

Down lighter protection – a cover up?

There continues to be confusion in some areas as to whether or not recessed down lighters should be protected to preserve the fire and acoustic rating of the ceiling lining that has been perforated in order to install them

By Alan Rogers

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The simple answer is yes, all recess down lighter installation must be protected. The awareness campaign that has been running in this publication over the past two and half years, coupled with the introduction of Part P and the application of Part E has given this issue a broader focus.

We are also seeing more guidance and regulations being specific about recessed down lighters and their application. The first of these was 'Ensuring Best Practice for Passive Fire Protection in Buildings' published in 2003, which states: Section 12 Ceilings: "The fire resisting ceiling selected, should have documented test evidence to show that it meets the appropriate level of fire resistance for the relevant application and should be designed, specified and constructed to fully satisfy the manufacturers instructions.

"Lighting fittings, and other penetrations through the ceiling, must also have the same demonstrated standard of fire resistance, and be appropriate for the type of ceiling." And then in Approved Document to Part P: Regulation 4 (2) states that on completion of the work, the building should be no worse in terms of the level of compliance with the other applicable Parts of Schedule 1 to the Building Regulations. For example, one or more perforations of a ceiling lining beneath a floor- made to accommodate recessed lighting or similar fittings – may have an adverse effect on that floors performance in terms of its resistance to fire and sound penetration. Due regard should therefore be paid to the guidance in Approved Documents B (Fire safety) and E (Resistance to the passage of sound) on the performance of compartment floors. This is followed by Robust Details Hand Book, Appendix F Timber Separating Floors, January 2005: "Installation must be in accordance with the manufacturers fitting instructions and at a density such that the down grade in sound insulation is no more than -1dB for a tested and specified ceiling area. With openings for installation not to exceed 100mm diameter on 100mm x 100mm. All down lighters must comply with the requirements of Part B."

Changes to legislation

The reviews of Part B, of BS5250 – the passage of condensation and the new Part L, requiring the air tightness testing of dwellings, are expected to be very detailed on the installation of down lighters.

The insertion of recessed down lighters in floors that are required to have a fire resisting performance (including intermediate floors in houses) causes a serious downgrade in that performance. This downgrade increases dramatically where modern 'I beams' have been used in the structure, leaving the ceiling lining to provide the majority of the fire resistance.

The fire resistance must be reinstated by either installing down lighters with integral fire resistance or by protecting the down lighter with a fire cover.

Similarly, fitting down lighters will cause a downgrade in the acoustic performance of a ceiling floor structure. This may occur in separating floors, floors within dwellings and floors to rooms for residential purposes. Again the sound insulation must be reinstated by fitting down lighters with integral acoustic resistance or by fitting acoustic covers.

New issues to consider

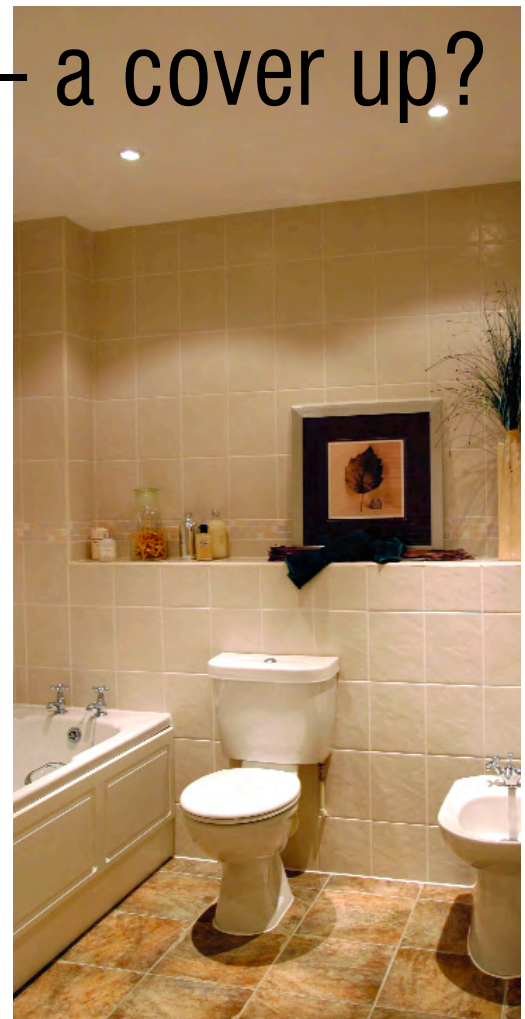
There has been no regulation in the past to cover down lighters in ceilings to roof spaces. However, installers have been found to be negligent, in certain legal actions, in not protecting the down lighter from being in contact with stored items in the loft and causing a roof fire. However, Part P requires safe installation to be achieved in all cases, and protection must also be provided here as good practice.

Also, in this upper floor area, down lighters will need to be sufficiently air tight to prevent the loss of useful heat and the passage of condensation up into the roof space.

There are now an increasing number of down lighters on the market that have integral protection for both fire and acoustics. It is disappointing to see that a number of manufacturers have not taken the opportunity with these new designs, to develop down lighters that can operate successfully under insulation. There will be an increasing use of insulation in dwellings for both heat and acoustic needs and to fit down lighters that require its removal is contrary to the efficiency standards that are trying to be achieved.

There has been considerable pressure on electrical contractors to provide very competitive solutions to modern domestic lighting requirements. This has resulted in many cheap down lighters being used in the past and price has influenced the design objective.

The market requirements are changing rapidly and future down lighters, with integral protection



or down lighters with additional fire and acoustic covers, must be capable of providing the following levels of protection. This means that new designs must be technically driven and provide good value, quality solutions:

- Separating Floors - Fire and Acoustics
- Intermediate Floors - Fire and Acoustics
- Ceilings to Roof Spaces - Fire and Air Leakage
- Bathroom Ceilings to Roof Spaces - Fire and Transfer of Condensation
- Under Insulation - Continuity of Insulation
- Corridors - Fire, Acoustics and Smoke
- Robust Details Limited Appendix F – Acoustic performance of timber separating floors incorporating down lighters

Electro-technik's low voltage SNAPLITE recessed down lighter gives all the above levels of protection, as a standard product, without the need of external covers or boxes. LANTAC is approved and is extremely simple to fit.

The need to protect down lighter installations is still, despite the growing awareness campaigns, sometimes queried but the increasing regulatory pressures are now silencing this debate and more clearly defining the product's contribution to a safe, quiet and energy efficient new home environment.

- For more details, please telephone 01527 595 349 or visit www.snaplite.co.uk