.

The practice operates throughout most sectors of



*View of our High Wycombe town centre offices from Frogmoor*

the building services consultancy industry, encompassing R&D, education, health care, leisure, office and housing sectors. However we believe that we are able to comprehensively deal with most if not all Building Services challenges that are presented to us.

### Project News:

- Gateway Academy opens its doors to students
- Oyster Wharf- 14 Luxury Thames side Apartments underway
- Barnfield College New Dental Academy
- Royal Garden Hotel, a 5 star refurbishment

## 5 Stars for the Partnership

The Partnership has commenced design on the first phase of the refurbishment of the prestigious Royal Garden Hotel in Kensington.

Work on an 80 bedroom wing is underway already with the works due for completion mid 2009.

Working with Architects Child Graddon Lewis the upgrade will ensure that visitors to the Capital are housed in modern energy efficient surroundings with that luxury touch.



## New Electrical Partner



New Electrical Partner Craig Taylor. Commended scheme in the Annual Lighting Design Awards (above right)

In June 2008 the Practice expanded to take on another Partner— Craig Taylor.

After graduating with a degree in Electrical Engineering from the University of Salford, Craig initially spent two years working in oil exploration in the Sahara Desert.

A move into the industrial



sector in the UK gave him considerable hands on experience in electrics & control in both the food & cement board industries responsible for maintenance & capital projects.

Craig became a full member of the IET at the age of 27.

Changing to building services

consultancy more than 20 years ago he has built up considerable experience & reputation in the electrical sector.

Nominated for lighting design awards in the past, Craig has worked in most sectors including Large Food Retail, R&D laboratories, commercial, industrial, educational & housing.

## Energy Performance Certificates (EPC's)

These certificates are for all buildings and will be required whenever a building is constructed, rented or sold. The Energy Performance Certificate (EPC) is broadly similar to the labels now provided with domestic appliances such as refrigerators and washing machines.

Its purpose will be to record how energy efficient a property is as a building. The certificate will provide a rating of the energy efficiency and car-

bon emissions of a building from A to G, where A is very efficient and G is very inefficient.

An EPC will be accompanied by a recommendation report that lists cost effective and other measures (such as low and zero carbon generating systems) to improve the energy rating of the building. The certificate will also be accompanied by information about the rating that could be achieved if all the recommendations were implemented.

The timetable for the implementation of EPCs will be:

April 2008 - EPC's required for the construction, sale or rent of buildings other than dwellings with a floor area

over 10,000 m<sup>2</sup>.

1 July 2008 - EPC's required for the construction, sale or rent of buildings other than dwellings with a floor area over 2,500 m<sup>2</sup>.

1 October 2008 - EPCs required on the construction, sale or rent of all remaining buildings other than dwellings. Display certificates required for all public buildings >1,000 m<sup>2</sup>.

Display Energy Certificates (DECs) will show the actual energy usage of a building, the Operational Rating, and is intended to help the public see the energy efficiency of a building, based on the energy consumption of the building as recorded by gas, electricity

and other meters. The DEC will need to be displayed at all times in a prominent place clearly visible to the public. A DEC will be accompanied by an Advisory Report that lists cost effective measures to improve the energy rating of the building.

Display Energy Certificates will only be required for buildings that are occupied by a public authority or an institution providing a public service to a large number of persons, with a total useful area greater than 1000m<sup>2</sup>. Display Energy Certificates will be valid for one year. The accompanying Advisory Report is to be valid for 7 years.

**For further information or if you need assistance with your certification call Roy Wheeler our Low Carbon Certified Consultant who will be able to help you.**

## Not the usual drill at Barnfield College

The Barn Partnership have just completed design of a new Dental Services Academy which will form part of Barnfield College's recently completed York Street Campus.

Working alongside Architects Widdup/Amer the Academy will provide a large teaching facility for dental technicians and will feature 6

surgeries with administrative and waiting areas, X-ray, developing plus equipment washing & sterilisation facilities. Colour 965 lamps have been recommended by ourselves to simulate daylight conditions & provide excellent colour matching

The new academy is scheduled to be open for the start of the new year.



## LG3:2001/LG7:2004 Lighting for VDU's & Offices

These two CIBSE Lighting guides covering The visual environment for display screen use and lighting for offices have been with us for some time now and were introduced not only bring the latest regulations up to date in line with the type of display screen regulations being used, but to radically change the thinking on lighting in offices.

The changes signalled the end of the previous "Category System" for louvres in office lighting where a one stop luminaire could cover all eventualities. The problem being with this approach was that lighting of the space, walls & ceilings was ignored and many poor lighting schemes based on minimal cost fittings appeared, creating cave-like effects with no visual interest to the space.

Lighting Guide 3 stipulates minimum illuminances for walls & ceilings in relation to that on the task of 50% & 30% respectively.

An important feature also is that to be in compliance with the guide the design team must not only consider the lighting but the reflectivity, colours & materials in the space itself. Window blinds for instance are a virtual necessity for compliance.

The change from cathode ray tubes to LCD screen technology where veiled reflections are virtually non-existent has also allowed the designer to utilise brighter, fresher luminaires to enhance the space & well-being of the occupants.

So where are we now?

Since the guides were published lighting manufacturers have produced many exciting new architectural luminaires to aid designers to achieve compliance or come very close to it, using latest lamp technology & new materials.

Some luminaires are based on dropped baskets, some are semi-recessed & others fully recessed. Nearly all use a di-

rect/indirect light component to give visual interest on the ceiling with a graduated tail off of the light to avoid high contrast.

Two new materials in particular –micro-prismatic sheets and prism based lenses made possible by laser cutting production machinery have signalled a trend to abandon aluminium louvres, with the fully mirrored louvres now firmly out of favour.

The use of indirect lighting components has energy penalties though this is offset by the overall benefits to the occupants that a well designed scheme brings.

At last it seems we have seen the end of the old CAT2 luminaire which plagued our buildings in the last 25 years.

The Barn Partnership will continue to ensure that all spaces are lit correctly & sympathetically for each application using the latest technologies & materials.



*The Old "Cat2" luminaire which plagued our offices & schools*

**"The Barn Partnership will continue to ensure that all spaces are lit correctly"**



*One of the new range of direct/indirect luminaires using laser cut prismatic technology*

## The Gateway Opens

June 2008 saw the opening of the prestigious Gateway Academy in Thurrock.

Designed by the Barn Partnership in conjunction with Architects Lyster Grillet & Harding, the G-shape of the building over two floors presented a challenging task to

fit the services into its curves.

The M&E Budget was over £5.5 million pounds.

The Academy is now open to both day students and the community for adult further education classes.





The practice has the professional expertise and experience to undertake the full range of building engineering services.

Whether you need a full or abridged design, cost advice or tender preparation, condition surveys, facilities management monitoring, EPC's or just a chat about your building we can tailor our services to suit your requirements.

## MECHANICAL SERVICES

- Central and Self contained Air Conditioning systems.
- Low, Medium and High Pressure Hot Water and Steam Heating.
- Commercial and Industrial Ventilation systems.
- Domestic Hot and Cold Water, Purification & Conditioning
- Oil and Gas Combustion and Medical Gases.
- Plant Engineering.
- Automatic Controls & Building Management Systems

## PUBLIC HEALTH AND ENVIRONMENTAL SERVICES

- Swimming Pool and Spa Filtration and Disinfection.
- Above Ground Soil and Waste.
- Below Ground Drainage.
- Rain Water systems.
- Waste Treatment Systems.

## FIRE ENGINEERING SERVICES

- Fire Detection and Annunciation Systems.
- Sprinkler systems.
- Fire Suppression systems.
- Smoke Control and Pressurisation.

- Wet and Dry Hydrants and First Aid Fire Fighting

## ELECTRICAL SERVICES

- Feature and Functional Interior, Exterior and Emergency Lighting
- HV/LV Electricity Distribution.
- Power Generation (stand-by, CHP and UPS).
- Heavy and Small Power.
- Voice and data systems.
- Fire Detection and Alarm Systems.
- Fire Suppression Systems.
- Intruder Alarm Systems, Access Control & CCTV.
- Lighting Controls
- Emergency Lighting
- Lightning Protection

## VERTICAL TRANSPORTATION

- Electric Traction & Hydraulic Lift Systems.
- Escalator and Moving Walkway Systems.
- Scissor Lifts and hoists.
- Disabled access Lifts and disabled access platforms

## Stay awake this winter

Osram's Lumilux Skywhite lamps. [www.osram.com](http://www.osram.com)

The increasing scientific research into how lighting affects people's well-being culminated in 2002 in the discovery of a new receptor in the human eye's retina. In addition to the well-known rods and cones (required for vision), we now know that there is a third receptor which is particularly sensitive to the deep-blue part of the visible spectrum, and ongoing research indicates that these receptors play an important role in the system that steers the biological clock.

With this in mind both Philips & Osram Lighting have produced a new range of tube colours that actively mimic the blue effects of daylight.

Trials in the UK have demonstrated that the use of these lamps promotes well being by improving contrast, reducing visual fatigue, supporting activity and promoting vigour. It is becoming the first choice wherever high levels of concentration and well-being are needed in conjunction with special visual requirements.



The lamps feature a colour temperature of 8000 K with a high proportion of blue light in the 410-460 nm range, high luminous flux efficiency of up to 95 lm/W, average life of 20,000 hours & colour rendering index Ra 80-89.

The lamps are only currently available in certain lengths styles & power options and luminaires need to be carefully chosen to ensure compatibility.

## Oyster Wharf-Riverside Luxury



The final phase of the Oyster Wharf Development is well underway.

Working with Southern Properties and Architects Groves Natheva, The Barn Partnership are providing the complete M&E services design to these 14 luxury apartments.

The apartments utilise heat-pumps for heating & cooling .

Internally, feature dimmable lighting schemes with continuous recessed strip lighting and track mounted fittings provide flexibility for the tenants whilst giving a luxurious feel and ensuring compatibility with Part L1 of the Building Regulations.

The development will be complete in the early part of 2009