

## Article 7 and Article 10 of the EPBD -Building Certification and the Training, Qualification and Quality Assurance Requirements for Independent Experts

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### Introduction

1. Article 7 of the EPBD requires that '*Member States shall ensure that, when buildings are constructed, sold or rented out, an energy performance certificate is made available to the owner or by the owner to the prospective buyer or tenant, as the case might be. The validity of the certificate shall not exceed 10 years.*'
2. Article 7 of the EPBD also requires that '*The energy performance certificate for buildings shall include reference values such as current legal standards and benchmarks in order to make it possible for consumers to compare and assess the energy performance of the building. The certificate shall be accompanied by recommendations for the cost-effective improvement of the energy performance.*'
3. In addition, Article 10 of the EPBD requires that '*Member States shall ensure that the certification of buildings, the drafting of the accompanying recommendations and the inspection of boilers and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts, whether operating as sole traders or employed by public or private enterprise bodies.*'
4. The group's objective will be to report to ODPM and DEFRA by the end of the Part L consultation period with recommendations for survey specification(s), surveyor qualifications and experience, how the obligation(s) may be most effectively conveyed, how they could be policed, and the time and resources that will be needed to prepare for launch.

### Scope of the survey

5. The interpretation of the Article 7 requirement proposed is that the energy rating of a building should be determined using a common robust methodology. A working group has been assembled to determine suitable methodologies for dwellings and buildings other than dwellings. For dwellings it is suggested that a revised version of the Standard Assessment Procedure for the Energy Rating of Dwellings (SAP) would be a suitable methodology for dwellings. A discussion paper was produced by the working group<sup>1</sup> to cover buildings other than dwellings.
6. The methodology working group has suggested that there are two possible types of rating for buildings other than dwellings:
  - a) **The Design and Asset Ratings**; these are measures of the intrinsic performance potential of the building, and rate the standard of the building fabric and building services equipment. The design rating can be calculated before the building is built and the asset rating is calculated for the building as built. The asset rating should be of particular interest to those purchasing or leasing a complete building, since the asset is the commodity they will be taking on.
  - b) **The Operational Rating**; this is a measure of in-use performance of the building. This will be influenced by the quality of the building (as measured by the Asset Rating), but also by the way the building is maintained and operated.These measures are discussed more fully in a separate paper<sup>2</sup>.
7. The methodology chosen will have a significant impact on the **skill level** required of the surveyors / independent experts and on the **cost** of providing certification. It is envisaged that a Calculation Tool will be made available into which relatively simple information on the building structure and fittings can be entered. The asset rating would only require information on the

## Articles 7 and 10 of the EU Energy Performance of Buildings Directive

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construction type and fittings; the operational rating would require information on the efficiency of use of the building and may require an analysis of energy bills etc.

8. Reference 2 states that 'The principal purpose of the Design or Asset Rating is to compare two or more buildings so that the prospective purchaser/tenant can make an informed investment decision. That means that to ensure like-for-like comparison, the activity schedules used to calculate the Asset Ratings should be the same for all buildings. This means that each building should be assigned to a particular building class (office, retail, industrial, etc), and then each area within that building should be assigned to a particular activity (open plan office, cellular office, circulation space, etc), each having associated with it profiles of internal gains (people, lights, small power) and required environmental conditions (temperature, humidity, lighting level).
9. These activity schedules need to be defined in a database, and users of the Asset Rating tool can only select activity schedules from this pre-defined database. In order to generate the required consistency of rating, it is essential that this list of pre-defined activities be very short, so there can be little or no ambiguity as to how each space should be represented. It is important to accept that the Asset Rating need not reflect the way the building is actually being used by the current occupant. Its purpose is to reflect what the performance of the building would be, when operated according to a standard schedule.'
10. Reference 2 also states that when considering operational ratings, 'measured consumption is specific to the way a particular building is currently being used. In order to allow it to be compared to benchmark data, the actual consumption and the benchmark information have to be brought to a common base. The CIBSE TM22 Energy Tree approach offers one way to normalise the data, and this approach is being further developed as part of EuroProsper.
11. A key issue is whether the benchmarks are adjusted to the intensity of use of the actual building, or vice versa. It is suggested that if the use of the building is very different from the norm for its particular type, the former approach is more sensible. In this way the Operational Rating will then most closely reflect the actual operating conditions of the building, which is the primary intention of the Operational Rating. However, this would suggest that an additional design rating should be produced to reflect the actual use of the building, otherwise there is no clear indication as to the reason for the good (or indifferent) performance.'
12. Another key issue is what information describing the building and systems will be available for inspection at the time of certification. For the newest buildings there might be good information in the log book and manuals, for many buildings just the O&M manuals, and for the rest there will be very little written information. The Advisory Group might consider what is the scope for specifying, and maybe requiring the building owner / manager to assemble before the inspection, some minimum set of information.
13. How much effort should or could be put into getting the information required from an existing building? This is coupled with the abilities of the "inference engines" incorporated into the Calculation Tool that could interpret simple descriptions into parameters that the model could accept. It is also tied together with some view of "acceptable accuracy" and consistency in the calculation and certification. An absolute fundamental will be consistency, in that different surveyors should be able to look at a building and arrive at the same result. Simplicity in what is asked, and checklists of options, might be a way of ensuring this.
14. The Group might consider whether the surveyor be expected to undertake the survey simply "by observation", or would it include any aspects of inspection that could involve carrying out "work", which could significantly increase the skill level and potential exposure to liability.
15. Whatever information is gained during the survey and certification process, a means is needed to 'store' and interchange information between this and the Article 8 and 9 inspections. This could be an enhanced role for the building log book.

## Surveyor qualifications and experience

16. The Advisory Group could enter into a dialogue with relevant Sector Skills Councils to determine what (if any) existing qualifications (e.g. VRQ's) might provide the basis for non-domestic building certification (i.e. what existing qualification(s) could be used or developed to provide the necessary proof of competence to undertake these functions, particularly in the context of self-certification).
17. If relevant qualifications do not currently exist, the working group should determine the best mechanism for developing relevant training material and delivering the necessary training (e.g. Asset Skills, Professional Institutions, Trade Associations etc) and which qualification authorities need to be involved in establishing/accrediting nationally recognised qualifications.
18. In the case of dwellings, responsibility for implementing Articles 7 and 10 is likely to fall to the Home Inspectors being trained to provide Home Condition Reports for dwellings being sold. Both the Awarding Body for the Built Environment (ABBE) and the Surveyors and Valuers Accreditation Ltd. (SAVA) are involved with accrediting inspectors and a dialogue with these bodies would ensure some consistency between the approaches to Articles 7 and 10 for dwellings and buildings other than dwellings.
19. The issue of Self-Certification of buildings requires careful consideration to ensure that the requirements of Article 10 (Independent experts) are not compromised and to, *'ensure that the certification of buildings, the drafting of the accompanying recommendations .....are carried out in an independent manner by **qualified and/or accredited experts**, whether operating as sole traders or employed by public or private enterprise bodies.'* The requirements of Article 10 do not necessarily preclude self-certification, provided a robust and effective quality assurance scheme enables certification (and the drafting of the recommendations) to be *'carried out in an independent manner'*. The Competent Person training and qualification requirements for Part L compliance verification (i.e. deriving and checking Design and Asset Ratings) also requires discussion.

## Policing and Quality Assurance Framework

20. The Advisory Group should review and make recommendations regarding the degree of independence appropriate for the UK - and the need or otherwise for establishing accreditation and/or competent person schemes.
21. In particular the need for third party involvement to police the certification process and enforce the required methodology should be considered and the possibilities for 'self-certification' by suitably qualified engineers could be considered.
22. There will also need to be a strategic discussion about the number of approved surveyors that will need to be in place by January 2006 to undertake the following:-
  - compliance checking for new build upon submission of plans (i.e. calculating the Design Rating and verifying compliance with Part L)
  - compliance checking upon completion of construction (i.e. calculating the Asset Rating as built and confirming compliance with Part L)
  - to derive the Operational Rating and Asset Ratings for existing buildings prior to transfer of tenancy or ownership.
  - to produce the Operational and/or Asset Ratings for Public Buildings for display purposes (N.B. it is not clear from Article 7 what triggers the public display requirement or what timescale is allowed for compliance)
23. Do the surveyor and building owner representatives think that we will need more time in the UK to put this number of surveyors in place and/or could a phased approach be adopted to the introduction of building energy certification for new and existing buildings?

## **Relation to other initiatives**

24. It would be helpful to make use of the information describing relevant installed boiler and air conditioning systems collected for Articles 8 and 9 and to record it in such a way as to assist subsequent inspections. A way of ensuring this continuity could be to recommend, within the new provisions, that the information is included in the building log book, where one exists, or otherwise to recommend the preparation of a section for a log book having this as its minimum content.
25. It has also been suggested that the provision of energy performance certificates for residential rental properties could be linked to the requirement to undertake the gas safety check – this suggestion requires further consideration.
26. It is vital that the Advisory Group liaise closely with the ODPM Working Group developing the methodology for the calculation of the energy rating. The skill level and training required by inspectors is closely aligned with the complexity (or simplicity) of the Calculation Tool.

## **The way forward**

27. The following questions need to be addressed:
- a) What data is required from the survey (or off-plan) to determine the ratings for inclusion in the energy performance certificate?
  - b) What skills does the surveyor need?
  - c) What qualification should the surveyor attain to demonstrate the necessary knowledge and skills?
  - d) Who should provide the necessary surveyor training and how will quality be assured?
  - e) How will development of training material be undertaken and what resources are required?
  - f) What quality assurance framework should be implemented to deliver credible and repeatable energy performance certification and drafting of the accompanying recommendations for cost effective improvement? N.B. This needs to be achieved at the lowest possible cost, whilst:-
    - providing protection against fraud
    - satisfying Article 10's requirements for independence
    - ensuring effective Building Regulations compliance/enforcement
    - maximising the adoption of cost effective energy efficiency measures.
28. It is expected that a draft proposal outlining how Article 7 will be implemented will be prepared by September 2004.
29. The Advisory Group might also wish to make recommendations on its own role in developing, introducing and then overseeing the working of the new systems in practice.

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<sup>1</sup> 'Methodologies in support of the Energy Performance of Buildings Directive: The UK approach to implementation for buildings other than dwellings'. Version 1.5. Faber Maunsell, Sept 2003. Download:- [http://www.odpm.gov.uk/stellent/groups/odpm\\_control/documents/contentservertemplate/odpm\\_index.hcs?t?n=3855&l=3](http://www.odpm.gov.uk/stellent/groups/odpm_control/documents/contentservertemplate/odpm_index.hcs?t?n=3855&l=3) or via a link on the DIAG Website [www.diag.org.uk](http://www.diag.org.uk)

<sup>2</sup> Irving S, 'EPBD methodology & certification issues – an update on thinking', Version 1a, Faber Maunsell, Nov 2003.