The Scottish Building Standards Agency (SBSA) have issued revised editions of their two Technical Handbooks (domestic and non-domestic) and these supersede the previous editions from 1 May 2007. The full text of the 2007 editions of the handbooks can be viewed on the SBSA website www.sbsa.gov.uk under Technical Handbooks. The changes effecting electrical installations are summarised below: The references in brackets refer to the relevant sections in the SELECT Technical Guide for Approved Certifiers of Construction.

Section 1 Structure (3.1.1)

More specific guidance on notches and holes has now been introduced in the handbooks as follows:

**Timber frame walls**
Holes should be within the limits set out below:
- Holes should be drilled at the neutral axis;
- Holes should be at least 300 mm apart.

There should not be any notching of wall studs, *cripple studs or lintels.* *cripple studs are the studs either side of an opening such as a door or window, to provide support for a lintel.*

**Floor and flat roof joists**
Notches and holes in simply supported floor and flat roof joists of depth D should be within the following limits:
- Holes should only be drilled at the neutral axis; and
- Notches and holes should be at least 100 mm apart horizontally; and
- Notches may be at the top or bottom of a joist but not coinciding.

**Raised tie and collared roof members**
Notches and holes should not be cut in rafters, ties, collars or hangers.

**Trussed rafter members**
Members of trussed rafters should not be cut, trimmed, notched or otherwise altered.

Section 3 Environment (3.3.3)

**Ventilation**
Where mechanical extraction is used in a garage having a floor area of at least 30 m², details of the required extraction rates are given in the 2007 non-domestic SBS Technical Handbook Paragraphs 3.14.8 and 3.14.9.

Such ventilation may be provided to protect building users from the harmful effects of toxic emissions from vehicle exhausts.

Section 4 Safety (3.4.1)

**Access within buildings (domestic properties)**
Corridors are required to be at least 900 mm wide, although corridors can be reduced to 800 mm over a maximum length of 900 mm for such fixtures as radiators, heaters etc. except on a wall opposite a doorway.
Access within buildings (non-domestic properties)

All corridors should have an unobstructed width of least 1200 mm. This is the minimum width for escape routes. Other than on a wall opposite a doorway, an obstruction such as a radiator or heater may project up to 100 mm, reducing a corridor width to 1100 mm over a maximum length of 900 mm.

An internal door should:
- Have a clear opening width of at least 800 mm.
- Have an unobstructed space on the side of the door, next to the leading edge of at least 300 mm. This unobstructed space is not required however where the door is opened by automatic control.

SECTION 4 SAFETY (3.4.1)

Lighting in common areas of domestic buildings

Common areas should have artificial lighting capable of providing a uniform lighting level, at floor level, of not less than 100 lux on stair flights and landings and 50 lux elsewhere within circulation areas. Lighting should not present sources of glare and should avoid creation of areas of strong shadow that may cause confusion or miss-step. A means of automatic control should be provided to ensure that lighting is operable during the hours of darkness.

Door entry systems

Where a common building entrance door, intended as a principal means of access to a building, is fitted with a locking device, a door entry system should be installed. This should comprise of a remote door release and intercom at the point of entry and a call unit within each dwelling served by that entrance.

Any unit at a common entrance should be positioned between 900 mm and 1.2 m above floor level. It should include an inductive coupler compatible with the ‘T’ setting on a personal hearing aid, together with a visual indicator that a call made has been received. Controls should contrast visually with surrounding surfaces and any numeric keypad should follow the 12-button telephone convention, with an embossed locator to the central ‘5’ digit.

Socket outlets

A dwelling should be provided with at least the following number of 13A socket outlets:
- 4 within each apartment*; and
- 6 within the kitchen, at least 3 of which should be situated above worktop level in addition to any outlets provided for floor-standing white goods or built in appliances; and
- an additional 4 anywhere in the dwelling, including at least 1 within each circulation area on a level or storey.

* Note: Apartment means a room in a dwelling not used solely as a kitchen, store or utility room.

Sockets may be installed as single or double outlets, to give the recommended number of outlets in each space.

Electrical fixtures

Outlets and controls of electrical fixtures and systems should be positioned at least 350 mm from any internal corner, projecting wall or similar obstruction and, unless the need for a higher location can be demonstrated, not more than 1.2 m above the floor level. This would include fixtures such as sockets, switches, fire alarm call points and timer controls or programmers. Within this height range:

- Light switches should be positioned at a height of between 900 mm and 1.1 m above floor level.
- Where located on walls or other vertical surfaces, standard switched or unswitched socket outlets and outlets for other services such as telephone or television should be positioned at least 400 mm above floor level. Above an obstruction, such as a worktop, fixtures should be at least 150 mm above the projecting surface.
- In accommodation specifically intended for wheelchair users, such
as accessible bedrooms, operable controls should be located at a height of not more than 1.0 m above floor level.

Where sockets are concealed, such as to the rear of built-in appliances (e.g. in kitchens) or obstructed by built-in furniture, separate switching should be provided in an accessible position, to allow appliances to be isolated.

**AIDS TO COMMUNICATION (3.4.3)**

In certain non-domestic buildings people with a hearing impairment should be able to gain access to hearing facilities. Attention is however drawn to the problems of electrical interference between such ELV circuits and other LV circuits and the requirements of BS 7671 (Section 528) for segregation should be followed to prevent these problems.

**DETAILED GUIDANCE**

**Aids to communication**

Aids for people with a hearing impairment should be provided in:

a. any auditorium or other space, with fixed seating, where an audience or spectators will be present; and

b. any room with a floor area more than 60 m² that is intended to include uses such as meetings, lectures, classes or presentations; and

c. any location where a person is separated from a vendor or service provider by a physical barrier such as a glazed screen; and

d. the principal reception desk, public counter or information point in any building to which the public have access. In larger buildings, with multiple entrances, there may be a number of these in different locations.

Three forms of hearing enhancement system are in common use:

- Audio frequency induction loop systems
- Infra red systems
- Radio systems

More information on these systems can be obtained from the Royal National Institute for Deaf People www.rnid.org.uk

**SECTION 6 ENERGY (3.6.1)**

Building Standard 6.1, regarding carbon dioxide emissions, and associated guidance is entirely new and generally applies to new buildings only.

The sections on heating and hot water service controls in both the domestic and non-domestic handbooks have been expanded.

The section on lighting for non-domestic buildings has been updated and a new section on artificial lighting in domestic premises has been introduced, as shown below.

**Artificial lighting in dwellings**

A minimum of 50% of the fixed light fittings and lamps installed in a dwelling should be low energy type.

The fittings may be either:

- Dedicated fittings which will have a separate control gear and will only take fluorescent lamps (pin based lamps); or
- Fittings including lamps with integrated control gear (bayonet or Edison screw base lamps).

e.g. tubular fluorescent and compact fluorescent fittings (CFL’s) with luminous efficacy at least 40 lumens/circuit watt.

In this guidance:

- a minimum of 50% of fixed light fittings means at least 1 in a dwelling which has 2 fittings, 2 where there are 3, 2 of 4, 3 of 5 etc;
- fixed light fittings include only the main light sources to a room; not display or feature lighting such as picture lights, kitchen wall cupboard lights, over mirror lights. A light fitting may contain one or more lamps and a group of lamps operated by the same switch could be counted as one fitting, e.g. a pair of wall lights;
- low energy light fittings include the provision of lamps/bulbs.

The full text of Section 6 can be viewed on the domestic and non-domestic SBS Technical Handbooks (Building Standards 6.1 to 6.8).