From 6th April 2006 there are significant changes to the Building Regulations that cover the Conservation of Fuel and Power in buildings. This is the second in a series of guides to try and explain how these changes will impact on you.

As a result of the changes, works that may have been previously exempt or not covered by the Building Regulations are now controlled. As a consequence you are required to submit a Building Regulations application for such works.

REPAIRS, ALTERATION, REPLACEMENT AND RENOVATIONS TO ELEMENTS OF A BUILDING EXTERNAL SHELL.

Replacement windows have been covered for a number of years and have controls placed on what can or cannot be done on their replacement.

Some re-roofing works i.e. replacement of the roof tiles have similarly been controlled, where the weight of the roof materials used in the re-covering are either lighter (to prevent wind uplift) or are heavier (which could potentially cause a structural failure of the supporting structure).

The regulations have now been extended to cover repairs, alterations, replacement and renovation of what are called the buildings ‘Thermal Elements’. This applies equally to both domestic and commercial buildings.

Reference should be made to guide 3 – which provides guidance on the extension of ‘Self Certification Schemes’ for members of certain professional trade bodies. Membership allows works to be undertaken without having to submit a Building Regulation application.

“THERMAL ELEMENT” – is defined as wall, floor or roof (not including windows, doors, roof windows or roof-lights), which separates a thermally conditioned part of the building ("the conditioned space - i.e. heated or cooled space") from –

(a) the outside air or ground; or

(b) in the case of floors and walls, another part of the building which is -

(i) Unconditioned (unheated or cooled); e.g. floor over an unheated garage.

(ii) an conservatory / carport / porch extension; or

(iii) conditioned to a different temperature, e.g. wall between a low level heated stock area and the main shop-floor, etc*

It will include all parts of the thermal elements between the surfaces bounding the conditioned space and the external environment or other part of the building as the case may be.

*only applies to a building which is not a dwelling, where the other part of the building is used for a purpose which is not similar or identical to the purpose for which the conditioned space is used".
Also for the avoidance of doubt:

“RENOVATION” in relation to a thermal element is defined as the provision of a new layer in the thermal element or the replacement of an existing layer, but excludes decorative finishes, and "renovate" shall be construed accordingly;".

_The intention is to improve energy performance standards when the thermal elements as a whole or layers within them are replaced or provided. As part of this the approved document L1B and L2B signal that where the renovation work affects less than 25% of the face area of the thermal element reasonable provisions would be to do nothing to improve energy efficiency._

**REQUIREMENTS RELATING TO THERMAL ELEMENTS:**

- Works to such thermal elements will require the submission of a Building Regulation application.

- Where you intend to renovate or the replace a thermal element - you are required to carry out cost effective insulation improvements. The new building regulations provide guidance on what are considered cost effective insulation upgrades and the requirements for new replacements (Refer to further guides in this series).

- You must also carry out a condensation risk assessment of the effects of carrying out the improvement works and take suitable precautions to prevent condensation damage.

**EXAMPLES OF CONTROLLABLE WORKS REQUIRING THE SUBMISSION OF A BUILDING REGULATION APPLICATION:**

- Renewal of pitched or flat roof coverings – e.g. re-tiling, re slating of pitched roofs or re-felting of flat roofs.

- Renewal or replacement of ceilings under a roof space or flat roof (with or without the renewal of the supporting structure).

- Renewal of cladding to external walls or dormer cheeks.

- Renewal of a finish or cladding to an external wall area or elevation (render or other cladding) or applying a finish or cladding for the first time.

- Renewal of internal wall finishes to an external wall (excluding decoration) or where you are applying a finishes for the first time e.g. re-plastering or dry lining of walls.

- Renovation or replacement of a solid or suspended floor, involving the replacement of screed or a timber floor deck.

*Note - Replacement windows / roof lights and doors (more than 50% glazed) are not by definition thermal elements but are covered elsewhere as building work.*
MAKING A BUILDING REGULATION APPLICATION.

Refer to guidance notes on making a full plan or building notice application.

Works to thermal elements only – charges will be based on cost of the thermal improvement works, unless the work being undertaken constitutes a ‘Material Alteration’ in its own right and requires the submission of an application anyway – then the charges will be based on the full cost of the works proposed – subject to a minimum charge of the lowest charge on our estimated cost of works schedule (Refer to our charges guidance sheets).

Building Control will only be concerned with the Conservation of Fuel and Power elements of the work – unless it constitutes a ‘Material Alteration or Building Work in its own right.

Works to thermal elements as part of a larger Building Regulation application e.g. extensions / alterations etc – you will pay the charges for the main application work elements and you must then add the cost of the thermal improvement works into the estimated cost of works part of the submission charge calculation (unless a ‘Material Alteration as described previously) - (Refer to our charges guidance sheets).

Building Control will only be concerned with the Conservation of Fuel and Power elements of the thermal element work – unless it constitutes a ‘Material Alteration or Building Work in their own right.

Your applications must include a full specification of all works to be undertaken to thermal elements, the works to be carried out to upgrade them in compliance with the regulations (including thermal performance of chosen materials) and the precautions to be taken to prevent condensation in the upgraded works.

PAYBACK CALCULATIONS.

The regulations allow for you to employ a suitably qualified person to provide a simple payback calculation for the cost of the thermal elements upgrading works or to prove the upgrading is not technically feasible. If the works do not achieve a simple payback of 15 years or less through energy cost savings or it is not technically possible - then the element should be upgraded to the best standard that is technically and functionally feasible and that would achieve a simple payback of 15 years or less.

This evidence should be submitted at the time of making your application for approval by Building Control.

EMERGENCY REPAIRS.

In certain situations it may be necessary to carry out emergency repairs to controlled fixed building services e.g. emergency repairs to heating and hot water systems and to thermal elements, works that would be controlled by the new regulations and notification may not be possible at the time of the repair.

If this is the case you must at the earliest opportunity after commencement submit a Building Notice to Building Control to resolve the situation – repairs must comply with requirements of Regulation L1.
EXEMPT BUILDINGS.

For a number of years certain building types and some domestic extensions were exempt Building Regulation control (see Schedule 2 extract below). As a result of Part P and these new regulations it is now possible that the some of the buildings listed will not be exempt control.

You must make a Building Regulation application and comply with the ‘energy efficiency requirements’ for the erection of previously exempt new buildings or extensions or undertaking work to the buildings listed in Schedule 2 below - if the following situations are present:

EXCEPT to Schedule VII extensions i.e. conservatory, porch, covered yard or covered way; or carport complying with the other provisions of the exemption clause.

CONTROLLABLE WORKS IF:
1. Building or extension or works to same falls within ‘Schedule 2 – except Class VII above); and
2. The building extension has a roof and walls enclosing it and it will use energy to condition the indoor climate i.e. cooling or heating; Note: for buildings who’s processes generates heat e.g. steel mill, are not using energy to condition the indoor climate if the heat comes from only the process; and
3. It is not building which is: (i) a Listed Buildings; or (ii) in a conservation area; or (iii) a schedule of monument: where compliance with the energy efficiency requirements would unacceptably alter their character or appearance;
4. It is not building which is used primarily or solely as places of worship*;
5. If it is a temporary building* with a planned life span of more than 2 years and for industrial sites**, workshops & non-residential agricultural buildings*** not having a low energy demand;
6. If it is a stand-alone building (not dwellings) with a total useful floor area of more than 50m².

Definitions:
"building" means the building as a whole or parts of it that have been designed or altered to be used separately; (there will be circumstances where part of a building designed to be used separately falls within an exemption (e.g. a workshop with a low energy demand), but another part may be designed to be used as a office. The office would need to comply with the energy efficiency requirements whereas the workshop would be exempt.

"Energy Efficiency Requirements" means the requirements of regulations 4A – thermal elements, 17C – target CO2 emissions and 17D – consequential improvements to energy performance and Part L of Schedule 1;*

* Modular or portable buildings that are hired for short periods are not exempt unless they are to be scrapped within 2 years;

**Industrial sites - covers each building or part of a building designed or altered to be used separately on an industrial site should be considered as to whether it falls within the exemptions or not.

Examples of industrial buildings and workshops with low energy demand; buildings or parts of buildings designed to be used separately accommodating industrial activities in spaces where the air is not conditioned; e.g. foundries, forging, other hot processes, chemical processes, etc. Where the air is not fully heated or cooled other than by local air heaters or air conditioners serving work stations or refuges dispersed amongst, but not separated from the industrial activities.

***Non- residential agricultural buildings with ‘low-energy demand’ include buildings or parts of buildings that are heated for a few days a year to enable plants to germinate but are otherwise unheated.
### SCHEDULE 2 - EXEMPT BUILDINGS AND WORKS.

#### CLASS I - Buildings controlled under other legislation
1. Any building the construction of which is subject to the Explosives Acts 1875 and 1923.

2. Any building (other than a building containing a dwelling or a building used for office or canteen accommodation) erected on a site in respect of which a licence under the Nuclear Installations Act 1965 is for the time being in force.

3. A building included in the schedule of monuments maintained under section 1 of the Ancient Monuments and Archaeological Areas Act 1979.

#### CLASS II - Buildings not frequented by people
A detached building -
(a) into which people do not normally go; or

(b) into which people go only intermittently and then only for the purpose of inspecting or maintaining fixed plant or machinery, unless any point of such a building is less than one and a half times its height from
   (i) any point of a building into which people can or do normally go; or
   (ii) the nearest point of the boundary of the curtilage of that building,

whichever is the nearer.

#### CLASS III - Greenhouses and agricultural buildings
1. Subject to paragraph 3, a greenhouse.

2. A building used, subject to paragraph 3, for agriculture, or a building principally for the keeping of animals, provided in each case that -
   (a) no part of the building is used as a dwelling;

   (b) no point of the building is less than one and a half times its height from any point of a building which contains sleeping accommodation; and

   (c) the building is provided with a fire exit which is not more than 30 metres from any point in the building.

3. The descriptions of buildings in paragraphs 1 and 2 do not include a greenhouse or a building used for agriculture if the principal purpose for which they are used is retailing, packing or exhibiting.

4. In paragraph 2, "agriculture" includes horticulture, fruit growing, the growing of plants for seed and fish farming.

#### CLASS IV - Temporary buildings
A building which is not intended to remain where it is erected for more than 28 days.

#### CLASS V - Ancillary buildings
1. A building on a site, being a building, which is intended to be used only in connection with the disposal of buildings or building plots on that site.
SCHEDULE 2 - EXEMPT BUILDINGS AND WORKS Cont’d.

2. A building on the site of construction or civil engineering works, which is intended to be used only during the course of those works and contains no sleeping accommodation.

3. A building, other than a building containing a dwelling or used as an office or showroom, erected for use on the site of and in connection with a mine or quarry.

CLASS VI - Small detached buildings

1. A detached single storey building, having a floor area which does not exceed 30m², which contains no sleeping accommodation and is a building -
   (a) no point of which is less than one metre from the boundary of its curtilage; or
   (b) which is constructed substantially of non-combustible material.

2. A detached building designed and intended to shelter people from the effects of nuclear, chemical or conventional weapons, and not used for any other purpose, if -
   (a) its floor area does not exceed 30m²; and
   (b) the excavation for the building is no closer to any exposed part of another building or structure than a distance equal to the depth of the excavation plus one metre.

3. A detached building, having a floor area which does not exceed 15m², which contains no sleeping accommodation.

CLASS VII - Extensions

The extension of a building by the addition at ground level of -
   (a) a conservatory, porch, covered yard or covered way; or
   (b) a carport open on at least two sides;

where the floor area of that extension does not exceed 30m², provided that in the case of a conservatory or porch which is wholly or partly glazed, the glazing satisfies the requirements of Part N of Schedule 1.

MAKING AN APPLICATION FOR PREVIOUSLY EXEMPT BUILDINGS:

Full details must be submitted of the energy efficiency provisions to be carried out. Charges will be based on cost of the thermal improvement works, unless the work being undertaken constitutes a ‘Material Alteration’ in its own right and requires the submission of an application anyway – then the charges will be based on the full cost of the works proposed - subject to a minimum charge of the lowest charge on our estimated cost of works schedule (Refer to our charges guidance sheets).
### Changing a Building's Energy Status

This is a completely new area of coverage, where by virtue of undertaking certain works to either a commercial or domestic building you change the buildings or part of the buildings energy status, the regulations regarding energy efficiency improvements applies. Examples – domestic garage conversion / providing heating say to an unheated warehouse etc.

You will be required to submit a Building Regulation application for the works (see below) and comply with the provision of Building Regulation Part L.

"Change to a building's energy status" - means any change which results in a building becoming a building to which the energy efficiency requirements of these Regulations apply, where previously it was not;"

"Building" - means the building as a whole or parts of it that have been designed or altered to be used separately.

### Making an Application for Changing a Building's Energy Status:

Full details must be submitted of the change in energy status and the energy efficiency provisions to be carried out. Charges will be based on cost of the thermal improvement works, unless the work being undertaken constitutes a ‘Material Alteration’ in its own right and requires the submission of an application anyway – then the charges will be based on the full cost of the works proposed - subject to a minimum charge of the lowest charge on our estimated cost of works schedule (Refer to our charges guidance sheets).

### Material Change of Use

Where you change the use of the premises or part of the premise to any of the uses below, you must submit a building regulation application and comply with the requirements of Part L – Conservation of Fuel and Power.

(a) the building is used as a dwelling, where previously it was not;

(b) the building contains a flat, where previously it did not;

(c) the building is used as an hotel or a boarding house, where previously it was not;

(d) the building is used as an institution, where previously it was not;

(e) the building is used as a public building, where previously it was not;

(f) the building is not a exempt building described in Classes I to VI in Schedule 2, where previously it was;

(g) the building, which contains at least one dwelling, contains a greater or lesser number of dwellings than it did previously.

(h) the building contains a room for residential purposes, where previously it did not;

(i) the building, which contains at least one room for residential purposes, contains a greater or lesser number of such rooms than it did previously.

(j) the building is used as a shop, where previously it was not.
CONSEQUENTIAL IMPROVEMENTS TO ENERGY PERFORMANCE.

A new regulation 17D requires the application of the new energy efficiency requirements of Part L to an existing building with a total useful floor area over 1,000m² where the proposed building work consists of or includes —

(a) an extension;

(b) the initial provision of any fixed building services; or

(c) an increase to the installed capacity of any fixed building services.

However nothing in this requirement needs to be carried to the existing building, if it is not technically, functionally and economically feasible (see ‘Payback Calculations’ below).

“fixed building services” - means any part of, or any controls associated with —

(a) fixed internal or external lighting systems, but does not include emergency escape lighting or specialist process lighting; or

(b) fixed systems for heating, hot water service, air conditioning or mechanical ventilation;"

PAYBACK CALCULATIONS.

The regulations allow for you to employ a suitably qualified person to provide a simple payback calculation for the cost of the thermal elements upgrading works or to prove the upgrading is not technically feasible. If the works do not achieve a simple payback of 15 years or less through energy cost savings or it is not technically possible - then the element should be upgraded to the best standard that is technically and functionally feasible and that would achieve a simple payback of 15 years or less.

This evidence should be submitted at the time of making your application for approval by Building Control.

MAKING AN APPLICATION FOR CONSEQUENTIAL IMPROVEMENTS TO ENERGY PERFORMANCE.

Full details must be submitted of the energy efficiency provisions to be carried out. Charges will be based on cost of the thermal improvement works, unless the work being undertaken constitutes a ‘Material Alteration’ or ‘Building Work’ in its own right and requires the submission of an application anyway – then the charges will be based on the full cost of the works proposed - subject to a minimum charge of the lowest charge on our estimated cost of works schedule (Refer to our charges guidance sheets).
MATERIAL ALTERATION OF SERVICES.

The provision, alteration or extension of a controlled services or fittings in or in connection with a building; is considered to be a ‘Material Alteration’ of a building or controlled services or fittings - a Building Regulation application must be submitted for such work.

There has been little change to the provisions under this requirement, but because ‘Material Alteration’ to controlled services or fittings are covered under the Part L and the provisions have been extended some changes have occurred.

“Controlled services or fittings are controlled service or fitting” - means a service or fitting in relation to which Part G, H, J and L.

Examples of such are alterations of or provisions of: “new above and below ground drainage provisions; installation of new sanitary appliances and sinks; heating appliances and systems, fixed internal or external lighting systems; but not emergency escape lighting or specialist process lighting; fixed systems for heating, hot water service, air conditioning or mechanical ventilation;"

Refer to Guide 3 for exemptions of some minor works to Controlled services or fittings.

An alteration is material for the purposes of these Regulations if the work, or any part of it, would at any stage result -

(a) in a building or controlled service or fitting not complying with a relevant requirement where previously it did; or

(b) in a building or controlled service or fitting which before the work commenced did not comply with a relevant requirement, being more unsatisfactory in relation to such a requirement.

In paragraph (2) "relevant requirement" means any of the following applicable requirements of Schedule 1, namely –

Part A (structure)
paragraph B1 (means of warning and escape)
paragraph B3 (internal fire spread - structure)
paragraph B4 (external fire spread)
paragraph B5 (access and facilities for the fire service)
Part M (access to and use of buildings).