

Oxford Diocesan Guild of Church Bellringers

Towers and Belfries Committee

Technical Note No. TBC01 – Issue 2

EMERGENCY LIGHTING FOR RINGING CHAMBERS

Introduction

It is good practice to carry out a common sense risk assessment in the tower. One such risk - a loss of light in the ringing chamber - is potentially quite high and steps should be taken to eliminate it. Unless there is daylight coming in, the ringing chamber will be plunged into total darkness. If this happens while ringing, ringers may panic about catching their sallies and setting their bells, with potentially disastrous results. Loss of lighting in the bell chamber and on the stairs also presents risks, albeit without flailing ropes, and emergency lighting should be considered for these locations also to ensure safe egress during the hours of darkness.

There are three possible causes of a black out, each of which needs to be addressed separately:-

1. A power failure.
2. Accidental operation of the light switch.
3. Failure of a bulb.

1. Power Failure

Ringling chambers should, in addition to the ordinary lighting, be equipped with a suitable form of emergency lighting which comes on when the mains fail. Such lighting usually uses fluorescent tubes to prolong the operation of the light when it switches to the rechargeable battery which is contained within the unit. Emergency lighting can be the main source of lighting or you can install additional unit(s) which only operate when there is a mains failure. In any event, you should always have at least two light sources to protect against bulb failure (see section 3).

When making enquiries about emergency lighting, ensure you ask for fittings which require permanent installation. Do not opt for a portable form of emergency lighting such as a torch which you will have to pick up and switch on in the darkness and which will not work if you forget to replace it in its charger! Units which can be plugged into a normal mains socket are not recommended as they can be switched off or unplugged and removed. A search of the Internet using the key words “emergency lighting” reveals the range of fittings available. For example, the well-known Internet site www.screwfix.co.uk is a good source of emergency lights at competitive prices.

Permanently installed emergency light fittings come in a variety of forms and can cost as little as £11 for an 8-watt fluorescent tube but “bottom of the range” lights such as these are not recommended. They may however be suitable for other locations such as corridors or stairs. There is a huge range of prices for apparently similar emergency lights but when buying them you should look for those which comply with BS4355 or BS EN 60598.

At the top end of the price spectrum, an example of a suitable emergency light which provides the normal lighting as well as the emergency function is the 58W or 2x58W emergency fluorescent light fitting. It costs around £100 and is available from any competent electrical supplier or

contractor or via the web site mentioned above. Search the web site using “emergency lighting”. Typical emergency lights look exactly the same as an ordinary fluorescent light and use the same tubes. The only difference is that they are a bit heavier and contain a rechargeable battery and the necessary circuitry to detect a loss of power. You should check that the chosen light is powerful enough. If your ringing room is unusually large, it may be wise to install more than one emergency light.

Installation of emergency lighting should be carried out by a qualified electrician as there may be special requirements to be met. For example, the emergency fluorescent light requires the provision of an extra supply fed, from just before the light switch. As soon as this wire goes dead, the emergency fluorescent light fitting assumes that the power has failed and switches to its battery. The light stays on without a break but the brightness goes down. You thus know the power has failed and you have at least an hour of ringing if you wish to continue provided you have chosen a fitting advertised with a 3 hour life and you have adhered to the routine service schedule.

Remember that loss of power is normally completely outside your control and you cannot reduce the risk of it occurring. It might happen as a result of other activities in the church tripping the main circuit breaker or failure of the public mains supply. Only with emergency lighting can you react to such events safely.

2. Accidental Operation of the Light Switch.

You should ensure that the ringing chamber light switch is positioned where it cannot be operated accidentally, for example by someone leaning on it. It should be safely inside the ringing chamber and, ideally, above shoulder height where it cannot be leaned on.

A switch at the bottom of the stairs or in the church is asking for trouble from innocent passers-by or pranksters. Only the lights on the stairs themselves should be operated from a switch at the bottom.

3. Failure of a bulb

Irrespective of whether emergency lighting is installed, no ringing chamber should rely on a single light source which will go out if a bulb fails. (A single light source is penalised under the Tower Maintenance Award Scheme!) The obvious way to reduce this risk is to have more than one light fitting. If you decide to install additional emergency lighting, leave the old light in place. If the bulb or tube fails in either light or if a rope should hit one of them, then the other will provide illumination and you should be safe.

4. For the Technically Minded

The note so far has advised on the principles which should be adopted when considering the installation of emergency lighting. However, a permanent installation should be carried out by qualified electrical installers and may require a faculty. If you discuss an installation with a contractor there are a number of technical points which you may need to bring up.

There is a British Standard which relates to emergency lighting - BS5266: 2005 "Code of Practice for the emergency lighting of premises" and your contractor should be aware of this. Installation of units (as permanent parts of the electrical infrastructure) should be undertaken in accordance with the requirements of BS7671 and The IEE Wiring Regulations. Suitable test and completion

certificates and record drawings of the installation should be produced on completion. Architects and Diocesan Advisors will have views on the installation specification and, for example, may mean that PVC cable and conduit is unacceptable and only a mineral-insulated cable installation will do.

Installing emergency lighting must not be treated as “fit and forget”. Units rely upon a trickle charged Nickel-Cadmium or similar battery and to get adequate performance when needed, these need to be routinely discharged. BS 5266 contains a recommendation for the routine maintenance and testing of units which includes discharge tests. Tower maintenance schedules should take this into account.

5. Disclaimer

This technical note and its recommendations are given gratuitously and in good faith but expressly without liability on the part of the Oxford Diocesan Guild or any officer or member thereof, or any person who has been concerned in the preparation of the note.

The Towers and Belfries Committee exists to encourage the keeping of bell installations in the Oxford Diocese in good order and is pleased to be asked to assist with advice on maintenance or major work on an installation.

6. Contacting the Towers and Belfries Committee

More information on emergency lighting or any other aspect of tower maintenance can be obtained from the Towers and Belfries Committee whose details may be found via the Oxford Diocesan Guild website :- www.parishes.oxford.anglican.org/odg/

November 2007