

Fibre optic lighting – preserving our heritage

■ Designing lighting into buildings, and incorporating all the necessary electric elements during their construction, is something we are all very accustomed to today; we regard it as one of life's essential services. Yet, of course, this has not always been the case, and a huge amount of retrospective conversion in historic properties to introduce artificial illumination has taken place in the course of this century.

Initial enthusiasm with the new technology, and inevitable ignorance in those early years, served to cause some degree of damage to some of our finest historic heritage – in many instances irreparably. Magnificent structures, that were built long before the existence of electric lighting, were invaded by wiring and bulky fixtures, gouging into the fabric of the buildings and depositing unsightly excrescences on their elegant surfaces.

Similarly, priceless artefacts of ancient origin have been subjected to decades of damage under harmful levels of light and UV radiation, sometimes fading text into illegibility and fabrics into a colourless wash. The ultimate catastrophe is destruction by fire, and there have been some horrific examples in recent years. Lack of proper knowledge, and in some instances care, can have painful consequences.

Evidence of the increasing appreciation today of the importance of the quality of light in our built environment is provided by the growing influence of the dedicated professional Lighting Designer.

There is also a greater awareness of the potential for damage that exists in the visible light spectrum, and how different wavelengths interact with pigments, dyes and organic matter generally. Consequently, an augmented professional body of curators and conservators have in recent years introduced many and more stringent conditions under which our ancient buildings may be altered, and exhibits stored and viewed.

That good lighting enhances great architecture, and enables proper viewing of ancient artefacts, is not in dispute; but the conflict persists as to how to achieve this without causing damage to the very objects we wish to illuminate.

Of the tools at the disposal of today's lighting designers in their quest to deal with this apparent conflict, few bring such reliable solutions with so little risk of danger, damage or intrusion, as well designed fibre optic lighting systems.

This relatively new technology has made tremendous strides forward in the past decade or so, and now offers viable alternatives to satisfy most lighting requirements.

Amongst the many benefits of fibre optic lighting may be numbered the following:

- Absence of conducted power to the output points means light may be conveyed without any associated electrical hazard. This is particularly important where substantial quantities of ancient timberwork exist within the built environment.
- Absence of heat at output means no associated damage or

scorching of adjacent paintwork, reducing routine decorative maintenance.

- Filtering of Ultraviolet through the passage of light along glass fibre lengths, and filtering of Infrared rays at source, renders fibre optic lighting the safest to use for all aspects of conservation, but most notably where fugitive organic elements are involved.

- Absence of maintenance at the outputs means lofty interior spaces or elevated exterior features may be lit at high level, with the projector sources being located at a lower level.

- Multiple outputs may be powered from a single source, thereby greatly reducing both day-to-day running and on-going maintenance costs.

- Outputs can be extremely small and unobtrusive, and can be introduced into delicate existing structure and forms. They can also be shrouded or custom-designed, rendering them both comfortably glare-free, and sympathetic to their environment.

- High quality glass fibre optic systems are extremely durable. The transmission elements are entirely passive in operation and, if left undisturbed following their installation, should endure for as long as the fabric of the building.

- More recent technical advances provide for completely smooth gradient dimming of the systems, enabling balanced and completely flexible use of the lighting for a variety of atmospheric end effects.

Absolute Action have specialised in advanced fibre optic lighting systems since 1983, having pioneered much of what has now been embraced as the standard for this relatively new technology. The company has an unparalleled record of acclaimed installations, and a worldwide reputation for providing the very best in advice and equipment, promoting the fundamental reliability and durability of these systems.



Canterbury Cathedral undercroft benefits from fibre optics.

A B S O L U T E



Fibre Optic Lighting



A
C
T
I
O
N

CONSULTANCY; DESIGN INTERGRATION;
MANUFACTURING; INSTALLATION; COMMISSIONING

ABSOLUTE ACTION LIMITED

COMMITTED TO EXCELLENCE

MANTLEHOUSE BROOMHILL ROAD LONDON SW184JQ
TEL: +44 0181 871 5005 FAX: +44 0181 877 9498 TELEX: 917003 LPC G