The need for lightning protection should be established from a risk assessment and the application of the **BS EN 62305** – Protection against lightning.

**Legislation, regulations and advice documents**

Various regulations, codes, standards and guidance on lightning protection are applicable and these include the following:-

- **BS EN 62305-1:2011** - Protection against lightning. General principles
- **BS EN 62305-2:2006** - Protection against lightning. Risk management
- **BS EN 62305-3:2011** - Protection against lightning. Physical damage to structures and life hazard
- **BS EN 62305-4:2011** - Protection against lightning. Electrical and electronic systems within structures

Final proposals should be agreed with the Council. The Project Manager (PM) in consultation with the Councils M+E representative shall confirm to the Consultant/Designer, the scope of lightning protection required should funds be insufficient to meet the following provisions required by the British Standards

Lightning Protection against structural and transient strike shall be provided in Council Premises, as follows:-

**Existing compliant building**

Where the lightning protection installation (structural and transient) complies with the requirements of **BS EN 62305** any extension and/or alteration to the building, design to maintain the compliance.

(continued on page 2)
(continued from page 1)

**Existing partially compliant building**
Where the lightning protection installation partially complies with the requirements of **BS EN 62305** any extension and/or alteration to the lightning protection installation shall be designed to comply and the requirements to bring the remaining building up to standard and identified separately. The PM will determine the priority attached to resolving the non-compliant areas.

**Existing non-compliant building**
Where the lightning protection installation has no compliance with the requirements of **BS EN 62305** any extension and/or alteration to the lightning installation shall be designed to comply and the requirements to bring the original building up to standard shall be identified separately. The Project Officer will determine the priority attached to resolving the non-compliant areas.

**New Build**
The lightning protection installation shall be designed to comply with the requirements of **BS EN 62305**. Structural and transient protection shall be provided against structural and transient lightning strikes in accordance with **BS EN 62305**.

- Structural protection shall be provided by means of a range of tapes and air terminal devices. All extraneous metal at roof level shall be bonded to the system.
- The lightning protection system shall be bonded to the buildings earth point adjacent to the utility incoming electrical supply.
- Where the buildings structure is a steel frame the frame shall be used as the down conductor. Where surface fixed down tapes are necessary these shall be protected with hardwood casings from finished ground level to 2.500m.
- All incoming and outgoing including but not limited to telephone cables, data cables, power cables, metallic services, pipes, cables, ducts etc shall be bonded and protected to avoid induction/transmission of transient surges.
- Transient suppression shall be fitted to limit the potential for surges to cause damage to downstream systems.
- All suppression equipment installed should be identified with a label and the positions should be marked on a drawing for future reference.
- All test points, earth electrodes, down tapes, roof conductors and associated lightning protection components should be given identification, and the positions should be marked on a drawing for future reference and maintenance purposes.