Modular and Portable Building Part L 2010 
Building Control Compliance Guidance

This document provides specific guidance to building control bodies (BCB) and Approved Inspectors of compliance to the Building Regulations Part L 2010 and the Energy Performance of Buildings Directive (EPBD), inclusive of the provision of Energy Performance Certificates (EPC) for the Modular and Portable Building Industry.

Published February 2011 
Version 1.1

More Information 
www.mpba-epc.co.uk
This document provides specific guidance and support to assist the compliance process for modular and portable buildings to meet the requirements of ADL2 and the Energy Performance of Buildings Directive (EPBD).

Note: The content of this document should not deviate from the compliance requirement required by the overall building regulations and other approved documents.

The flowchart on the following page provides clear guidance on what level of compliance is required for a specific application.

Following the flowchart each special consideration is detailed for modular and portable building applications.

**Exemptions**

Modular buildings exempt from Approved Document Part L are limited to
- Buildings under 50m²
- Buildings with a low energy demand
- Temporary buildings

A temporary building is defined as a building that is used on a single site for a period less than two years and then destroyed.
Are you constructing, installing, selling or hiring out a **modular/portable building**?

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Is the building:

- Less than 50sqm
- Temporary use, to be installed for less than 2 years at a single location **and then destroyed**
- Of low energy demand (i.e. The building is un-heated)
- A place of worship

The proposed building does not need to comply with ADL2A.

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Is this a building being **sold** from one party to another and not being installed in a fixed location by the seller?

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Is the building **new** to be installed for more than 2 years in one location?

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Is the building **new** to be installed for more than 2 years in one location, where the building envelope incorporates more than 70% of sub-assemblies manufactured prior to 01/10/2010?

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Is the building to be used as a hire building to be installed for less than 2 years?

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The provider of the building is a member of a **Generic Calculation Scheme**

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The provider may utilise a generic calculation from your purchased library representing the closed fit to the building on hire (Age, Type, Location)

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You have demonstrated compliance with ADL2A and ADL2B (Please check separately for EPBD compliance)

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Compliance is required fully to ADL2A 2010 with a full carbon calculation and supporting information. (Where appropriate the calculation will account for the pre 01/10/2010 sub-assemblies.)

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If the building is extending an existing building >1000m² cost effective consequential improvements are **also** required to the existing building as per ADL2B section 6.

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Flowchart to demonstrate compliance to Building Regulations ADL2A 2010 and EPBD
Are you constructing, installing, selling or hiring out a modular/portable building?

Is the building:
- • Less than 50sqm
- • Temporary use, to be cited for less than 2 years
- • Of low energy demand (i.e. The building is un-heated)
- • A place of worship

Is the building to be used as a hire building to be installed for less than 2 years in one location?

Does an existing EPC exist for the building in the current location that is still valid.

You have demonstrated compliance with EPBD

The proposed building does not need to comply with EPBD.

Under the current definition of temporary use in EPBD an EPC is not legally required. However, members of the MPBA-EPC generic scheme provide a voluntary EPC for illustration.

A new EPC and RR must be commissioned for the building and issued to the new owner/occupier on completion of installation or sale

The existing EPC and RR may be used for the transaction. The existing documents must be issued to the new owner/occupier

Refer back to CLG Guidance Documentation for EPBD

1. Introduction
2. Compliance Flowchart
3. Carbon Calculations
4. Limits on design flexibility
5. Limits on solar gain
6. Quality of construction
7. Provision of information
8. Resources
Special Considerations for Modular and Portable Buildings

The following special considerations have been approved and included within the Approved Document L2A by CLG.

Criteria One | Carbon Calculation

All modular buildings other than those exempt are required to issue a compliant carbon calculation. The calculation must be specific to the building unless the building is being hired for a period less than two years.

For permanent buildings, the submission to building control would be no different in format to that of any other submission received by building control for traditional construction.

If a modular/portable building is being used for hire purposes then a generic calculation may be issued to building control to demonstrate compliance. The calculation, which would be accompanied by an Energy Performance Certificate (EPC), would be from one of four packs issued by the MPBA-EPC compliance scheme and should clearly be marked with the address and membership number of the issuer. The validity of the issuer should be checked at www.mpba-epc.co.uk.

The generic calculation and certificate issued should be the closest size, location, activity and year of construction to the building on hire.
Criteria One | Carbon Calculation (continued)

Each generic submission should include the provision of:

- BRUKL Document
- Energy Performance Certificate
- Accompanying explanatory letter from compliance scheme

The project name (A) on the BRUKL should correspond to the relevant generic configuration issued and the addresses (B) on both documents should reflect the address of the generic scheme member issuing the certificate and can be checked for validity at www.mpba-epc.co.uk
Criteria One | Carbon Calculation (continued)

A unique calculation can be issued to demonstrate compliance for a hired building as an alternative to a generic at the discretion of the supplier. A reason for this may be that the supplier wishes to demonstrate a higher level of compliance and improved EPC rating.

Where calculations are carried out there are special considerations available for selection by the energy assessor to account for the inclusion of sub-assemblies in the construction manufactured before 2010.

Criteria Two | Limits on design flexibility

Due to the unique construction properties of a modular or portable building special considerations are made within the calculation software to enable/allow the use of electric heating as this is the only practical heating method within the construction.

In addition for a modular building where more than 70% of its external envelope is to be created from sub-assemblies manufactured prior to 1st October 2010 it is not required to comply with the full requirement of criteria two reduction factors.

Building control officers should ensure that supporting documentation is received to support the construction year of the sub-assemblies.

This guidance applies irrespective of how long the modular building is to be sited in a given location, and therefore covers the retrospective Reg 17C calculation for an old module.
Criteria Two | Limits on design flexibility (continued)

Where modules constructed prior to October 1st 2010 are incorporated building control should expect to see the TER adjustment factor in section 1.6 of the BRUKL document.

**Criterion 1: The calculated CO₂ emission rate for the building should not exceed the target**

| CO₂ emission rate from the notional building, kgCO₂/m².annum | 26.3 |
| Target CO₂ emission rate (TER), kgCO₂/m².annum | 46.1 |
| Building CO₂ emission rate (BER), kgCO₂/m².annum | 37.3 |
| Are emissions from the building less than or equal to the target? BER <= TER |
| Are as-built details the same as used in the BER calculations? Separate submission |

1.6 TER adjustment factor for modular and portable buildings | 1.75 |

Where the TER adjustment factor in section 1.6 of criteria one is greater than 1.0 (A) the element value of a wall is not expected to meet the required standard (B) where the reasonable provision is demonstrated through satisfying criterion one.

**Criterion 2: The performance of the building fabric and the building services should achieve reasonable overall standards of energy efficiency**

The building does not follow guidance in England and Wales Building Regulations Part L 2010

2 a Building fabric

<table>
<thead>
<tr>
<th>Element</th>
<th>U</th>
<th>U</th>
<th>Surface where the maximum value occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall**</td>
<td>0.35</td>
<td>0.37</td>
<td>0.48</td>
</tr>
<tr>
<td>Floor</td>
<td>0.25</td>
<td>0.17</td>
<td>0.2</td>
</tr>
<tr>
<td>Roof</td>
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<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Windows***, roof windows, and rooflights</td>
<td>2.2</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Personnel doors</td>
<td>2.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vehicle access &amp; similar large doors</td>
<td>1.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>High usage entrance doors</td>
<td>3.5</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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A B
Criteria Three | Limiting the effect of solar gain

There are no special considerations for modular buildings under criteria three.

Criteria Four | Quality of Construction

Where the floor area is less than 500m², a modular building is not required to carry out an air tightness test and can assume an air permeability value of 15m³/h·m²@50PA.

However, the building must still meet the requirement of criteria one in full.

As an alternate approach for buildings with a floor area less than 500m², type test data can be used if a test has been carried out by the manufacturer. A certificate of testing issued by a registered ATTMA member to support the figure used within the calculation for criteria one.

All buildings greater than 500m² require an air tightness test to be carried out on completion.

There will be no requirement to demonstrate calculations in support of thermal bridging until such a time when accredited schemes are available.

Criteria Five | Provision of information

Within the scope of all submissions, a modular building must also supply an Energy Performance Certificate for all new construction on completion as part of the as built documentation.
Further Resources

If you register your details at [www.mpba-epc.co.uk](http://www.mpba-epc.co.uk) you will be provided with a login to access the following resources.

- Full details of MPBA-EPC generic calculation and certification scheme for modular hire buildings where on placed on a site for less than two years.
  - Ability to check authenticity
  - Member details
  - Technical details
  - Guidance for recipients
  - Complaints procedure
- Detailed guidance documentation for download.
- Access to online technical support for specific cases

Further details and assistance can be provided to building control officers and approved inspectors registering at [www.mpba-epc.co.uk](http://www.mpba-epc.co.uk).