Facilities managers and Part L

Contributed by Anthony Wilson, 2007

Many facilities managers are still unaware of how Part L of the Building Regulations 2006 could impact on their day-to-day work. Anthony Wilson offers some insight.
What are the components of Part L and what areas do they relate to?

How can facilities managers take a proactive role in fulfilling the requirements of the regulations?

When the latest version of Part L (Conservation of Fuel and Power) of the Building Regulations came into force in April 2006, many facilities managers assumed it would have little impact on their role.

Unlike its predecessors, however, Part L 2006 has huge significance for facilities managers. This is because it now applies to many routine maintenance and refurbishment operations on existing buildings, as well as the performance of new buildings.

Traditionally, the Building Regulations have applied to building works on new buildings, alterations and extensions, with a view to gradually upgrading the UK's building stock as older buildings are replaced or refurbished. While Part L 2006 continues to fulfil this role, it also requires additional improvements to be made to existing buildings and plant under certain circumstances.

So Part L is no longer the sole preserve of the architect, property manager or professional design team; it has the potential to impact on every facilities manager's regular activities. And any facilities manager who has inherited buildings with an average energy performance will need to pay particular attention to this legislation.

In relation to non-dwellings, there are two sections to Part L. Approved Document (AD) L2A applies to new buildings and AD L2B to existing buildings. Between them, these documents incorporate four articles from the Energy Performance of Buildings Directive (EPBD) - though the energy inspections of boilers and air conditioning equipment are not covered in the 6 April 2006 Approved Documents of Part L.

New buildings
Starting with new buildings, designers now have to adopt an approved methodology for calculating the energy performance of buildings. In the UK, the only approved methodology for non-dwellings is the National Calculation Method comprising the simplified building energy model (SBEM) and approved dynamic thermal simulation models (DTSMs). This is designed to ensure that heat gains and losses are minimised through effective insulation of the building fabric and services, such as pipes and ductwork, and building services are reasonably efficient and equipped with effective controls.

In this respect, the facilities manager has a responsibility to ensure these criteria have been met and that services have been installed and commissioned properly before accepting the building from the builders. The facilities manager or building operator should also ensure they receive a building energy log book at handover as well as all the other O&M information, so they know exactly what they are getting as an end product and how best to maintain and manage it. The added advantage of this is that the energy log book will hold summary information for use in selling or letting the building, giving greater confidence to letting agents, prospective tenants and purchasers.

Existing buildings
By far the greatest impact for facilities managers comes from the conditions in AD L2B that apply to existing buildings. These cover both extensions to existing property and plant, and any work carried out on thermal elements (walls, floors, roofs).

Where an existing building is being extended, if the total useful floor area of the extension exceeds 100sqm and is more than 25 per cent of the existing building's floor area, it will have to meet the same standards as new buildings, as described in AD L2A.

In addition, if certain types of work are carried out on an existing building with a useful floor area of over 1,000sqm then, under Regulation 17D of the Building Regulations, "consequential improvements" must be made to improve the performance of the building. The types of work that will trigger the requirement for consequential improvements are:

- Extensions;
- The initial provision of any fixed building services (boiler, chiller, lighting etc.);
- Any increase in capacity of any fixed building services.This whole area of consequential improvements is one that facilities managers need to be very aware of. The reasoning behind these is that any of the types of work above will carry an energy penalty, so the consequential improvements are designed to mitigate that energy penalty by introducing energy efficiency improvements elsewhere.

To put this into a practical context, if a particular part of the building is getting too hot there will be pressure on the facilities manager from internal customers to do something about it. The first reaction might be to install air conditioning, or to increase the capacity of any existing air conditioning.

However, this would require you to carry out work in other areas of the building to 'offset' within certain limits the extra energy that would be required for the air conditioning.

A better initial approach would be to explore the possibility of passive measures such as solar shading or higher-performance glazing first, as this would not carry an energy penalty and would not require consequential improvements. However, if it were still deemed necessary to install or increase the air conditioning, you would be required to make some consequential improvements.

Similarly, if an extension is added to an existing non-domestic building it will be necessary to make consequential improvements to parts of the existing building. Or if an existing boiler is replaced with a higher capacity boiler - as opposed to a more efficient boiler that provides higher heat output for the same fuel consumption - consequential improvements will apply.

In all such cases, the amount of consequential improvements that have to be carried out are determined by selecting energy improvements from a list until their value is not less than 10 per cent of the value of the principle works. Such a list would include the following activities as ways of improving overall energy performance:

- Upgrading U values of external fabric (thermal elements);
- Replacing poor performing windows and doors (controlled fittings);
- Upgrading heating, mechanical ventilation and cooling plant - and their controls - where they are over 15 years old;
- Upgrading lighting and lighting controls where the area of lighting is over 100sqm and has a lamp efficacy of less than 40 lamp-lumens/circuit watt;
- Installing energy metering;
- Increasing the on-site low and zero carbon energy-generating systems.

Technically, functionally and economically feasible

Where Regulation 17D applies, there is the proviso that any consequential improvements are "technically, functionally and economically feasible". The technical and functional components of this are relatively straightforward to evaluate, but economic feasibility may be a little vaguer. However, AD L2B provides some helpful guidance.

Economic viability is defined as providing a simple payback within 15 years, except under certain circumstances (e.g. LZC systems on seven-year paybacks). In calculating the payback, AD L2B also provides the energy prices that are to be used, so that building operators aren't tempted to lower the prices to extend the payback period beyond the 15 years. The figures are:

- Mains gas - 1.45p/kWh;
- Electricity - 5.0 p/kWh;
- Heating oil - 1.90 p/kWh;
- LPG - 3.39 p/kWh.The value of any such consequential improvements also has to be verified and signed off by a suitably qualified professional, such as a member of the Royal Institution of Chartered Surveyors.

Work on controlled fittings such as windows and fixed building services might be capable of being undertaken by approved "competent persons". For gas work, for example, this would be a CORGI registered operative.

In the case of other types of building work in non-dwellings on mechanical fixed building services, this would be BESCA registered operatives. Where there are no competent person schemes, local authority building control officers or Approved Inspectors will need to be engaged to oversee compliance.

Where does the facilities manager come in?

Facilities managers are ideally placed to not just react to these requirements but to also take a proactive role in managing the energy their organisation consumes. In order to do so, and to ensure compliance with the Building Regulations, it is important to be up to speed with the regulations and be ready for the implementation of the remaining reporting elements of the EPBD.

These reporting elements will be directly influenced by the quality of the maintenance regime. They are due to be published imminently as the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations.

In terms of the Part L-related work itself, the key thing is to be aware of what is necessary and be in a position to ensure that any contractors are carrying out the work properly (e.g. properly commissioning the services and providing energy metering and building log books).

The following list is a summary of how the role of the facilities manager has been extended both by the existing Building Regulations and the impending EPBD:

- To ensure when services or buildings are changed or refurbished they comply with Parts L, F, P and the EPBD;
- To ensure the air conditioning is checked by a competent person and a certificate issued;
- To ensure that new buildings are air-tightness tested by a member of the British Institute of Non Destructive Testing;
- To ensure the Building Energy Log Book is kept up-to-date and an appropriate energy metering strategy developed to enable in due course energy performance certificates to be prepared as required;
- To ensure energy is managed to reduce costs and impacts for the organisation;
- To consider renewable energy (NB: Planning Policy Statement 22 sets out as a planning requirement a target of 10 per cent of energy to be meet by renewable sources);
- To work with supply chain professionals on projects to ensure carbon reduction is a key component of any project;
- To take into account the revisions to Approved Document F of the Building Regulations affecting ventilation.

Taking control

In order to fulfil these extended responsibilities, facilities managers will need to ensure they have significant input into the design process and exert more influence over the buildings they are going to be running. This could be seen as 'yet more work', or as an opportunity to broaden the role and status of the FM department within the organisation. Either way, energy performance is now part and parcel of a facilities manager's responsibilities.

Copies of all the Approved Documents in the Building Regulations can be downloaded free of charge from www.planningportal.gov.uk

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