

New Energy Standards For Dwellings

Part L 2007

The new energy regulations for dwellings (Technical Guidance Document L) have been published.

NEW REQUIREMENTS

- A reasonable proportion of dwelling energy needs to be provided by renewable energy which should be either 10kWh/M2/annum of water or space heating or 4kWh/M2/annum electrical or combination. This means that each dwelling must now have either a heat pump, solar water heater, wood pellet boiler or a windmill. Apartments must also comply and in many cases the only practical solution would be central biomass heat generation or combined heat and power systems.
- The building owner must be provided with details of how the building and its services can be operated and maintained. (a homeowners manual). The regulations are silent as to who should provide this manual (architect? vendor?)
- The amended part L (2007) applies to dwellings only. For all other buildings the 2006 Part L applies. Yes, there are now two Part L's in operation.
- It is intended that regulations would be tightened further by 2010 to achieve zero carbon rating for dwellings. Buildings should now be designed to be "upgradable in the future to reduce further carbon emissions".
- Attached unheated and or non domestic spaces (such as garages and surgeries) should be insulated to dwelling standards as they have the capacity for future conversion as living space.
- Attached conservatories now to be treated as part of the dwelling.
- TGD L also applies to extensions and "material alterations" and replacement of building fabric.
- Increased risk of condensation is recognised as an issue to be addressed in designing to achieve the new standards.
- It is the intention to revise TGD F (ventilation) to take account of new part L.

- The MPCDER (maximum carbon dioxide emission rate) is now replaced with MPEP (maximum permitted energy performance coefficient) and MPCPC (maximum permitted carbon performance coefficient). These compare the performance of the proposed dwelling with the performance of a reference dwelling. The reference dwelling criteria has changed from TGD L 2006. The DEAP software is necessary to calculate this.
- MPEPC and MPCPC to be assessed at completion stage.
- For certain dwelling types the use of renewables may prove the most practical way of complying with MPEPC and MPCPC.
- A new publication, "Heating and domestic hot water systems for dwellings-achieving compliance with Part L" is promised.
- Mandatory air pressure tests. Even for one-off house. Include the details of the test in the building manual.

OPERATIVE DATES

They will be operative from 1st July 2008. Where planning approval or permission has been applied for on or before 30th June 2008 and substantial work has been completed by 1st July 2009 the 2006 regulations will apply.

Except that after 31st March 2008, where works involve the installation of an oil or gas boiler, the installation must comply with Part L 2008, all gas and oil boilers must be at least 86% efficient.

DEAP thinking.

The most significant recent development in housing design was the introduction of the DEAP software. This is both a design tool and a means of assessment for compliance with Part L of the Building Regulations and Building Energy Rating (BER).

Deaton Lysaght have been using the software for some months now and find it to be invaluable allowing the designer to assess the energy implications of any proposed changes to the design or specification of a house. In this way the house can be modified to achieve a good BER and this can be discussed with the client at design stage. It should be noted that many of the design decisions which

relate to energy use need to be made before Planning Permission is obtained as they may affect the external design and appearance of the dwelling.

So what are the principal factors which affect Part L and BER?

Firstly, it should be remembered that compliance with Part L is a legal requirement as is issuing a BER rating on all new houses (and all houses offered for sale or rent after 2008). BER is a consumer label only.

Achieving a good BER rating is not a legal requirement.

"Organic architecture seeks superior sense of use and a finer sense of comfort, expressed in organic simplicity."

Frank Lloyd Wright

RENEWABLE ENERGY

One of the most significant changes is that all new dwellings will be required to have a renewable energy component regardless of its actual energy demand.

A reasonable minimum level of renewable energy is considered to be any of the following:

- 10 kWh/SqM/annum contributing to domestic hot water, space heating or cooling
- 4kWh/SqM/annum of electrical energy
- a combination of these with the equivalent effect.

Renewable energy systems include: solar thermal, solar photo-voltaics, biomass, biofuels, heat pumps, etc.

This will present a challenge for apartment developments where communal energy systems (such as combined heat and power) may have to be considered.

BUILDING ELEMENTS

The insulation standards for individual building elements (U Values) have not changed but designers will find that it is necessary to adopt higher insulation values in order to keep the buildings primary energy use and carbon output within the limits of Part L.

AIRTIGHTNESS TESTING

Airtightness testing will now be mandatory for new dwellings.

For 4 house types or less one test is required. For 4 to 40 house types two tests are required.

The air pressure test must be certified by a 'competent person' in accordance with IS EN 13829:2000.

The results of the air test must be provided to the "owner of the building"

USER INFORMATION

The regulations require that the building owner be provided with "sufficient information about the building, the fixed services and their maintenance requirements so that the building can be operated in such a manner as to use no more fuel and energy than is reasonable in the circumstances". A homeowners manual?

BER ASSESSMENTS

Deaton Lysaght are pleased to announce that they will shortly be offering a BER certification service.

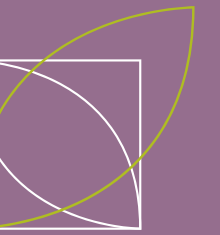
NOTE

The advice in this newsletter is qualified and is published without prejudice. It is recommended that you seek further professional advice in respect of the matters covered in this newsletter.

Deaton Lysaght Architects

Progress Report 2

CLASAC CENTRE FOR TRADITIONAL ARTS



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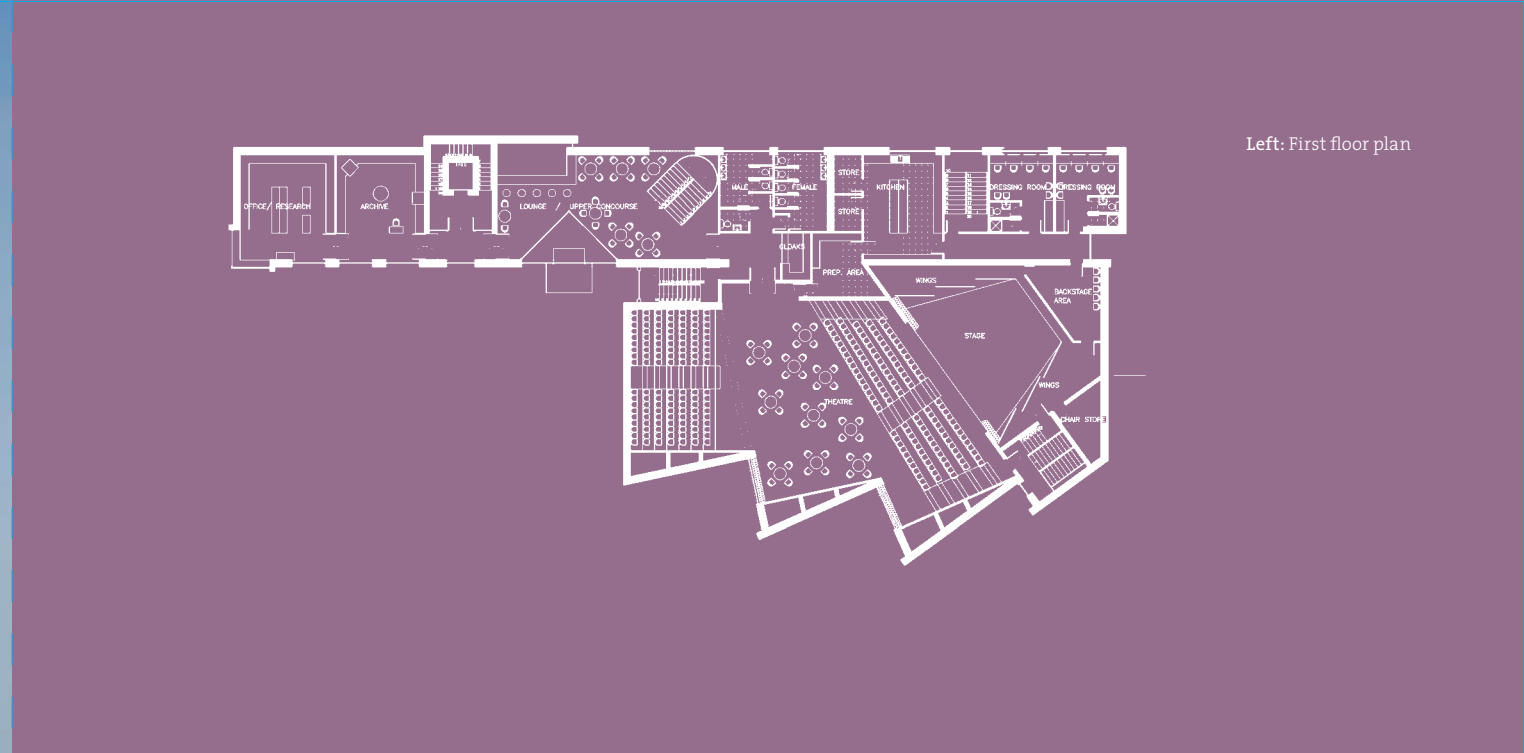
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This progress report is produced
from 100% post-consumer
recycled waste.



Below: Front elevation view



Left: First floor plan

CLASAC Traditional Arts Centre

has been developed to act as a regional centre for the promotion of the traditional arts in accordance with Comhaltas Ceoltoiri Eireann's 5 year programme.

The centre will promote Irish music, song, dance, drama and other art forms associated with Ireland's rich cultural heritage. The new centre will provide facilities for performance and teaching, rehearsal, recreation and research.

The centre consists of two distinct forms; the angular theatre and the geometric ancillary building. The main space of the 320 seat theatre is designed as 4 rotating, stepped segments to make it a more informal and dynamic space and allow sub-division for smaller performances. The theatre is externally clad with silver aluminium panels with double height windows and cedar cladding in the joints between the segments.

As one passes by the centre on the Alfie Byrne Road the glazed and cedar clad joints of the segments sequentially reveal themselves and are then concealed by the protective fin walls of silver aluminium cladding. The segments are capped by distinctive overhanging angular roofs. A semi-sunken bar and dancing room form the base of the theatre building expressed externally in grey render. The geometric ancillary wing

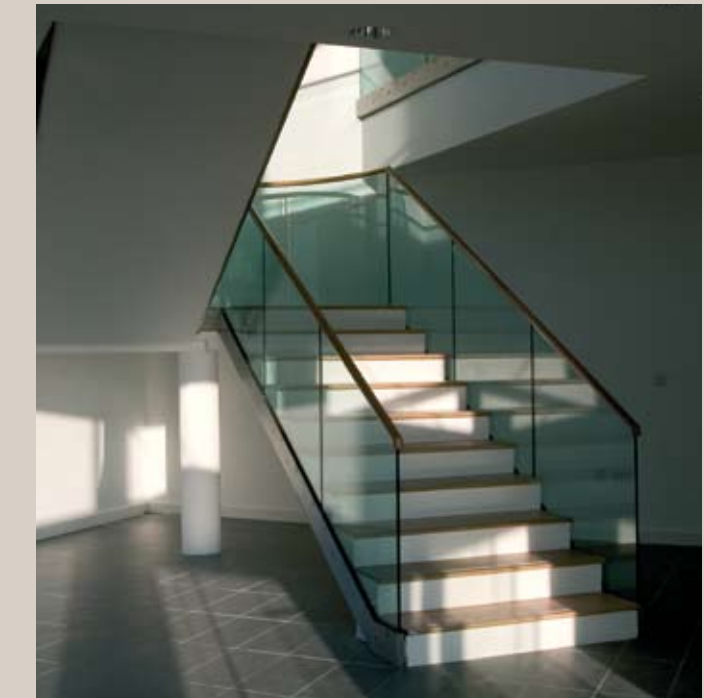
accommodates offices and archive, classrooms, dressing rooms, recording studio, kitchen and wcs. The main entrance is at the junction with the theatre building. This long rectilinear wing acts as a buffer between the theatre and the railway track behind.

The materials reflect a juxtaposition between modern and more natural materials; the modern sliver aluminium and grey render with the more natural iroko windows and cedar cladding and granite cladding. This theme is carried to the interior with oak and stone tiled floors contrasting with white plaster walls and glass and stainless steel balustrades.

A semi-sunken amphitheatre for informal outdoor performance is the focus of the outdoor space. There is also a large roof terrace on the second floor.

This is where great things will happen.

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- Services Engineers**
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Conor Collins, Jimmy Cullen
- Acoustic Consultants**
AWN Consulting
Damian Kelly
- Main Contractor**
Rohcon
Dennis Mc Carthy, Eddie Egan, Ted Mc Alonan, Chris Miller
- Photographer**
Andy Mason



Left: Feature entrance staircase
Below: View from court

