



BER Assessors – Dwellings Technical Bulletin

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The archive of previous bulletins is available under
http://www.sei.ie/Your_Building/BER/BER_FAQ/FAQ_BER/Assessors/SEI_BER_Reports.html

Note that there will be no BER technical bulletin in December '09. The next technical bulletin will be published in January 2010.

1 Demonstrating compliance with Building Regulations TGD L

1.1 Compliance with TGD L revisions prior to TGD L 2005

DEAP provides the facility to check that a new dwelling complies with various requirements in Building Regulations TGD L 2008 and 2005 including:

- Sufficient fabric insulation levels;
- Minimum level of energy provision from renewable sources (TGD L 2008 only);
- Maximum Permissible Energy Performance Coefficient is not exceeded (TGD L 2008 only);
- Maximum Permissible Carbon Performance Coefficient is not exceeded (TGD L 2008 only);
- Maximum Permitted CO₂ Emission Rate is not exceeded (TGD L 2005 only).

As stated in the Code of Practice for BER Assessors:

“If the Building Regulations Part L applies to the building being rated and the BER Assessor finds that it does not conform to the requirements of Part L, then the BER Assessor is obliged to notify the client and to identify which elements of the design do not conform to these Regulations.” It is important that BER Assessors comply fully with this requirement.

Building Regulations TGD L 2008 is available under: <http://www.environ.ie/en/TGD/> . The transition periods stating when this document came into effect are described in the July 2009 BER Technical Bulletin.

TGD L 2005 and 2002 are available under:

<http://www.environ.ie/en/Publications/DevelopmentandHousing/BuildingStandards/> .

The May 2009 BER Technical Bulletin differentiates new dwellings from existing dwellings. DEAP can be used to check CO₂ emissions and energy consumption compliance for new dwellings under TGD L 2008 and TGD L 2005. If an Assessor is asked by a client to carry out a BER on a new dwelling to which TGD L 2002 applies, DEAP TGD L 2005 fabric insulation compliance checking can be used instead for Elemental Heat Loss and Overall Heat Loss method. TGD L 2002 and TGD L 2005 fabric insulation requirements are the same. Compliance checking using the Heat Energy Rating method should be calculated as per Section 1.4 of TGD L 2002. The BER Assessor should also ensure that the client is made aware of TGD L 2002 sections on:

- Thermal bridging (Section 1.5);
- Air Infiltration (Section 1.6);
- Heating Controls (Section 2);
- Insulation of Hot Water Storage Vessels, Pipes and Ducts (Section 3).

2 Guidance on DEAP data collection and data entry

2.1 Room in roof FAQ amendment

The “room in roof” approximation for existing dwellings in DEAP allows the BER Assessor to enter a room in roof as a single heat loss element with an approximated area and a single U-value.

In cases where a single U-value clearly does not apply to the entire room in roof heat loss area, then the approximation should not be used.

As an example, if a BER Assessor has clear evidence that the sloping heat loss facades of the room in roof have had additional insulation retrofitted, then the default U-value does not apply to those sloping facades. Conversely, if the horizontal heat loss roof facade is inaccessible, then the default U-value still applies to that horizontal section. Therefore, the single default U-value, as applied in the room in roof approximation method, cannot be used and the heat loss elements of the room in roof must be entered separately in DEAP.

In summary, if a non-default U-value applies to a heat loss façade, then that non-default U-value should be applied to that heat loss façade in DEAP. All other heat loss roofs or walls are entered with default U-values separately in DEAP.

Step 5 of the room in roof FAQ has been amended with this clarification:

http://www.sei.ie/Your_Building/BER/BER_FAQ/FAQ_DEAP/Building_Elements/How_do_I_enter_a_“room_in_roof”_in_DEAP_.html

2.2 When to select wood fuels in DEAP

As per section 10.3.3 of the DEAP manual, wood logs, pellets or chips may be selected as the fuel type for an appliance if its design is such as to prohibit the use of any other fuel type. This can be demonstrated by one of the following:

- Documentation showing that the product warranty is void if the product is used with any fuel type other than wood fuels ;
- Listing of the product under http://www.hetas.co.uk/pdfs/Part_1_Appliances.pdf showing that the appliance burns wood fuels only.

In cases where there is any doubt about fuel type selection, then wood fuels should not be selected as the fuel type in DEAP assessments or for the purposes of demonstrating TGD L compliance. The appropriate choice of fuel should be made from one of option 2, 3 or 4 in DEAP manual Section 10.3.3.

Further guidance on selection of the appropriate solid fuel type is given in the October 2009 Technical Bulletin under http://www.sei.ie/Your_Building/BER/BER_FAQ/FAQ_BER/Assessors/October_Technical_Bulletin.pdf.

2.3 Open fires with “fire doors”

Some open fires may have been retrofitted with an enclosure or door to control air flow from the room to the fireplace. When accounting for this in DEAP, the ventilation loss can be entered as an open flue rather than a chimney provided the enclosure minimum open area is no more than the equivalent of a circle of diameter 200mm. The enclosure is likely to have controllable ventilators between the fireplace and the room.

It is unlikely that the efficiency of the enclosure combined with the exact type of fireplace in the dwelling will have been tested to the relevant standards by an accredited laboratory. When entering the efficiency of this fireplace and enclosure in DEAP, the default 30% efficiency from DEAP Table 4a is to be used.

2.4 Central heating pumps

The March and May 2009 BER Technical Bulletins provided guidance on entering gas boiler flue fans and oil boiler fuel pumps in the “Distribution System Losses and Gains” section of DEAP. In the case of wet heating systems (typically using radiators or underfloor heating), the heating system is likely to have one or more central heating pumps installed. These are accounted for under “Distribution System Losses and Gains” for individual heating systems in DEAP. Where no central heating pump is entered in DEAP, substantiating evidence needs to be retained by the BER Assessor to this effect. In the absence of this evidence, a central heating pump must be entered in the DEAP assessment.

2.5 Dwellings with chimneys and no secondary heating in DEAP

When a dwelling has a chimney or chimneys entered in DEAP, the dwelling will generally have secondary space heating entered in the DEAP assessment. This secondary space heater may or may not be the open fire associated with the chimney, subject to guidance in DEAP Appendix A. The following are sample scenarios where the open fire would not be considered as secondary heating:

- Another heat source is the secondary space heater (subject to guidance in DEAP Appendix A);
- The hearth below the chimney is not capable of supporting an open fire (the chimney is still counted in this case, but the actual fireplace cannot be used as a heat source);
- There are several open fireplaces in the dwelling and, based on guidance in Appendix A, these are chosen as the main space heating system.

With the exception of these cases, it is highly likely that a dwelling with one or more chimney would have an open fire selected as secondary space heating.

2.6 Entering primary circuit loss type

Table 3 in the DEAP manual defines different levels of heat loss between the main water heating system and the hot water store. While some of the Table 3 options have the same kWh/yr primary circuit energy loss as other Table 3 options the most appropriate option must be selected at all times.

In addition, when specifying that the primary pipework is insulated, bear in mind that this refers to **all** of the pipework between the primary water heater and the water storage. Where some of the pipework is not visible (if for example it runs through walls or floors), then it must be assumed to be uninsulated unless it can be proven to be insulated.

2.7 Floors above commercial premises

Section 3.5 of the DEAP manual provides options for determining the U-value of floors between a new dwelling and a non-domestic premises.

These floors are considered:

- a) to have zero heat loss if the spaces directly below the dwelling are normally heated to similar levels as the dwelling (i.e. heated to a similar pattern and to similar temperatures), or
- b) as heat loss elements to an unheated space if the spaces below are unheated, heated only infrequently or heated only to a low level, or
- c) as if they were external elements but with their U-value halved if the spaces are heated to a different pattern to that dwelling (e.g. commercial premises).

Where an existing dwelling is above a space which is heated to a different pattern than that of a dwelling, then the default U-value of $1.0\text{W/m}^2\text{K}$ from Section S6.5 of the DEAP manual applies. This is half of a typical value which would be attained by an uninsulated exposed element. However, if there is enough information available (and proof thereof) to calculate the actual floor U-value, then this should be done, and the result halved as per DEAP Section 3.5(c) to attain the floor U-value for the purposes of the DEAP assessment.

3 BER assessment data access

3.1 What data should be supplied to the homeowner/client

After a BER Assessor carries out and publishes a BER for a client, the client is entitled to access to the BER Certificate and the Advisory Report.

In addition, Statutory Instrument No. 666 of 2006, Article 20(4)(c) details that the “building owner, or the agent of that building owner, via a BER Assessor” has access to “a data file or other extract from a register relating to a BER assessment for a particular building”.

SI 666 is available under:

<http://www.environ.ie/en/Legislation/DevelopmentandHousing/BuildingStandards/FileDownload.1700.en.doc>

The “BER data file” referred to above is defined in SI 666 of 2006 as “an electronic file which contains a report on the outcome of a BER assessment of a building in a form approved by the issuing authority, which is completed by a BER assessor and provided to the issuing authority for the purpose of notifying it of the record to be made or updated on the BER register in respect of that particular building, and shall be deemed to include any calculations and related data or documents accompanying that report”.

In other words, the client has a right to the BER “XML” file should they wish to obtain it.

3.2 Provision of data to other parties

Section 10 of the BER Assessor’s Code of Practice details the obligations on BER Assessors in relation to BER data confidentiality and data protection:

http://www.sei.ie/Your_Building/BER/BER_Assessors/Code_of_Practice.pdf

In particular, a BER Assessor is required to abide by the following confidentiality requirements:

- To keep confidential the identity of applicants and BER records.
- To obtain in writing the consent of the client to hold discussions with third parties concerning BER assessments that he/she has been instructed to carry out, including discussions with architects, engineers, and prospective suppliers or suppliers of building materials, components or services.

In relation to determining compliance with Part L of the Building Regulations, TGD L 2008 states that “Those involved in the design and construction of a building may be required by the relevant building control authority to provide such evidence as is necessary to establish that the requirements of the Regulations are being complied with.”

Consequently, a client may direct a BER Assessor to provide information to a Building Control Authority in relation to the dwelling’s energy performance and/or in relation to compliance with the Building Regulations.

The Building Control Act described under

<http://www.environ.ie/en/DevelopmentandHousing/BuildingStandards/> details the powers of enforcement and inspection for Building Control Authorities.