

EPBD Article 7/10 Advisory Group

Final Report and Recommendations

Training, Qualifications and Quality Assurance Framework associated with Building Energy Certification and the requirements for Independent Experts

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EPBD Article 7/10 Advisory Group

Background

In May 2004 the Office of the Deputy Prime Minister requested the formation of an Industry Advisory Group to make recommendations associated with the training, qualification and quality assurance (QA) to deliver, in a practical and pragmatic manner, the requirements of Article 7 (Energy Performance Certificates) and Article 10 (Independent Experts) of the E.U. Energy Performance of Buildings Directive.

The Advisory Group met for the first time on 18th June 2004 with the scope and objectives for the Group being formally agreed.

Two separate Working Groups were established:

Working Group 1 Development of a Training Programme, National Occupational Standards and Qualifications for Building Energy Certifiers

Working Group 2 QA Framework Requirements (including implications associated with Professional Indemnity Insurance)

Both sub-groups reported their findings to the Advisory Group in September 2004 and it was subsequently decided to form a separate sub-group to develop recommendations for an Implementation Timetable associated with phasing-in the various requirements for training, qualifications and QA.

The Final Report contains:

- Summary of Recommendations
- EPBD Article 7/10 Advisory Group Report (January 2005)
- Annex 1 Recommendations of Working Group 1 (September 2004)
- Annex 2 Recommendations of Working Group 2 (September 2004)

Acknowledgement

I would like to register my thanks for all members of the Advisory Group and the three Sub-Groups. In particular, Paul Davidson for chairing Working Group 1 and David Bell for drafting the Working Group Report. Also, to Brian Scannell for chairing Working Group 2 and for his major contribution in chairing the Implementation Sub-Group and drafting the Sub-Group Report (which formed the basis of the Final Report).

The recommendations contained in the Final Report are the product of the many hours of discussion undertaken freely and willingly by the members of the various groups. Without their contribution this report would not have been possible.

My thanks also to Paul DeCort for managing the logistics associated with the meetings, and Anthony Slater and Hilary Graves who provided the Secretariat support.

Professor David Strong
Chairman, Article 7/10 Advisory Group

EPBD Article 7/10 Advisory Group Report

Energy Performance of Buildings Directive Article 7/10 Advisory Group

Summary of recommendations

Background and Advisory Group brief

1. The Advisory Group was established at the request of ODPM to advise on the issues relating to the implementation of Articles 7 and 10 of the Energy Performance of Buildings Directive 2002/91/EC.
2. Articles 7 and 10 of the Energy Performance of Buildings Directive 2002/91/EC together require independent qualified and/or accredited experts to carry out the energy certification of buildings using a national calculation methodology. This has to be accompanied by appropriate benchmarks and recommendations for the cost-effective improvement of the energy performance.
3. A considerable body of underpinning knowledge and understanding is required to do this. It will be important to ensure a common knowledge base among those conducting energy certification in order to achieve consistency and accuracy between building energy certifiers and across different types of built environment.
4. Specific issues addressed were the qualifications required for building certifiers, accreditation and implementation methods and timescales.

Constitution of advisory group

5. The advisory group was made up of representatives from the following bodies: ODPM, Department of Finance and Personnel for Northern Ireland (DFPNI), Scottish Building Standards Agency (SBSA), Carbon Trust, EST, BRE, DEFRA, RICS, CIBSE, Asset Skills, Summit Skills, CITB, British Property Federation (BPF), Awarding Body for the Built Environment (ABBE), AON Consulting, Surveyors and Valuers Association (SAVA), Business Services Association (BSA), National Energy Services (NES), Faber Maunsell.

Key recommendations

6. The primary recommendation of the Advisory Group is the establishment of a formal framework of nationally recognised qualifications and authorised competent persons schemes. Specific qualifications and competent persons schemes would be required for each of the methodologies to be used in various types of buildings to undertake an energy efficiency assessment, determine an energy rating, prepare appropriate recommendations and produce an energy performance certificate. **Only individuals licensed by an appropriate competent persons scheme will be able to issue energy performance certificates.**
7. A statement from ODPM that they are "minded to" take this approach is urgently needed.
8. It is recognised that time is short and not all the methodologies are fully established yet. A phased approach is therefore recommended, subject to on-going review.

Qualifications

9. A formal framework of nationally recognised qualifications should be established. Different qualifications will be required for each application and methodology, i.e. new

or existing buildings, dwellings or other buildings. A two-phase approach is recommended which involves the following sequence:

Phase One

- 1) Specification of the skill requirements to conduct energy rating and certification including use of the national calculation methodology
- 2) Specification of the training and licensing requirements including assessment and testing of competence
- 3) Design and development of discrete modules of training which take into account the different types of calculation methods and types of building and their uses

Phase Two

- 4) Development of new national occupational standards (NOS) for building energy certifiers within a broader suite of property-related national occupational standards
- 5) Development of either one or more Vocationally Related Qualification (VRQ) or one or more National Vocational Qualification (NVQ) or Scottish Vocational Qualification (SVQ) based on an appropriate mix of national occupational standards

10. It is recognised that this is not achievable in the timescale available and so an interim examination is proposed for each methodology while the full qualification scheme is developed.

Accreditation

11. Competing commercial competent persons schemes, authorised by ODPM, should be established for each application and methodology, i.e. new or existing buildings, dwellings or other buildings. A statement from ODPM that they are "minded to" take this approach is urgently needed to encourage candidate scheme providers to work together to develop the overarching technical standard (see 14 below).
12. A detailed assessment of likely activity levels is needed to determine the number of licensed individuals needed and hence the commercial viability of the competent persons schemes.
13. A multi-stage approach has been defined for introducing the recommended accreditation framework. The level of quality assurance progresses from a simple list of licensed individuals working within an agreed code of conduct (phase I) to full UKAS accreditation of individual schemes (phase V). The decision to proceed to successive phases of accreditation would be based on market feedback and the expectation of improved consumer protection or environmental benefits.
14. A single overarching Technical Standard should be developed together with a suite of supporting Technical Standards for individual areas of competence. The Technical Standards should include specified minimum components including a monitoring programme incorporating random sampling of completed certificates sufficient to demonstrate compliance with a specified quality standard.
15. The Competent Persons schemes in each sector should be required to submit all input data and results for all energy performance certificates to a single common data repository developed and maintained by, or under license from, ODPM.

Implementation

16. Nine generic scenarios have been identified that give rise to a requirement for an energy performance certificate. The Advisory Group has considered the scope for a phased introduction of the certification requirement in each of these scenarios.
17. The Directive effectively precludes any phasing of the introduction of certificates in respect of four scenarios - the construction and refurbishment of dwellings and of buildings other than dwellings. All of these activities are subject to Building Control and there is a clear logic to linking the provision of certificates to the demonstration of compliance.
18. The current proposals for the introduction of Home Information Packs (affecting the majority of sales of dwellings) militate against the introduction of any interim solution in these cases during 2006. All dwellings offered for sale from 2007 will require an energy certificate as part of the HIP.
19. It is recommended that the requirement for a valid certificate on other sales of dwellings and on the rental of dwellings be introduced from the start of 2006. This will both leverage and support the development of appropriately qualified individuals for the subsequent introduction of Home Information Packs. It is recommended that (at least initially) the requirement for a certificate in the dwellings rental sector be initiated by a change of tenant.
20. It is recommended that the introduction of a requirement for an energy performance certificate on sale or rental of buildings other than dwellings be phased in over the three-year period 2006 to 2008 inclusive. It is recommended that the requirement be initially introduced for smaller buildings, with subsequent phases introducing the requirement for larger buildings so that by the end of 2008 all buildings are included in the requirement.
21. As yet it is not clear how the operational rating will be determined. A majority of the Advisory Group considered that the introduction of the requirement for display of an operational rating certificate in public buildings should be carried out in phases based on the function of the building. The initial phase would cover building types where the range of activities undertaken within the buildings is known and understood. This is expected to help to ensure that appropriate information is available to reliably discriminate between good and poor performance, which is considered essential if recipients are to have confidence in the certificates. A phased approach to the introduction of the requirement for operational ratings will also enable data to be collected for building types where no benchmark information is currently available. However, a minority held the view that a simple operational rating should be introduced much sooner, with all public buildings being compliant by the end of 2006.

Recommended actions for ODPM

22. Issue "minded to" statement as soon as possible, covering:
 - 1) The proposed framework of qualifications and issue of certificates
 - 2) The proposed scope of authorised commercial competent person schemes
 - 3) The implementation timetable for each of the nine scenarios
23. Training
 - 1) Commission development of exams
 - 2) Commission skill analysis
 - 3) Commission code of conduct for development and operation of exams
 - 4) Set up steering group to direct development

24. Accreditation

- 1) Formally endorse phased approach
- 2) Seek expressions of interest from organisations seeking to establish schemes
- 3) Set up steering groups to implement and develop the scheme technical standards.

Glossary

It is proposed that the following terminology be adopted for consistency:

- Organisations are AUTHORISED to operate competent persons schemes.
- Authorised schemes are required to use APPROVED software.
- Schemes LICENSE suitably qualified individuals to undertake ASSESSMENTS using the relevant ADOPTED methodology (SAP, RDSAP, "Design", "Asset" or "Operational").
- Licensed individuals CERTIFY buildings using appropriate methodology.

EPBD Article 7/10 Advisory Group Report

1 Summary

The Advisory Group was established at the request of ODPM to advise on the issues relating to the implementation of Articles 7 and 10 of the Energy Performance of Buildings Directive 2002/91/EC. The primary recommendation of the Advisory Group is the establishment of a formal framework of nationally recognised qualifications and authorised competent persons schemes. Specific qualifications and competent persons schemes would be required for each of the methodologies to be used in various types of buildings to undertake an energy efficiency assessment, determine an energy rating, prepare appropriate recommendations and produce an energy performance certificate.

The Advisory Group recognised that proposing full implementation of these recommendations in time for the entry into force date of 4th January 2006 specified in the Directive, was unrealistic.

1.1 Qualification

Having reviewed the range of options available, the group recommends the establishment of an interim qualification framework based on individuals taking an examination to test that they have the relevant technical expertise and the competence to apply it. Separate examinations will be required for each of the five methodologies.

Progression from the interim exam based qualification to a formal qualification within the national qualifications framework will occur at different times for each methodology depending on the relative maturity of the methodology and the current state of development of the training and qualification framework. It is considered feasible to introduce the national qualification for the RdSAP methodology from the start of 2006 to fit with the Home Inspector Diploma and to signal the future development route for the qualifications for the other methodologies.

1.2 Accreditation

A multi-stage approach has been defined for introducing the recommended accreditation framework. The starting point remains Government authorising a limited number of competing commercial accreditation schemes linked to the individual adopted methodologies. The level of quality assurance progresses from a simple list of licensed individuals working within an agreed code of conduct (phase I) to full UKAS accreditation of individual schemes (phase V). The decision to proceed to successive phases of accreditation would be based on market feedback and the expectation of improved consumer protection or environmental benefits.

1.3 Phased Implementation

Nine generic scenarios have been identified that give rise to a requirement for an energy performance certificate. The Advisory Group has considered the scope for a phased introduction of the certification requirement in each of these scenarios.

The Directive effectively precludes any phasing of the introduction of certificates in respect of four of these scenarios - the construction and refurbishment of dwellings and the construction and refurbishment of buildings other than dwellings. All of these activities are subject to Building Control and there is a clear logic to linking the provision of certificates to the demonstration of compliance.

The current proposals for the introduction of Home Information Packs (affecting the majority of sales of dwellings) militate against the introduction of any interim solution during 2006. All dwellings offered for sale from 2007 will require an energy certificate as part of the HIP.

It is recommended that the requirement for a valid certificate on other sales of dwellings and on the rental of dwellings be introduced from the start of 2006. This will both leverage and support the development of appropriately qualified individuals for the subsequent introduction of Home Information Packs. It is recommended that (at least initially) the requirement for a certificate in the dwellings rental sector be initiated by a change of tenant.

It is recommended that the introduction of a requirement for an energy performance certificate on sale or rental of non-dwellings be phased in over the three-year period 2006 to 2008 inclusive. It is recommended that the requirement be initially introduced for smaller buildings, with subsequent phases introducing the requirement for larger buildings so that by the end of 2008 all buildings are included in the requirement.

As yet it is not clear how the operational rating will be determined. A majority of the Advisory Group considered that the introduction of the requirement for display of an operational rating certificate in public buildings should be carried out in phases based on the function of the building. The initial phase would cover building types where the range of activities undertaken within the buildings is known and understood. This is expected to help to ensure that appropriate information is available to reliably discriminate between good and poor performance, which is considered essential if recipients are to have confidence in the certificates. A phased approach to the introduction of the requirement for operational ratings will also enable data to be collected for building types where no benchmark information is currently available. However, a minority held the view that a simple operational rating should be introduced much sooner, with all public buildings being compliant by the end of 2006.

1.4 Uncertainty

The development of the implementation plan has been greatly complicated by the lack of clarity in several key areas, including:

- Interpretation of the requirements of the Directive in respect of the factors initiating a requirement for a certificate or its updating – particularly in relation to the display of certificates – thereby affecting potential market demand.
- The legislation by which the requirement will be introduced and therefore the enforcement mechanism. This is of direct relevance to the requirement for accreditation.
- Definition of the various methodologies – particularly of the asset and operational ratings for non-dwellings. This is of direct relevance to the training and accreditation requirements and the phasing of the introduction of the requirement.

Key assumptions are detailed in the report.

2 Certification Requirements

A requirement for an energy performance certificate will arise in nine separate scenarios:

Dwellings	Non-dwellings
1. Construction	5. Construction
2. Refurbishment/Material change/Extension	6. Refurbishment/Material change/Extension
3. Sale	7. Sale
4. Rental	8. Rental
	9. Public display

Table 1 summarises the current situation for each of these scenarios, including the anticipated legislative vehicle through which the obligation will be implemented; the assessment methodology that will be employed; the anticipated and latest possible implementation dates^{*}; and the anticipated activity levels during the initial two to three year period and ongoing thereafter.

It should be noted that the estimates of anticipated activity levels are in some cases extremely crude and are not based on any detailed analysis. It is a key recommendation of the Advisory Group that work be commissioned to develop more robust estimates. In order to prepare more reliable estimates, decisions will need to be taken on key issues of interpretation such as what constitutes a public building and what is meant by the Directive requirement that a valid certificate is available when a building is “rented out”.

2.1 Methodologies

Consideration of the methodologies to be adopted was outside the scope of the Advisory Group. However, it is self-evident that the complexity of the methodologies and the skills required to apply them will determine the availability of individuals with the relevant skills or the ability to be adequately trained.

The Advisory Group is required to recommend appropriate training, qualifications and QA schemes, all of which are directly influenced by the complexity of the methodologies. The continuing uncertainty over the methodologies has therefore presented a fundamental challenge to the operation of the Advisory Group.

Table 1 reflects the current understanding of the methodologies to be adopted. These comprise two methodologies for dwellings (SAP and RdSAP) and three for buildings other than dwellings (Design, Asset and Operational). Table 2 attempts to provide an initial assessment of the relative complexity of these methodologies, together with an indication of the degree of uncertainty in the specification and the likely variability in the complexity of applying the methodology to different buildings.

^{*} The assumption has been made that the provision of certificates for construction and refurbishment for both dwellings and other buildings is inextricably linked with the implementation of Articles 3 through 6 for which no deferment from the January 2006 deadline is permitted.

EPBD Article 7/10 Advisory Group Report

Table 1. Summary of Certification Requirements

Building Type	EPBD Purpose	Implementation Legislation	Energy Rating Methodology	Implementation Date		Anticipated Activity Level (Certificates / Year)	
				Target	Latest	Initial Period	Ongoing
Dwellings	Construction	Building Regulations	SAP	Jan 2006	Jan 2006	150,000	150,000
	Refurbishment	Building Regulations	SAP / RdSAP	Jan 2006	Jan 2006	600,000	600,000
	Marketed sales of existing homes	Housing Act 2004 Section 5 (HIP)*	RdSAP	Jan 2007	Jan 2009	1,250,000	1,250,000
	Other sales of existing homes	TBA	RdSAP		Jan 2009	Unknown†	
	Rental of existing homes	TBA	RdSAP		Jan 2009	2,000,000‡	500,000
Other buildings	Construction	Building Regulations	Design Rating	Jan 2006	Jan 2006	50,000	50,000
	Refurbishment	Building Regulations	Design Rating / Asset Rating	Jan 2006	Jan 2006	100,000	100,000
	Sale of existing buildings	TBA	Asset Rating		Jan 2009	400,000	150,000
	Rental of existing buildings	TBA	Asset Rating		Jan 2009		
	Public display certificate	TBA	Operational Rating		Jan 2009	TBC	TBC§

* Applies in England and Wales only. Implementation in other countries has yet to be clarified.

† Assumed included in the above

‡ Assumes certificates issued for all social sector housing during initial years.

§ Depends crucially on both the definition of “public buildings” and the required update frequency.

Table 2. Comparative Complexity of Methodologies

Methodology	Application	Complexity	Uncertainty	Variability
SAP	Dwellings - Building Control (new build)	Low to moderate	Low	Low
RdSAP	Dwellings - Building Control (refurbishment) - HCR (most properties) - Rental sector / some sales	Low to moderate	Low	Low
Design	Non-dwellings - Building Control (new build)	Moderate	Moderate	Moderate
Asset	Non-dwellings - Building Control (refurbishment) - Sale (including some HCR) - Rental sector	Moderate to high	High	High
Operational	Public buildings - Display	Low to moderate	High	Moderate to high

2.1.1 Dwellings

For dwellings the SAP methodology is adopted for assessments from plan drawings and specifications whereas the Reduced data SAP (RdSAP) is used for assessments from a visual site inspection.

The SAP methodology is well established, although it is subject to some revisions to accommodate the requirements of the Directive. The SAP (2005) specification has been circulated for comments and is expected to be finalised in early 2005.

The RdSAP methodology is the result of a standardisation exercise drawing together a number of proprietary systems. The current version is based on the SAP (2001) specification and has been subject to technical field trials. The methodology will be subject to some revision to be compatible with SAP (2005), but RdSAP (2005) should be finalised by mid 2005.

For the purpose of preparing an implementation plan, the following assumptions have been made in respect of issues that are outside the remit of this Advisory Group:

- The SAP (2005) specification will be finalised by 1st April 2005.
- The RdSAP (2005) specification will be finalised by 1st August 2005.*
- An approvals process for SAP and RdSAP software will be in place immediately after the specification is finalised.

2.1.2 Buildings other than dwellings

The methodologies for buildings other than dwellings have yet to be agreed. Whilst the basic principles are agreed, much uncertainty remains. This arises from the need for the methodologies to deliver reliable comparative ratings between buildings that are extremely variable in their complexity and in the manner in which they are used.

* DEFRA are aiming to deliver RdSAP by June 2005, which will allow a 6 month period for the training of assessors.

The detailed consideration of the choice of methodology and level of complexity is outside the remit of this Advisory Group. Currently the level of complexity of the data collection, processing and results interpretation required for each of the methodologies is not finalised. This has presented the Advisory Group with a significant challenge in providing recommendations on the appropriate approach to training and QA.

The current understanding is that the design rating will be based on a standard modelling approach for the majority of buildings (the issues around modelling complex buildings have yet to be resolved). This approach will be used for assessments from plan drawings and specifications. The asset rating will utilise the same basic modelling approach as the design rating but will utilise data collected through a visual inspection together with appropriate defaults and inference rules. It is understood that both the design and asset rating methodologies will eventually be based on CEN standards.

The operational rating is subject to the greatest level of uncertainty in the specification. An extreme option would be simply to base the rating on the measured energy use per unit floor area. However this would take no account of different occupancy patterns or activities occurring within the building (or the geographic location of the building), raising concerns over the validity of comparing ratings between buildings. Normalisation to improve the validity of comparison (between buildings or against benchmarks) increases the complexity of the data collection and processing and therefore the associated training and QA requirements.

Resolving this issue is outside the remit of this Advisory Group and the assumption has been made that some level of normalisation will be required. As well as allowing a more valid comparison to be made between buildings, this should allow a distinction to be drawn between the intrinsic characteristics of the building and the effectiveness of the management team in optimising energy use within the building.

It is probable that different tiers of competence will emerge, with some individuals solely qualified to provide a rating on a relatively simple building, such as an asset rating for a converted town house used as an estate agents office or an operational rating for a distribution warehouse without heating or cooling. At the other extreme, some individuals will need to be qualified to provide energy performance certificates for far more complex buildings, such as the Swiss Re building or a major shopping and leisure development. This may apply with any or all of the different rating approaches – design, asset and operational.

In addition to the development of the methodology itself, there is a requirement to develop appropriate benchmarks for each methodology and building type / use. This is probably of greatest significance for the operational ratings where current information is considered poor. Improved benchmarks could be established quickly if the information collected for individual certificates during an initial period were pooled to allow the benchmarks to be established.

The finalisation of each of the methodologies will inevitably be a crucial milestone in the implementation plan. As such, the assumptions made are critical. For the purpose of preparing an implementation plan, the following assumptions have been made in respect of issues that are outside the remit of this Advisory Group:

- Outline specification of the methodologies defining anticipated data collection requirements will be available by 1st April 2005 for the purpose of determining skills requirements.

- A beta version of the software implementation of each methodology (excluding complex buildings) will be available by 1st May 2005 for use in the development of training courses.
- Detailed specifications of the methodologies (for at least an initial class of buildings in the cases of the asset and operational ratings) will be available by 1st August 2005.
- That an approved software implementation of the methodologies (for at least an initial class of buildings in the cases of the asset and operational ratings) will be available by 1st September 2005 for use in the delivery of training courses.

If any of these deliverables are delayed, there will inevitably be knock-on implications for the overall implementation timetable.

2.2 Implementation Legislation

Considerable uncertainty remains over the legal mechanism by which some of the key requirements of the Directive will be implemented and enforced. At this stage, the proposed revisions to the Building Regulations in England and Wales are subject to consultation and the Housing Bill is before Parliament.

One of the most fundamental issues highlighted in all of the discussions within the Advisory Group is the need to ensure adequate and consistent application of the certification requirements. Two fundamental concerns exist. Firstly, that the requirement for an energy performance certificate will not be enforced by the relevant building control body. Secondly, that building control bodies will be able to provide a service issuing certificates without being subject to the same qualification and accreditation regime as third-party providers.

Both of these concerns are based on observed problems in the current building control market. Unfortunately, either problem could seriously constrain the commercial viability of the market and therefore the extent to which industry will invest to develop products and services to support the market.

The timing of the legal implementation of the Directive requirements is clearly crucial to the implementation timetable. As such, the assumptions made are critical. For the purpose of preparing an implementation plan, the following assumptions have been made in respect of issues that are outside the remit of this Advisory Group:

All buildings:

- That the legislation and regulations implementing the requirement for energy performance certificates specify that all certificates must be issued by an approved individual.
- That all individuals wishing to be licensed to issue energy performance certificates (including Building Control Officers) must be subject to the same approvals process.
- That the revisions to Part L of the Building Regulations in England and Wales be approved substantively as per the consultation proposals, with clear guidance to this effect (possibly in the form of a "minded to" statement from ODPM) issued by 1st April 2005.

Dwellings:

- That the requirement for compulsory Home Information Packs is introduced in January 2007 following a period of six months during which the licensing scheme and databank will be fully operational.

- That the proposed legal mechanism for the introduction of the requirement for energy performance certificates when a dwelling is rented out or sold without a HIP be clarified by 1st April 2005.

Buildings other than dwellings:

- That the proposed legal mechanism for the introduction of the requirement for energy performance certificates when a building other than a dwelling is rented out or sold be clarified by 1st April 2005.
- That the proposed legal mechanism for the introduction of the requirement for the display of energy performance certificates in public buildings be clarified by 1st April 2005.

Once again, if any of these assumptions are incorrect, there will inevitably be knock-on implications for the overall implementation timetable.

2.3 Activity Levels and Phasing

Even if the necessary methodologies and legal vehicles were to be in place, the Advisory Group considers the full introduction of all certification requirements from January 2006 to be impracticable.

When the obligation is first introduced, the demand for certificates driven by change of tenant or display obligations would create a substantial short-term demand for a large numbers of qualified individuals, although the ongoing requirement would require significantly fewer. This short-term requirement would be highly inefficient and would inevitably result in significant non-compliance. As such, a phased implementation is considered far more appropriate.

Since the methodologies required for buildings other than dwellings are relatively immature, there are also technical reasons why a phased implementation should be considered. This would allow the methodology to be developed over a period of time, with the creation of a pool of qualified individuals and the strengthening of skills and systems occurring in a managed way.

It is also anticipated that a significant number of individuals will wish to be qualified in multiple methodologies. This is supported by the significant transferability of skills between the various methodologies. Introducing the certification obligation in a phased manner will encourage this, thereby reducing capacity constraints and optimising productivity.

For example, starting a phased introduction of the requirement for energy performance certificates when a dwelling is offered for rent from early 2006 will support the introduction of the HIP in 2007 since Home Inspectors must all be qualified to use the RdSAP methodology.

Similarly, starting a phased introduction of the requirement for operational ratings from early 2006 will develop skills to support the subsequent introduction of the requirement for an asset rating in more complex buildings.

In order to progress the development of the implementation plan, the following assumptions have been made:

- That a phased implementation of the requirements of the Directive is acceptable.
- That the activity levels outlined in Table 1 are realistic estimates.
- That a commercial market for the provision of certification services will be encouraged to develop through the implementation and enforcement of legislation.

If any of these assumptions are incorrect, there will inevitably be knock-on implications for the overall implementation timetable and the availability of suitably qualified individuals.

3 Training and Qualification

A sub-group of the Advisory Group, Working Group 1, was set up to consider the issues of qualification and training. Their findings, contained in Annex 1, were discussed by the Advisory Group. A framework of nationally recognised vocational qualifications is required, linked to the various methodologies. The development of the qualifications is dependent on an analysis of the skills required to apply the methodologies and this is in turn dependent on the urgent finalisation of the methodologies.

3.1 Review of Options

In reaching their recommendation, the group considered a range of alternative options. In particular, they considered whether there was any option of using membership of a professional institution or trade group, or any existing academic or vocational qualification, that could serve as a proxy to identify individuals with the appropriate competencies.

The group concluded that there was no realistic prospect of using membership of a professional institution or trade group as a proxy to indicate competence to apply any of the methodologies. The diversity of routes to membership and the variety of skills and specialisms within institutions preclude this option.

When the group reviewed the availability of existing qualifications, the only options identified related to the methodologies for dwellings.

The new Diploma in Home Inspection requires competence in the application of the RdSAP methodology. As such, holders of the Diploma could be expected to be competent to deliver a stand-alone energy performance certificate using the RdSAP methodology. However, given the greater breadth of the Diploma, this is not an appropriate prerequisite qualification for those just wishing to undertake stand-alone RdSAP assessments.

It was also recognised that existing Authorised Energy Rating Organisations qualify individuals to use their software to issue quality assured SAP ratings. However, since no formal harmonisation of standards between alternative providers has occurred, there are concerns about the use of this approval as an indicator of competence.

For the methodologies to be applied in buildings other than dwellings, no specific or outline qualifications were identified. Since the methodologies to be used are new, this is not surprising.

Given the lack of appropriate proxies or existing qualifications, the group concluded that specific solutions were required.

One option considered was to require all those wishing to issue energy performance certificates to attend a specified training course, with or without a standardised examination. This was considered inappropriate because it would require both experienced and inexperienced individuals to attend the same course, imposing a high level of abortive cost on the experienced individuals.

The conclusion was therefore reached that the most appropriate solution was the creation of a formal framework of new vocational qualifications that can be gained by demonstrating appropriate competence. However, the Advisory Group recognises that this process involves several formal steps. These include formal industry consultation, the development of occupational standards and the conversion of standards into a qualification. This process would normally take a minimum of two years and only once the qualification is finalised would training course providers and

assessment centres begin to offer candidates the opportunity to become qualified. Further details are contained in the Annex to this report.

3.2 Interim Solution

The Advisory Group recognises that the time required to implement the recommended solution is incompatible with the available timetable for implementation of the Directive requirements and that an interim solution is therefore required.

The most appropriate interim solution is considered to be a standardised examination of competence for a specific methodology that all individuals wishing to offer certificates using that methodology would be required to successfully complete. Separate examinations will be required for each methodology and candidates will need to pass the relevant examination for each sector in which they wish to operate.

It is recognised that such an approach is open to greater abuse than the formal national qualifications approach, which incorporates comprehensive audit and harmonisation processes. However, since this is intended as an interim solution, it is hoped that an industry code of conduct amongst those offering training courses and administering the examinations should be sufficient. Relatively simple measures, such as third-party supervision of examinations and multiple variations of the examination papers will assist in providing appropriate safeguards.

This approach will contribute directly to the development of the qualifications framework, through the identification of skills required and the establishment of a formal means of assessing competence. However, with appropriate industry cooperation, it can be implemented far more quickly.

3.2.1 Training Requirements

The proposed interim solution does not require candidates to undertake any specific training – if they feel that they have the required knowledge and competence, they could simply take the interim examination. However, in practice it is likely that most candidates will choose to take a training course to help them to prepare for the examination.

A wide range of organisations are likely to develop suitable training courses in response to market demand. This is likely to result in a wide variety of different options including on-line, distance learning and traditional classroom approaches. For the purpose of developing the implementation plan, Table 3 provides an assessment of the likely training requirements for the initial cohort of candidates i.e. those undertaking similar work and therefore possessing some of the required knowledge and competence.

Table 3. Training Requirements for Candidates During Interim Period

Methodology	Starting Competence	Training Required
SAP	Basic technical knowledge, numeracy and computer literacy plus some ability to interpret plan drawings and specifications for dwellings	2-3 days specific training
RdSAP	Basic technical knowledge, numeracy and computer literacy plus some ability to make reliable measurements on-site	2-3 days specific training
Design	Advanced technical knowledge and computer literacy plus understanding of design principles and ability to interpret plan drawings and specifications for relevant building types	2-3 days specific training depending on flexibility allowed within methodology
Asset	Advanced technical and computer literacy plus existing knowledge of construction types and services for relevant building types	Dependant on final specification of methodology 2-3 days specific training for simple buildings, additional modules likely to be required for buildings with more complex features
Operational	Basic technical knowledge, numeracy and computer literacy plus existing familiarity with energy use and activities for relevant building types	Critically dependant on specification of methodology 1-2 days specific training for simpler buildings; additional modules likely to be required for more complex buildings

3.3 Recommendations

Recommendation 1: ODPM should commission the development of examinations to evaluate competence in the application of the SAP and RdSAP methodologies.

Recommendation 2: ODPM should commission an analysis of the skills requirement for the methodologies to be adopted for buildings other than dwellings. This should evolve into the detailed development of the various examinations once the methodologies are finalised.

Recommendation 3: ODPM should commission the development of a code of conduct for the development, operation and administration of the examination systems. This work can begin immediately and would help to stimulate activity amongst potential training providers.

Recommendation 4: ODPM should establish a steering group to direct the development of the examinations and code of conduct for each methodology. Commercial organisation, trade associations, professional institutions and academic and research organisations, together with the relevant sector skills councils and awarding bodies, should all be invited to take part in the steering group.

All of these recommendations should be implemented immediately.

These recommendations complement the recommendation contained in the Working Group paper that work begin as quickly as possible on the development of a formal framework of nationally recognised qualifications. The establishment of the steering group and the development of examinations would directly contribute to the wider goal.

4 Accreditation and Quality Assurance

A second sub-group of the Advisory Group, Working Group 2, considered the issues of accreditation and quality assurance. The recommendation was that a framework of certification schemes authorised by ODPM (based on the Competent Persons approach) be established based on the licensing of individuals.

Competing commercial schemes would be encouraged to develop for each methodology. All competent persons schemes for a specific methodology would operate to a common technical standard, defining minimum requirements in respect of qualification, software approval, code of conduct, quality monitoring, insurance, CPD and so forth. The technical standards in respect of each methodology would all be incorporated into a common framework. UKAS accreditation of the technical standards and of each scheme was identified as a desirable goal. This is illustrated in Figure 1.

4.1 Review of Options

In reaching their recommendation, the group considered a range of alternative options.

The most basic option considered was to do nothing and to have no quality assurance framework, relying instead on certificates being prepared by suitably qualified individuals. This option was rejected because it is effectively unworkable and of doubtful compliance with the requirements of the Directive.

The Directive requires that Member States ensure that certificates and recommendations are prepared in “an independent manner by qualified and/or accredited experts” and that the certificate must be “recognised by the member State or a legal person designated by it”. This was considered to imply a requirement to ensure that appropriate professional standards and adequate levels of consumer protection are in force.

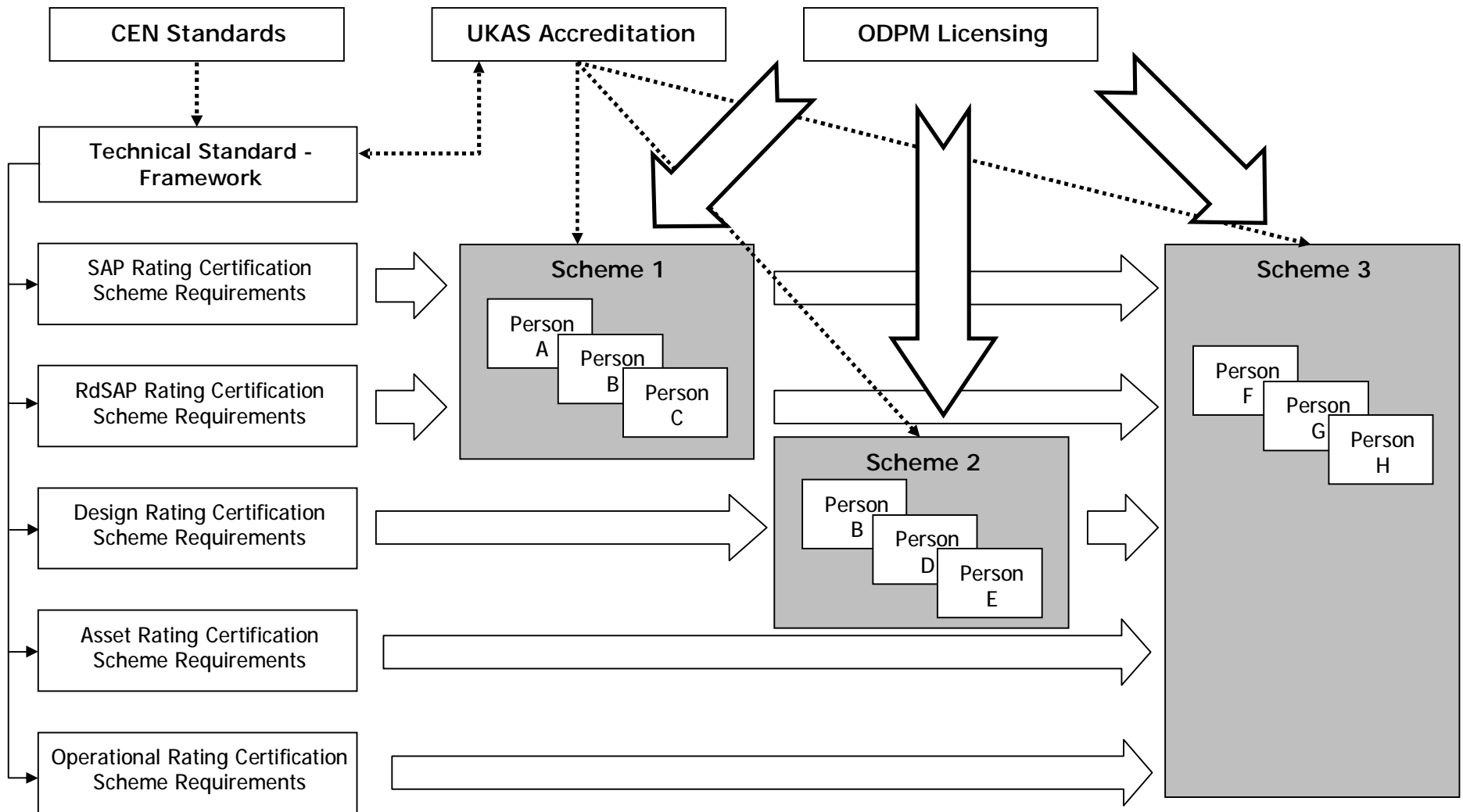
The lack of any accreditation scheme would require those commissioning an energy performance certificate to understand the qualifications framework and to be able to verify that the individual offering the service was suitably qualified. Since the requirement for energy performance certificates is new and the qualifications framework is not established, this option was considered highly vulnerable to fraud.

A further option considered was the establishment of a single, preferred licensing scheme developed under contract to ODPM along the lines of the proposed Home Inspector Certification Scheme. Indeed a possible option might be to directly extend the remit of the Home Inspector scheme to cover the broader requirements for energy performance certification.

In general terms, the group considered the establishment of a single, monopoly, licensing scheme to be inappropriate, being likely to impose higher development costs and ongoing management costs on Government compared with a market oriented solution.

Leveraging the developing Home Inspector scheme was considered to offer some potential benefits. However, given the scale and significance of the task of introducing Home Information Packs, it was considered unrealistic to impose this additional burden and thereby increase the implementation risk. It was also recognised that the scope of the Home Inspector scheme was proscribed by the enabling legislation and regulations, which could limit the scope for expanding its remit.

Figure 1. Schematic Illustration of Proposed Certification Scheme Licensing Framework



4.2 Interim Solution

As with the qualifications, the Advisory Group recognises that the time required to implement the recommended solution is incompatible with the available timetable for implementation of the Directive requirements and that an interim solution is therefore required.

The most appropriate way forward was considered to be a phased implementation of the elements that contribute to the overall recommended solution. Possible stages that were identified included:

Phase I

- Industry or professional groups contemplating developing competent persons schemes are invited to sign-up to a planned development programme and agree to a code of conduct, allowing them to establish a scheme with “provisional approval” from ODPM.
- Individuals wishing to issue valid certificates would be required to register with one or more of the provisional schemes.
- Registration requirements imposed by each scheme would include validating that individuals held the appropriate qualification (initially this would be that they had passed the interim examination) and requiring individuals to agree to a code of conduct. This would cover basic issues such as agreeing to periodic relicensing; use of standard terms of engagement; use of approved software; CPD; license renewal; dispute resolution etc.
- Schemes would be required to maintain a public register of all individuals licensed by the scheme and to provide a means for complaints to be raised and investigated.
- The necessity for individuals to be able to offer Professional Indemnity insurance was considered. Whilst some clients will specify PI requirements, suggesting that the provisional schemes would not need to check this, there were concerns that inexperienced clients would not and that this could distort the market. On balance, it was felt that the schemes should require licensed individuals to demonstrate that they have appropriate cover and commit to maintain it during their licensed period.

Phase II

In order to maintain provisional approval status, all schemes will be required to implement the following:

- Maintain a register of all energy performance certificates issued by individuals licensed within the scheme.
- Implement an agreed minimum level of quality assurance monitoring using repeat assessments in order to be able to identify quality standard being achieved.

Phase III

In order to maintain provisional approval status, all schemes will be required to implement the following:

- Adoption of national qualification as pre-requisite for relicensing of individuals.
- Implementation of Technical Standard requirements for the specific methodology.
- Accreditation to ISO 9000:2000 quality assurance standard for all elements specified in the Technical Standard.

Phase IV

- Formal approval of schemes within competent persons framework.
- National database of all certificates issued.
- National database of licensed individuals.

Phase V

- UKAS accreditation of Technical Standard framework.
- UKAS accreditation of individual schemes.

The specific requirements at each phase could be amended based on practical experience in order to better meet the user requirements and accommodate the operational constraints applicable to the market for the specific methodology.

The phases can be introduced at different rates for each methodology, depending on the progress achieved, market feedback and the perceived adequacy of the current phase in delivering adequate compliance with the Directive requirements.

Given the relative maturity of the market for energy assessments in the dwellings sector, it would be possible to implement the SAP methodology at phase IV in time for January 2006, subject to having to recognise the interim examination qualification pending the national qualification becoming available.

4.3 Recommendations

Recommendation 5: ODPM should formally endorse the phased approach to implementing accreditation and quality assurance, progressing from a minimal licensing scheme initially and progressing towards the full vision of UKAS accredited competent persons schemes.

Recommendation 6: ODPM should seek expressions of interest from organisations interested in establishing accreditation schemes with a view to establishing a steering group for each methodology and an overarching steering group to ensure coordination between the various sectors.

5 Implementation Phasing

Having identified appropriate interim solutions for implementing the recommended approaches to qualification and accreditation and made a preliminary assessment of potential activity levels by methodology / legislative driver, it is appropriate to attempt to develop an overall implementation programme.

The primary objective of the implementation programme must be to deliver a sustainable solution to complying with requirements of the Directive. In the absence of a phased implementation, the majority of buildings are expected to require a certificate within the first few years, creating a short-term level of demand that would not be sustained and, in all likelihood, could not be met.

This issue arises in part because certificates are expected to have a period of validity of 10 years in sectors other than marketed sales of dwellings (where a new Home Condition Report including the Energy Performance Certificate is required each time the dwelling is placed on the market).

As well as avoiding an unsustainable peak, a phased implementation would also allow the ongoing phased development of the methodologies. This is considered to be of particular relevance in the development of benchmarks for the asset and operational ratings of buildings other than dwellings, as well as the development of these methodologies to accommodate the broad range of design techniques and energy-related technologies.

Figure 2 summarises the recommended phasing for implementation of the certification requirements in each of the nine identified scenarios, together with the phased implementation of appropriate qualification and accreditation frameworks for each methodology.

The key recommendation is that the introduction of certification requirements can begin to be introduced from January 2006 at an initial level in all scenarios except the sale of dwellings, where the existing timetable for introduction of the Home Information Pack suggests that an interim solution would be inappropriate.

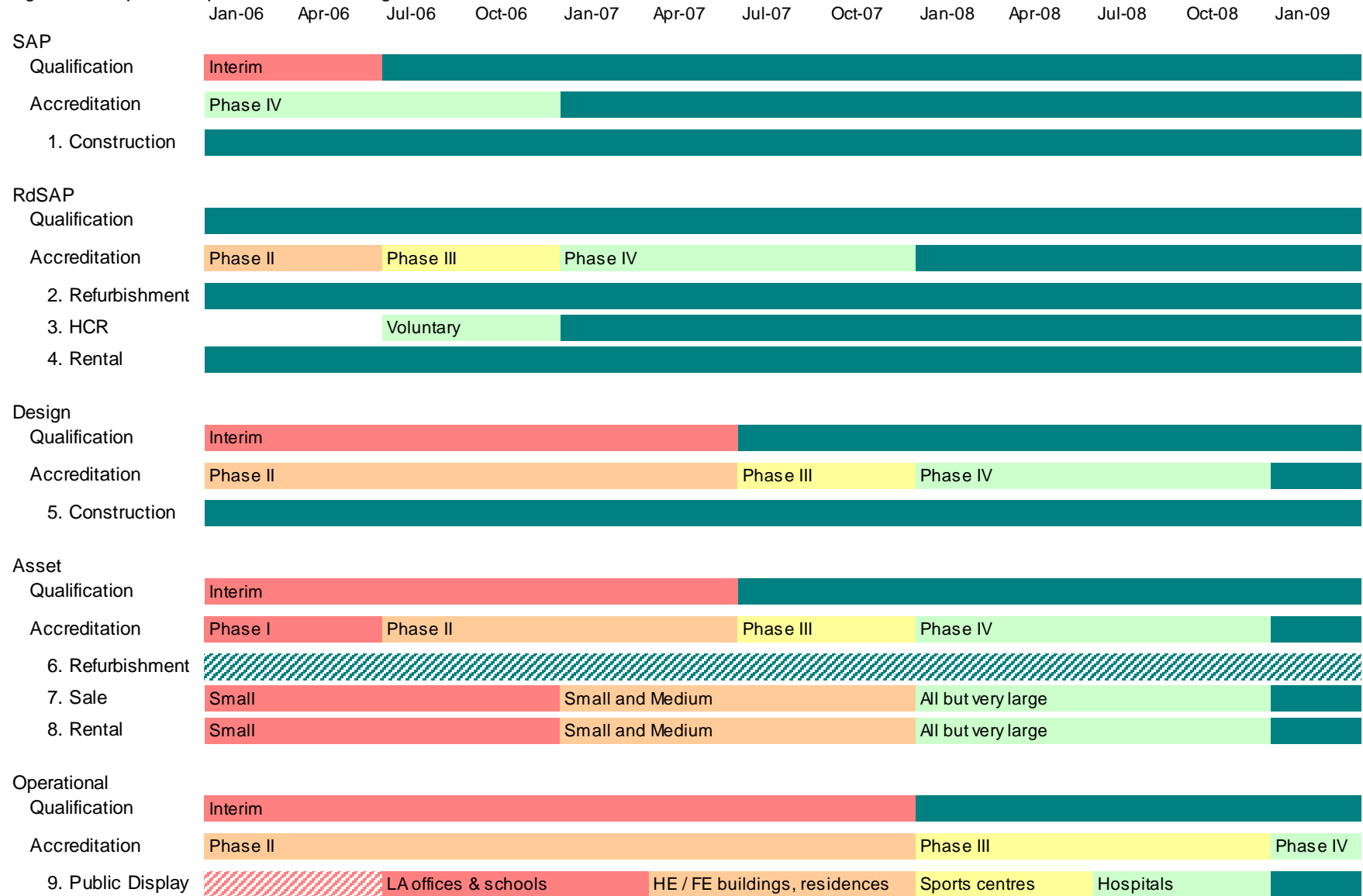
A critical recommendation is that the requirement for certificates on sale or rental of non-dwellings be introduced in a phased manner based on the size of buildings, beginning with the smaller buildings.

A phased introduction of the requirement for operational ratings is also proposed, but based on the building function rather than size. It is recommended that the requirement is initially introduced for building types where existing information is most robust. Over the three year period 2006 to 2009, the requirement for public display would be extended to a wider range of building types to cover all public buildings by 2009 and allowing the further role out to the wider definition of buildings regularly accessed by the public thereafter. However, a minority held the view that a simple operational rating should be introduced much sooner, with all public buildings being compliant by the end of 2006.

The following sections provide a more detailed description of the recommended phasing of the introduction of certification, qualification and accreditation for each methodology and application scenario.

EPBD Article 7/10 Advisory Group Report

Figure 2. Proposed Implementation Phasing



5.1 SAP

5.1.1 Application

Scenario 1 – Building Control compliance approval for construction of dwellings.

5.1.2 Implementation Phasing

Required to be in place for compliance checking by January 2006.

5.1.3 Qualification Phasing

Stand-alone examination system required for September 2005.

National level qualification could potentially be introduced during 2006.

5.1.4 Accreditation Phasing

It is recommended that the Building Regulations state that the SAP rating (and the associated Energy Performance Certificate) must be provided by an accredited (licensed) person.

Accreditation should be through a recognised competent persons scheme (or equivalent) (interim phase IV). Competent persons schemes can be introduced in time for January 2006 based on the existing Authorised SAP provider framework, subject to standardisation of quality monitoring and adoption of proposed stand-alone examination.

Full implementation of recommended accreditation and QA framework, including UKAS accreditation and national qualifications framework, should be achievable by late 2006 or early 2007.

5.2 RdSAP

5.2.1 Application

Four applications exist for RdSAP ratings and/or energy performance certificates:

- (a) Scenario 2 - Building Control compliance for refurbishment of dwellings to identify the potential for installing energy efficiency improvements in the remainder of the building that is not subject to refurbishment.
- (b) Scenario 3 – Sale of dwellings where a Home Condition Report is produced.
- (c) Scenario 3 – Sale of dwellings where a Home Condition Report is not produced. This covers all non-marketed sales of dwellings – including portfolio sales (including large scale voluntary stock transfers in the social housing sector) and sales through right-to-buy.
- (d) Scenario 4 - Rental of dwellings. It is unclear whether the legislative implementation will be for a certificate on change or renewal of tenancy or solely when there is a change of tenant. The former would impose a far higher demand for certificates in the short-term following the introduction of the obligation.

5.2.2 Implementation Phasing

Implementation for each of the four applications can be considered separately:

- (a) Required to be in place for January 2006. Only the rating calculation methodology and potential for improvement measures are required, not the full energy performance certificate including benchmarks.
- (b) Dry run of the Home Information Pack, including the Home Condition Report planned to start mid-2006, compulsory scheme scheduled to start January 2007. The Energy Report will form part of the Home Condition Report, which may necessitate some design changes compared with the stand-alone Energy Performance Certificate. It is recommended that no compulsory scheme be introduced during the interim period between January 2006 when the Directive requirements come into force and January 2007 when Home Information Packs become compulsory, but that all voluntary schemes operating during the period should be encouraged to adopt the RdSAP methodology.
- (c) The level of demand for certificates via this route is uncertain, but is considered unlikely to be sufficiently high that it will lead to market problems even if introduced from the start of 2006. In the event that the legislative assessment suggests that phasing is necessary, it is recommended that priority be given to sales through right-to-buy and portfolio sales in the private sector since transfers in the social sector already tend to include consideration of the energy efficiency of the dwellings.
- (d) If the legal implementation is for a certificate on change of tenant, then this should be introduced from January 2006. If the legal implementation is for a certificate on change / renewal of tenancy agreement a phased implementation will be required.
 - In the event of a phased implementation in the private sector, it is recommended that the requirement be linked to the licensing schemes introduced by the Housing Act 2004.
 - In the event of a phased implementation in the social sector, it is recommended that priority be given to ensuring a certificate is available when there is a change of tenant.

5.2.3 Qualification Phasing

Given the existing HI qualification framework and the development work currently underway, it should be possible to introduce a national qualification by September 2005.

5.2.4 Accreditation Phasing

For each of the applications, it is recommended that the implementing legislation or regulations specify that the energy rating and/or energy performance certificate must be provided by an individual accredited to apply the methodology appropriate for the building.

In the case of Home Inspectors, it is recommended that a condition of their license be that they maintain their accreditation to issue energy performance certificates based on the methodology approved for the dwellings for which they prepare Home Condition Reports.

Accreditation should initially be through schemes with provisional approval but incorporating basic quality monitoring (interim phase II). These can be implemented by January 2006, including scheme specific databases of all certificates issued and quality monitoring to demonstrate quality standard being attained.

Progression to interim phase III accreditation should be achievable during 2006, with formal approval of competent persons schemes in early 2007.

Full implementation of the recommended accreditation and QA framework, including UKAS accreditation and national qualifications framework, should be achievable by late 2007 or early 2008.

5.3 Design Rating

5.3.1 Application

Scenario 5 - Building Control compliance approval for construction of most buildings other than dwellings.

For simple non-dwellings a National Calculation Method (NCM) will be adopted based upon the CEN methodology.

For complex buildings, it is anticipated that compliance will be demonstrated through a process of comparative simulation modelling using a variety of proprietary dynamic simulation tools.

5.3.2 Implementation Phasing

Required to be in place for compliance checking by January 2006.

5.3.3 Qualification Phasing

Stand-alone examination system required for September 2005.

It remains unclear whether this qualification will remain as a blanket qualification for all types and sizes of buildings for which a Design Rating can be determined, or whether it will be necessary to discriminate through a hierarchical qualification. This will depend on the evolution of the methodology. However, given the intention of maintaining the comparative simulation approach as the preferred methodology for dealing with the most complex designs, it is likely that a two tier Design Rating qualification will be required (i.e. one based upon the NCM and the other upon demonstrating competence in undertaking complex dynamic simulation).

Depending on the progress with the development of the NCM, a national level qualification could potentially be introduced during 2007.

5.3.4 Accreditation Phasing

It is recommended that the Building Regulations state that the design rating must be provided by an accredited person.

Accreditation should initially be at interim phase II, requiring schemes to maintain a register of ratings and certificates issued and to operate a minimum level of quality monitoring.

Progression to interim phase III accreditation is unlikely to be achievable until mid 2007, when the national qualification should be in place and schemes will have

had chance to achieve ISO 9000:2000 accreditation. Implementation of formal Competent Persons schemes (interim stage IV) should be achievable by early 2008.

5.4 Asset Rating

5.4.1 Application

Three applications exist for Asset ratings and/or energy performance certificates:

- (a) Scenario 6 - Building Control approval of refurbishment of buildings other than dwellings. The purpose is to identify the potential for installing energy efficiency improvements in the remainder of the building that is not subject to refurbishment.
- (b) Scenario 7 - Sales of buildings other than dwellings. It is assumed that the requirement for a certificate will apply irrespective of the circumstances within which the sale occurs (individual marketed sale; directly negotiated sale; sale to current occupant; portfolio sale etc.).
- (c) Scenario 8 - Rental of buildings other than dwellings. As in the residential sector, it is unclear whether the obligation applies only on change of tenant or on tenancy renewal. Given the significance of promoting improvements in energy efficiency in the commercial building sector and the relatively long tenancies, it is recommended that the requirement for an energy performance certificate should apply on renewal as well as change of tenant.

5.4.2 Implementation Phasing

Implementation for each of the three applications can be considered separately:

- (a) Required to be in place for January 2006. Only the rating calculation methodology and potential for improvement measures are required, not the full energy performance certificate including benchmarks.
- (b) and (c) It is recommended that the requirement for energy performance certificates be introduced in a phased manner over a period of at least three years. Various options for phasing the introduction of certification requirements were considered.
 - Building type and technical complexity were considered unworkable due to the lack of any consistent classification of type or definition of a simple or complex building.
 - Location would do nothing to ease the burden of introduction in any one area and would serve to actively discourage individuals from qualifying until the requirement was due to be introduced in their area.
 - Size is considered the easiest basis for implanting any phased scheme, since information on floor area would be available as a normal part of the sale or rental transaction.
 - The critical decision is whether to phase in the certification requirements starting with the biggest buildings or the smallest. Both options have their own merits. Starting with the larger buildings would involve a smaller number of buildings and fewer parties. Conversely, starting with the smaller buildings would involve a larger number of transactions and parties but would generally be far less complex, both

in terms of the technical methodology and in terms of the contractual interaction between parties.

- Starting with the smaller and relatively less complex buildings would also help to ensure an appropriate cohort of expertise could be recruited and trained to the required standard. This is particularly relevant to the crossover of skills with Home Inspectors and others undertaking RdSAP assessments.
- On balance, it is therefore recommended that the requirement for certificates should start with smaller buildings.
- It is recommended that work is undertaken to determine the most appropriate choice of size bands. This should be based on an analysis of historical transactions and should seek, as far as possible, to introduce the requirement in a manner that avoids excessive short-term peaks in demand.

5.4.3 Qualification Phasing

A stand-alone examination system will be required for September 2005 based on the initial implementation of the methodology.

It is extremely unlikely that a single tier qualification in undertaking site assessments for buildings other than dwellings will be appropriate. Requiring all individuals wishing to provide an asset rating and energy performance certificate for a simple structure to be competent to do so for a much larger or more complex building would impose excessive costs and barriers to entry.

Instead it is likely that a tiered qualification will be needed, enabling individuals to demonstrate competence to undertake assessment on buildings of different levels of complexity or employing different levels of design technique or energy technologies.

As the methodology evolves, one or more supplementary tiers of examination are therefore expected to be established, reflecting the enhanced competence required to undertake assessments of buildings that are more complex. Individuals will need to have successfully undertaken the examination at the correct tier in order to undertake an assessment at a building at that level of complexity.

It is unlikely that a national level qualification could be sensibly established until the methodology is more fully evolved and the appropriate tiers of qualification clarified. This is unlikely to be achievable until mid 2007 at the earliest.

5.4.4 Accreditation Phasing

For each of the applications, it is recommended that the implementing legislation or regulations specify that the energy rating and/or energy performance certificate must be provided by an individual accredited to apply the methodology appropriate for the building.

Accreditation will initially only be possible at the interim phase I level – effectively a simple register of individuals having passed the stand-alone examination and signed-up to a common code of conduct.

Progression to phase II accreditation (requiring schemes to maintain a register of ratings and certificates issued) should occur as quickly as possible and no later than mid-2006. However, it is recommended that some quality monitoring be

undertaken from the start of 2006 in order to be able to determine the quality standard being attained.

Progression to interim phase III accreditation is unlikely to be achievable until the mid 2007 when the national qualification framework is established. Implementation of formal Competent Persons schemes (interim stage IV) should be achievable by early 2008.

5.5 Operational Rating

5.5.1 Application

Operational ratings are currently only proposed for inclusion in display certificates required for “public buildings”.

The final definition of “public buildings” is subject to ongoing discussion and consultation. Preliminary feedback from the Part L consultation suggests that there is strong support for a wide definition including buildings accessed by the public, rather than solely buildings occupied by public authorities. This would have a significant impact on the number of buildings involved.

The update frequency for the display certificate is also currently undefined but is of crucial importance. As is a final decision on whether to require that display certificates incorporate both an operational rating and an asset rating. The inclusion of an asset rating would significantly enhance the effectiveness of the display certificate, but would substantially complicate their production. A relatively shorter period of validity would allow the requirements to be revised as the various methodologies mature and the availability of suitably skilled individuals increases.

On balance, it is recommended that the certificates are not required to display an asset rating, but that if one has been prepared for some other reason (refurbishment, sale or rental of the building), it must be included in the certificate.

It is also recommended that the update frequency for operational certificates should be no more than three years and annual updating should be encouraged in order to maintain management focus on the potential for improving performance.

5.5.2 Implementation Phasing

The key issue for the production of operational ratings is the availability of suitable benchmarks that are recognised as providing a valid basis for comparison. In order to enable appropriate benchmarks to be developed and to allow the methodology to evolve, it is recommended that the requirement for operational ratings and display certificates be introduced in a phased manner.

Initial implementation over a period of three years is recommended for those buildings included in the restricted definition of public buildings adopted above. In the event that a wider definition is to be adopted, it is recommended that the definition be expanded in phases after the initial implementation is completed. However, other sectors should be encouraged by government and their agencies to display operational ratings on a voluntary basis during the initial implementation phase.

Phasing should be implemented based on the availability of suitable benchmark information. Thus, the initial phase of application might be in schools and local government offices. The requirement for hospitals, sports complexes, further and higher education buildings, halls of residence, sheltered accommodation facilities

etc would be introduced in subsequent phases as and when the appropriate benchmarks are adopted.

Specification of the number of phases, their timing and the choice of building types to be included will depend on the final methodology selection and the time required to produce benchmarks. However, it is recommended that the first phase, which should include building types for which robust benchmarks are established and accepted, should begin in January 2006 with compulsory display for the specified building types being introduced six months later.

It is strongly recommended that this approach is repeated in subsequent phases, with full details of the assessment methodology and parameters to be used in calculating benchmarks for the particular building types being published six months prior to the requirement for compulsory display is introduced for that type of building. Thus, in July 2006, the building types to be included in the second phase and the appropriate benchmark parameters would be published, with the requirement for compulsory display coming into force in January 2007. This will ensure that users have adequate opportunity to prepare certificates and any anomalies can be identified and resolved in good time before the requirement for display.

This approach could be extended to facilitate the development of improved benchmarks. During the initial preparatory six-month period, all of the required data would be collected and collated to enable benchmarks to be defined. Certificates for all of the buildings involved would then be issued at the end of the initial period, in time for the start of the compulsory display period. The process would then be repeated for the next phase of buildings. However, the developing of robust benchmarks (and tracking the subsequent improvement in building performance by building type/sector) is critically dependent upon a national certificate/database repository being established.

The view was also expressed that a simple operational rating should be introduced much sooner, with all public buildings being compliant by the end of 2006.

5.5.3 Qualification Phasing

A stand-alone examination system should be prepared for September 2005 for the initial class or classes of building.

It is likely that the methodology will continue to develop as additional classes of buildings are required to display energy performance certificates. However, it is unclear whether tiered levels of competence will be required. Updating of competence at each phase may require nothing more than appropriate guidance in determining the specific benchmarks for the newer classes of building.

Since the full breadth of issues potentially affecting the methodology are unlikely to be resolved until the implementation covers the widest range of buildings, it is unlikely that the national level qualification will be able to be defined until end 2007.

5.5.4 Accreditation Phasing

It is recommended that the implementing legislation or regulations specify that the operational rating and display certificate must be provided by an accredited individual.

Given the relative simplicity of the operational rating methodology and the limited data collection requirements, it is recommended that accreditation be introduced

at the interim phase II level, requiring scheme operators to maintain a register of all certificates issued and to undertake a minimal level of quality monitoring.

Since the certificates are for public display purposes, it is considered essential that a basic level of checking is undertaken. Equally importantly, the data collected will provide vital information to assist in improving and maintaining the benchmarks.

Extending accreditation to more complete implementation of the recommended approach will depend on the establishment of the national level qualification, the evolution of the methodology and on market feedback, but it is considered reasonable to aim to achieve competent persons status for schemes by end 2008.

Annex 1: Recommendations of Working Group 1 - September 2004 Development of a Training Programme, National Occupational Standards and Qualifications for Building Energy Certifiers

1. Background

The Directive requires qualified and/or accredited experts able to carry out asset energy ratings (in the first instance, followed by operational energy ratings) using a national calculation methodology linked to menu-driven alternatives.

There is a considerable body of underpinning knowledge and understanding required to make judgements between options and to arrive at accurate values.

It will be important to ensure a common knowledge base among those conducting energy ratings in order to achieve consistency and accuracy between building energy certifiers and across different types of built environment.

It is, however, important that a simple yet robust system be developed which ensures that building energy certification be carried out without developing an over-complicated process or requiring individuals to possess knowledge and skills over and above that required to carry out the appropriate level of energy assessment and certification.

There is, therefore, a need to establish the increasing levels of competence required linked to the different calculation methodologies used and the differing building types, their condition and uses.

There will also be an added level of complexity where buildings have mixed uses.

For the purposes of defining discrete competence areas and levels of operation the following categories are suggested:

- energy ratings from plans for dwellings
- energy ratings from site inspection for dwellings
- energy ratings from plans for non-dwellings
- energy ratings from site inspection for non-dwellings

The introduction and validation of the calculation methodology is an essential first step in identifying parts of the skill mix needed by energy rating certifiers. The structure of the inputting options and the degree of judgement required to make accurate data entries will have a major impact on the extent and nature of required training. In any event it is suggested that there will have to be a sliding scale of modular training provision which recognises the existing skills, experience and qualifications of those who will carry out the energy ratings. Such training will clearly vary in length and depth dependent upon the nature of the energy rating being performed and the type of building involved.

Training and certification arrangements will also be greatly influenced by the precise number of certificates required both initially and in "stable state" operation and whether all types of building will be certificated immediately or through a staged process.

2. Recommendations

The sub-group recommends that a two-phase approach is taken which involves the following sequence:

Phase One

- specification of the skill requirements to conduct energy rating and certification including use of the different national calculation methodologies
- specification of the training and certification requirements including assessment and testing of competence
- design and development of discrete modules of training which take into account the different types of calculation methods and types of buildings and their uses

Phase Two

- development of new national occupational standards (NOS) for building energy certifiers within a broader suite of property-related national occupational standards
- development of either one or more Vocationally Related Qualification (VRQ) or one or more National Vocational Qualification (NVQ) or Scottish Vocational Qualification (SVQ) based on an appropriate mix of national occupational standards

It is recognised that there needs to be coherence with the training and qualification arrangements of Home Inspectors. The proposal will be based on the information made available to the sub-group about the calculation methodology, which is still under development.

Note that for dwellings, the calculation methodology is close to completion and Defra, BRE and FAERO have already undertaken significant development work. This includes the design and delivery of a pilot training course and the assessment of the resulting competence of the trainees. However, there is still work to do and the process described in the proposal will build on this previous work. The sub-group has developed an outline methodology for each of the above recommendations with an indicative timescale for development, subject to appropriate project funding. The sub-group consisted of: Asset Skills; Construction Skills; Summit Skills; the Royal Institution of Chartered Surveyors (RICS) and the Chartered Institution of Building Service Engineers (CIBSE).

Phase One

3. Specification of the skill requirements

This first stage will identify the detailed skills set needed by building energy certifiers to carry out the full function including operating the calculation methodology and organising and carrying out building energy inspections. Note that the skill set forms a coherent hierarchy of skill levels, providing a comprehensive skills set covering each of the categories described in page 1 of this annex. Annex II to the EPBD provides an overall framework for the skill set but does not provide the necessary detail. This required skills sets are likely to be drawn from architecture, service engineering, building services design and installation, surveying and specific skills relating to the use of the calculation methodology, home condition inspection and generic inspection skills including information gathering and reporting. Of particular importance will be the CIBSE TM 31 Building Log Book which will help identify many of the required skills.

The following table provides an example of the possible structure of such a skills set matrix. The content is derived from earlier analysis of the functions and from the home inspection standards. It is based on site inspection competencies and in its final form design based competencies will also be included.

Generic Building Energy Assessment and Certification Skills
<p>Prepare for energy assessments</p> <ul style="list-style-type: none"> • Taking instructions, establishing location and area to be surveyed, confirming arrangements including terms and conditions and issues of confidentiality • Gathering necessary information on property including: design brief and design criteria against which to measure the energy performance; function of the building; engineering systems; energy use in all forms (gas, electricity, oil etc) from bills and meter readings • Making preliminary enquiries relating to property including ownership, tenancy and lease arrangements • Identifying issues to be clarified and additional information required • Planning conduct of energy assessment
<p>Carry out energy assessment of properties</p> <ul style="list-style-type: none"> • Identifying health and safety procedures relevant to assessment • Interpreting the inspection requirements in relation to specific building • Inspecting external and internal condition of property • Gathering and recording required information via the calculation methodology and general surveying processes
Technical Skills Linked to Calculation Methodology
<p>Establish the geometry of the building</p> <ul style="list-style-type: none"> • Defining size, shape and orientation • Defining glazing area proportion • Establishing exposure ratings
<p>Establish the construction characteristics of the building</p> <ul style="list-style-type: none"> • Establishing the date of the building and the implications for energy rating • Defining fabric details for walls, floor, roof, basements/undercrofts • Selecting glazing specification • Amending thermal performance parameters if known • Assessing air-tightness

<p>Establish the nature of all building services</p> <ul style="list-style-type: none"> • Identifying predominant lighting system (lamps, luminaires, controls) • Identifying heating system type(s), by zone • Identifying ventilation system(s) by zone • Identifying cooling system(s) by zone • Editing efficiency assumptions if necessary • Identifying control system(s) in place • Separating fixed building-linked plant from 'temporary' additions linked to activity (process)
<p>Make recommendations on building's use of energy</p> <ul style="list-style-type: none"> • Checking and filtering stock suggestions • Checking compliance with regulations, other requirements, etc • Adding specific recommendations based on expertise/qualification
<p style="text-align: center;">Preparing an energy rating certificate</p>
<p>Compiling and evaluating inspection data</p> <ul style="list-style-type: none"> • Processing data in correct format for certification • Validating data • Detailing any assessment limitations and caveats and explanations • Issuing energy certificate in the correct format and to the appropriate person • Ensuring all legal requirements have been complied with • Ensuring the client understands the nature of the certificate, what it certifies in relation to energy efficiency and the nature of its validity

The skill set will be developed via an expert panel drawn from experienced energy surveyors and others with the required skill areas. The knowledge and understanding underpinning the skills-set will also be identified and the whole package will then be validated with a wider group of practitioners, the calculation methodology developers and appropriate organisations including professional bodies.

4. Training, assessment and certification requirements

Certification should reflect the appropriate level of skill primarily based on the calculation methodology used and the type of building being energy rated. Given the previous categories proposed, this would suggest that four levels of certification will be needed with the opportunity to move to the next level following appropriate modular training and end-testing. Certification of individual modules may be possible but it is likely that a single certificate will be issued for the appropriate cluster of modules linked to the relevant level of energy rating activity.

It is recommended that all candidates for certification should undergo the same end-test in order to ensure consistency and provide rigour of assessment particularly in relation to the required underpinning knowledge. The assessment process will be derived from the final skill set and knowledge and understanding specification. Assessment must include a minimum of one "hands-on" use of the calculation methodology in a building which is representative of the buildings which fall into the appropriate certification level.

Wherever possible the content of existing qualification and training modules will be identified which will meet certain aspects of the identified skills set in order to assist individuals identify which aspects of the training provision they will need.

Consideration should be given to the setting up of a formal exemption system based on the accreditation of prior experience and learning (APEL) which would identify an individual's existing skills, knowledge and understanding in relation to the building energy certifier skills mix. However, this process should not be unwieldy and cumbersome. The advantage of having such a system is that it would allow implementation of the Directive in a phased manner, perhaps linked to certification of certain types of building as part of a systematic "roll-out" plan. It also provides a valid basis for allowing differentiated training provision of varying length and complexity.

An APEL system would involve matching the validated skills set against the skills and knowledge content of existing qualifications and identifying the level of coverage. This would then create a list of

acceptable qualifications to be used to identify those able to conduct the energy rating process subject to attending training on the use of the calculation methodology and passing the end test.

5. Design and development of discrete modules of training

Given the different levels of skills required by type of building and calculation methodology, it will be necessary to develop a wide range of training modules which can be brought together in different combinations. The length of training will also vary depending upon the previous knowledge and experience of those wishing to present as energy rating certifiers. It is envisaged that some training may be as little as a day's familiarisation with the input of data using the calculation methodology coupled to some trial rating calculations and an end test. For others, the training may take up to 8-10 days where there are major gaps in skills and knowledge which will need to be redressed.

Some modules will relate exclusively to the use of the appropriate calculation methodology and would be compulsory for all energy rating certifiers regardless of previous experience. These would contain a strong practical component and could be linked to post certification monitoring.

The final nature and number of modules cannot be stated until the skill mix matrix and related underpinning knowledge and understanding has been fully developed. Some modules relating to the preparation and certification activities may be shared across the different levels.

Wherever possible, training providers should be encouraged to adapt existing provision to meet the new requirements and there may be considerable development work involved in achieving these adaptations

Phase Two

6. The development of new national occupational standards for building energy certifiers

This will require the development of a functional map which defines the full range of functions performed across the building energy assessment, rating, certification and reporting field including residential, non-residential, new, rented and owned property in order to identify shared and specialist competences. This methodology requires the creation of key purpose statement linked to disaggregated and discrete sub-functions normally taken to the point where primary work functions can be identified as the basis for detailed standards development.

There is also a need to ensure that the functional map reflects the full identified skills mix, underpinning knowledge and understanding and to have the map validated with a broad range of practitioners in all four Home Countries, professional bodies and relevant agencies. Once the functions have been endorsed then it is possible to identify existing national occupational standards which cover specific functions and identify gaps in provision. Where skill gaps emerge then new national occupational standards (NOS) can be developed and validated with practitioners and others. This will then define an integrated suite of national occupational standards from which core and optional units can be identified for varying building energy assessment, rating, certification and reporting functions in different residential, non-residential, new, rented and owned property contexts including mixed use.

These national occupational standards can be used to inform training provision and to assist individuals identify which skills they already possess and which they need to develop in order to perform the energy rating and certification functions.

7. Development of appropriate qualifications

It is possible to bring together an appropriate mix of national occupational standards drawn from the property suite to create a National/Scottish Vocational Qualification (N/SVQ) or a Vocationally Related Qualification (VRQ) or set of VRQs.

A VRQ can consist of relatively few units and can be structured around modular learning outcomes linked to a wide range of assessment methods including end-testing of varying kinds. They normally have notional learning hours attached to them and are frequently developed jointly between awarding and professional bodies.

N/SVQs are statements of occupational competence and are developed by expert practitioners. The emphasis is on work-related and competence-based outcomes directly relevant to effective performance of work activities. Assessment is normally by means of on-the-job observation by an experienced assessor linked to a portfolio of documentary and other evidence. N/SVQs fit into the National Qualifications Framework and can be accredited at professional level.

Any N/SVQ will be developed by identifying the qualification structures of core and optional units linked to an Assessment Strategy which specifies how occupational competence can be measured by means of valid and reliable assessment procedures.

Any qualification would be developed in conjunction with an appropriate Awarding Body (or Bodies) to develop and gain accreditation within the four Home Countries' qualification frameworks for one or more NVQ/SVQ or VRQ based on the qualification structures and assessment strategy. The development of an appropriate qualification within the National qualifications Framework will take longer than the proposed certification linked to modular training and end-testing, but will set in place a permanent and rigorous structure by which to ensure energy rating certifiers are competent to perform their role over the lifetime of the Directive.

8. Implementation Timetable

In order to achieve the phased introduction of these recommendations it will be necessary to begin the development work immediately in the following areas. Optimistic indicative timescales are provided of how long each activity could take assuming adequate resources:

- Accelerated development and piloting of national calculation method(s) for buildings other than dwellings and production of key documents
Timescale to be determined – dependent on funding levels
- Set up a working group of expert practitioners to develop and validate the skill mix and statement of underpinning knowledge and understanding
4 Months
- Set up a working group of professional bodies, awarding bodies and training providers to define assessment, testing, accreditation of prior experience and learning (APEL) and certification framework
2 Months co-terminous with skill mix development (activity one)
- Set up a working group of selected training providers to design and develop an integrated modular training programme
8 Months following on from completion of skill matrix
- Set up a standards development group of expert practitioners to develop a suite of NOS using existing standards and developing new ones
12 months following on completion of the skill matrix
- Set up an awarding body forum to develop VRQs/N/SVQs
9 months from completion of NOS

Annex 2: Recommendations of Working Group 2 - September 2004

QA Framework Recommendations

Summary of Recommendations

The Advisory Group makes the following recommendations in respect of the operational framework and quality monitoring of the provision of energy performance certificates as required by the Energy Performance in Buildings Directive 2002/91/EC.

1. That a formal assessment of anticipated activity levels be prepared.
2. That the legal requirement for energy performance certificates specifies that they must be provided by an individual operating within a formal third-party certification scheme.
3. The third-party certification of individuals through Competent Persons schemes authorised by ODPM based on the technical methodology employed.
4. That a framework for commercial Competent Persons schemes be developed incorporating separate provisions for the five areas of competence identified.
5. That an individual submitting proposals for the refurbishment or extension of an existing building be required to be competent in the provision of both asset and design ratings for the relevant type of building.
6. That the overlap between Building Control requirements, the provision of Home Information Packs and the provision of energy performance certificates in the domestic new-build sector be coordinated to provide a coherent, efficient and clear process.
7. That multiple Competent Persons schemes should be encouraged to develop in each sector and be operated commercially and competitively.
8. That all Competent Persons schemes be subject to licensing by ODPM based on their compliance with the requirements of the common Technical Standard.
9. That a single overarching Technical Standard be developed together with a suite of supporting Technical Standards for individual areas of competence.
10. That the Competent Persons schemes should eventually incorporate UKAS accreditation.
11. That the Technical Standards include specified minimum components including a monitoring programme incorporating random sampling of completed certificates sufficient to demonstrate compliance with a specified quality standard.
12. That the insurance industry be consulted directly on the suggested framework in order to identify key concerns in the provision of appropriate cover.
13. That the Competent Persons schemes in each sector be required to submit all input data and results for all energy performance certificates to a single common data repository developed and maintained by or under license from ODPM.
14. The development of an implementation programme for compliance with Article 7 requirements as a matter of urgency.
15. That resources are urgently required to begin development work in key areas such as the calculation methodologies and the Technical Standards documents.

1 Background

The Advisory Group was established at the request of ODPM to recommend how the operational requirements of Articles 7 and 10 of the Energy Performance in Buildings Directive should be implemented. Article 7 relates to the provision of Energy Performance Certificates and Article 10 to the requirement for Independent Experts.

In summary these two articles together require 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” and that “the certification of buildings and 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 Advisory Group recognises that the operational framework adopted must be appropriate given the different legislative drivers and methodologies proposed for the preparation of an Energy Performance Certificate. The following table identifies the key sectors created by this analysis:

Building Type	Sub-type	EPBD Purpose	Implementation Legislation	Methodology
Dwellings	All	Construction / First Sale / First Rental	Building Regulations	SAP
Dwellings	All	Refurbishment	Building Regulations	SAP and RdSAP
Dwellings	All	Sale – marketed sales of existing homes	Housing Bill Section 5 (HIP)	RdSAP
Dwellings	All	Rental / Non-Marketed sales of existing homes	TBA	RdSAP
Other buildings	Depends on methodology ^{§§}	Construction / First Sale / First Rental	Building Regulations	Design rating / Asset rating (plan)
Other buildings	Depends on methodology	Refurbishment	Building Regulations	Design rating / Asset rating (plan) and Asset rating (site)
Other buildings	Depends on methodology	Sale / Rental of existing buildings	TBA	Asset rating (site)
Other buildings	All	Public display certificate	TBA	Operational rating

In those areas where the implementation legislation is as yet undefined, the Advisory Group has assumed a direct transposition of the Directive.

The Advisory Group established two working-groups:

Working-group one was to consider the issues of training, qualifications and recruitment, taking account of the ongoing work to develop appropriate methodologies for determining the energy performance of different types of building and the formulation of recommendations for improvement.

Working-group two was to consider the issues of authorisation / third-party certification, quality assurance, professional indemnity insurance and data management, taking account of the developments in related areas such as the Home Inspector Certification Scheme and competent persons schemes.

This paper presents the recommendations of working-group 2 for consideration by the Advisory Group.

2 Recommendations

2.1 Anticipated Activity Levels

In order to evaluate the likely resource requirements, the working-group has made an estimate of the number of energy performance certificates required in the various sectors identified. Estimates have been made for activity levels during the initial period of two or three years following introduction and of

^{§§} Current understanding is that two methodologies may be adopted, one based on the Dutch model which would be suitable for buildings with straightforward climate control techniques and the other based on the US Energy+ model (and / or a variety of proprietary tools) that would be suitable for buildings with more complex climate control strategies.

the annual ongoing requirement thereafter. These estimates are extremely crude initial estimates and need review.

Building Type	EPBD Purpose	Anticipated Activity Level (Certificates / Year)	
		Initial Period ^{***}	Ongoing
Dwellings	Construction / First Sale / First Rental	150,000	150,000
Dwellings	Refurbishment	600,000	600,000
Dwellings	Sale – marketed sales of existing homes	1,250,000	1,250,000
Dwellings	Rental / Non-Marketed sales of existing homes	2,000,000 ^{†††}	500,000
Other buildings	Construction / First Sale / First Rental/ Refurbishment	50,000	50,000
Other buildings	Sale / Rental of existing buildings	250,000	150,000
Other buildings	Public display certificate	TBC ^{†††}	TBC

Recommendation 1: The working-group recommends that a formal assessment of anticipated activity levels be prepared.

A formal estimate of anticipated activity levels will enable the likely resource requirements to be calculated. This, combined with an evaluation of the competencies required and the pool of potential candidates, will enable an assessment of the likely training requirement. An evaluation of the rate at which appropriately trained individuals can become available will also assist in the development of a realistic timetable for the implementation of the various Directive requirements.

2.2 Legal Framework

Recommendation 2: The working-group recommends that the legal requirement for energy performance certificates specify that they must be provided by an individual operating within a formal third-party certification scheme.

The working-group is concerned that the viability of any framework for delivering certificates in the independent manner required by the Directive will be undermined if the relevant legislation is not enforced or can be circumvented. This is of specific concern in respect of the role of Building Control Authorities / Approved Inspectors. In order to ensure that a viable framework is able to develop, recommendation one is that all certificates must be provided by an individual operating within an appropriate Competent Persons scheme authorised by ODPM. This will need to be specified in all of the relevant legislation and regulations implementing the Directive requirements.

Such an approach would allow Building Control Officers to provide certificates should they wish to do so, but would ensure that they were subject to the same obligations in respect of terms of engagement, ensuring quality, providing insurance cover and adherence to specified code of conduct. This is considered essential if an efficient commercial market for the provision of building certification is to develop.

^{***} The initial period is the first 2-3 years

^{†††} Assumes certificates issued for all social sector housing during initial years.

^{†††} Depends crucially on interpretation of Directive requirements.

The adoption of the Competent Persons approach is considered to fit well with the Building Regulations framework and to provide an implementation mechanism that will be both effective and efficient.

2.3 Competent Persons Framework

Recommendation 3: The working-group recommends the third-party certification of individuals through Competent Persons schemes authorised by ODPM based on the technical methodology employed.

There was some considerable debate over whether the Competent Person should be an individual or a company (as per the Part P scheme and FENSA). The recommendation to adopt certification of individuals reflects the judgement that for the vast majority of buildings, an accurate assessment will depend on individual rather than corporate competence. Individual certification would also recognise the provision of Energy Performance Certificates as a professional service.

The working-group accept that no one individual is likely to have all of the skills required to produce an Energy Performance Certificate for the most complex buildings on their own. However, the sub-contracting of liability as part of the design process is already a routine occurrence and it is expected that appropriate contractual relationships could be established that would enable an individual to accept overall responsibility for issuing an Energy Performance Certificate.

Recommendation 4: The working-group recommends that a framework for commercial Competent Persons schemes be developed incorporating separate provisions for the five specific areas of competence identified.

The five specific areas of competence identified are for the provision of:

- Design ratings for new-build dwellings based on plan data;
- Asset ratings for existing dwellings based on data from site observations;
- Design ratings for new-build other buildings based on plan data;
- Asset ratings for existing other buildings based on data from site observations;
- Operational ratings for existing other buildings based on site observations

If more than one methodology is established in any of these areas, separate competence requirements could be established related to the specific methodology. Even without separate methodologies, some gradation of competence is likely to be required to accommodate the variability amongst buildings other than dwellings. It is clearly inappropriate to require all individuals wishing to provide energy performance certificates for small commercial offices in converted residential properties, to be competent to assess enormous multi-use buildings incorporating sophisticated design techniques and complex services. A formal delineation of areas of competence for individuals will assist clients to select an appropriate service provider.

The working-group anticipates that schemes will emerge covering multiple areas of competence in order to satisfy the needs of those providing energy performance certificates and commercial pressure from the wider market.

Figure 1 attached illustrates the anticipated structure. The overarching technical standard incorporates subsidiary technical standards related to the specific methodology / area of competence that a competent persons scheme may wish to cover. ODPM license separate competent persons schemes, each of which covers one or more of the areas of competence - in the figure Scheme 1 covers the two areas of competence related to dwellings, whilst Scheme 2 covers just a single area of competence and Scheme 3 covers all areas of competence for both dwellings and other buildings. An individual may be a member of one or more schemes, thus individual B is a member of both Scheme 1 and Scheme 2. Finally, the eventual adoption of the Technical Standards and accreditation of the schemes by UKAS is indicated by the dotted line.

Recommendation 5: The working-group recommends that an individual submitting proposals for the refurbishment or extension of an existing building be required to be competent in the provision of both asset and design ratings for the relevant type of building.

The consultation on Part L of the Building Regulations proposes that proposals for refurbishment of a building include an assessment of the scope for improving the energy efficiency of the remainder of

the building, as well the specific area subject to extension or refurbishment. This will require competence in both types of activity, together with an understanding of the application of the Building Regulations requirements.

2.4 Interaction with Home Information Pack

Recommendation 6: The working-group recommends that the overlap between Building Control requirements, the provision of Home Information Packs and the provision of energy performance certificates in the domestic new-build sector be coordinated to provide a coherent, efficient and clear process.

The working-group recognises that the proposals for the Home Inspector Certification Scheme do not currently fit clearly within the Competent Persons framework proposed here. Nor is it completely clear how they will fit within the Building Control process. As a minimum, it is considered essential that the technical methodology and the approach to quality management be common between any Competent Persons scheme and the HICS. Furthermore, in order to minimise cost and ensure that the processes operate efficiently, it is essential that the interaction between the different elements and the responsibilities arising be clarified.

2.5 Competition

Recommendation 7: The working-group recommends that multiple Competent Persons schemes should be encouraged to develop in each sector and be operated commercially and competitively.

Schemes could be operated by any organisation capable demonstrating to ODPM that their scheme conforms to the requirements of the relevant Technical Standard. It is considered desirable that this should ultimately include a requirement for relevant UKAS accreditation (anticipated to be EN45013).

Schemes are expected to emerge that cover multiple sectors and multiple schemes are expected to emerge in each sector, with all schemes operating commercially and competitively to provide the most appropriate support framework for those issuing certificates.

Schemes could potentially emerge operated by individual companies for their own employees; by commercial organisations for networks of individuals; or by professional institutions for their members. Such a diversity of schemes would encourage competition and cost-effectiveness, whilst ensuring that each scheme meets a common minimum standard.

2.6 Scheme Licensing

Recommendation 8: The working-group recommends that all Competent Persons schemes be subject to licensing by ODPM based on their compliance with the requirements of the common Technical Standard.

Recommendation 9: The working-group recommends that a single overarching Technical Standard be developed together with a suite of supporting Technical Standards for individual areas of competence.

Recommendation 10: The working-group recommends that the Competent Persons schemes should eventually incorporate UKAS accreditation.

The working-group recognises the fundamental requirement for the definition of Technical Standards defining all of the key aspects of how a competent persons schemes should be established and operate within each sector. It is proposed that ODPM licensing of individual schemes be based on the scheme demonstrating that it complies with the requirements of the relevant Technical Standard.

Although separate Technical Standards will be required for each sector, they are expected to share many elements. Ensuring that the development and maintenance of the Technical Standards is undertaken in a co-ordinated manner will encourage the development of competence, maximise efficiency and cost-effectiveness and enhance career opportunities.

The scope of the Technical Standards must be sufficient to ensure that all Competent Persons schemes established to implement that Standard will deliver a common minimum level of performance, both technically and contractually.

It is considered desirable that the Technical Standards are ultimately recognised by UKAS and that UKAS accreditation eventually becomes a condition of licensing a scheme. However it is considered unlikely that this will be possible in all sectors in the time available for implementation of the Directive.

2.7 Technical Standards – Methodologies and Assessment

Recommendation 11: The working-group recommends that the Technical Standards include the following minimum components:

- i. **Adoption of national methodology;**
- ii. **Software approval;**
- iii. **Monitoring through random sampling;**
- iv. **Quantitative quality standard;**
- v. **Registration of individuals;**
- vi. **Insurance; and**
- vii. **Reporting.**

i. Adoption of national methodology. This would tie-in all Competent Persons schemes with the methodology specified through Building Regulations and required by the Energy Performance in Buildings Directive. In addition to the calculation procedures, the methodology must include such issues as measuring conventions, in order to ensure that the methodology can be applied in a consistent manner (whether based on taking data from plans and specifications or from a visual inspection). It is also considered essential that the methodology includes the formulation of recommendations as required by Article 7. Clearly it is essential that there is flexibility within the scheme to cope with revisions to the approved methodology.

ii. Software approval. In sectors where the calculation methodology will be publicly defined, so that a commercial market for software is able to develop, a software approvals procedure will be required.

iii. Monitoring through random sampling. The aim of Article 10 is to ensure that the content of the energy performance certificate (including both the ratings and the recommendations) is robust and can be relied on. The working-group considers third-party repeat assessment of a random sample of completed jobs as being absolutely essential for this purpose. Whilst other techniques, such as supervised activity or technical knowledge assessment, may also be appropriate in some sectors, these will be additional to and not replacements for monitoring through random sampling.

Determining the most appropriate monitoring strategy will depend on the variability inherent in the assessment process, the sources of errors, the variability in competence and experience of those producing the certificates and the cost of undertaking monitoring. To some degree it may be appropriate to allow individual Competent Persons schemes to propose how they would go about ensuring that the quality goals are achieved. This would encourage differentiation and allow schemes to meet the perceived needs of their target market.

Whilst some variation between schemes is considered desirable, this should not be at the expense of ensuring that all schemes meet an agreed common minimum level of performance.

As part of the licensing process, all competent persons schemes should be required to demonstrate that they have a monitoring strategy, incorporating random sampling of completed certificates, that is statistically robust and sufficient to demonstrate compliance with a quality standard specified in the Technical Standard.

iv. Quantitative Quality Standards. As a minimum, quality standards should be defined in terms of the reliability of the final performance rating. Without a quality standard and a statistically robust monitoring regime there will be no means of ensuring that the various competent persons schemes operating in a sector are delivering reliable results.

Consideration needs to be given to the specification of appropriate quality standards for each sector and should be based on the key information contained in the certificates issued within the sector. For example, the quality standard for ratings issued for new-build dwellings based on plan data could be that currently employed for quality assured SAP ratings for Building Control purposes, which has historically been +/- 5 SAP points in 95% of all ratings issued. Similar specifications for accuracy and confidence limits would need to be specified for each sector and, potentially, for a range of measures provided on the certificate.

In defining the quality standard for any sector, it would be essential to recognise the inherent constraints of the methodology and the practical constraints on achieving consistency. This will need to take account of the effect of using recommended defaults when collecting the data and the reasons for and impact of moving away from defaults.

The lack of any track record of certificates being issued in most sectors is expected to make it difficult to be confident when defining appropriate quality standards at the outset. Consideration should therefore be given to specifying slightly looser standards initially, which can be subsequently tightened as the results of the random sampling monitoring.

v. Registration of individuals. All schemes would need to maintain a register of certified individuals licensed to issue certificates. They will also need to operate procedures to ensure certified individuals operate in accordance with the scheme requirements (including meeting performance standards) and to resolve any problems or complaints that arise. The general scope and purpose of the procedures should be defined in the Technical Standard (e.g. ensuring that certified individuals maintain their technical competence when the approved methodology changes) but the individual competent persons schemes should be allowed flexibility in implementing them, subject to demonstrating that they achieve the specified objective.

The maintenance of personnel certification would need to fit with the certification of quality and ensure that individuals maintained their competence. This could be through a process of periodic re-certification / examination; through CPD obligations and monitoring or some other approach, but basic principles would need to be set by the relevant Technical Standard and formalised within a scheme specification.

vi. Insurance. Schemes will need to ensure that all certified individuals are covered by and maintain appropriate insurance. Schemes should be allowed flexibility in the manner in which they achieve this, but the Technical Standard should specify a minimum level of requirements (including issues such as fall-back provision by the scheme if appropriate).

vii. Reporting. In due course, all schemes will be subject to auditing by ODPM and, eventually, UKAS, but this can be made easier by the adoption of standard reporting requirements for all schemes. As a minimum this would include numbers of certified individuals; numbers of certificates issued; quality monitoring results; disciplinary issues; complaints; insurance claims and so forth. Consideration should be given to the consumer benefits of transparency in the public disclosure of some or all of this information.

2.8 Insurance

Recommendation 12: The working-group recommends that the insurance industry be consulted directly on the suggested framework in order to identify key concerns in the provision of appropriate cover.

The working-group recognises the critical role of professional indemnity insurance in the development of any viable scheme.

One specific issue identified by the working-group is ensuring adequate run-off cover for any scheme linked to the certification of individuals. The option that has been discussed for the Home Condition Reports of providing cover through a one-off premium linked to the lodging of a report may be a preferable model to traditional PII cover.

A second specific issue is the setting of limits of liability. Ensuring that appropriate limits of liability are set will help insurers to develop appropriate products despite the lack of a directly relevant claims history.

A third issue is limiting the duration of liability. The Directive allows a period of validity for certificates of up to 10 years, whilst current insurance provision normally limits the period for claims to six years.

It is essential that this discrepancy be addressed and a maximum claims period is set which facilitates the introduction of insurance cover.

2.9 Data Management

Recommendation 13: The working-group recommends that the Competent Persons schemes in each sector be required to submit all input data and results for all energy performance certificates to a single common data repository developed and maintained by or under license from ODPM.

The establishment of a single data repository into which all of the schemes submit data would greatly help with the long-term goal of assessing the energy performance of the overall building stock; the identification of trends; the determination of benchmarks; the development of policy; and fulfilling national reporting requirements.

A national repository would also be of benefit to the competent persons schemes through the development of the national methodology; the monitoring of quality standards; and the supervision of the individual schemes.

Given the period of validity of an energy performance certificate (potentially up to 10 years), there would also be a strong consumer benefit in a single national database of valid certificates both as a source of information and protection against fraud.

Consideration needs to be given to the potential data protection issues; the scope of data that it would be appropriate to store; and the potential to leverage existing systems (such as the Land Registry or the data repository being developed for the Home Inspector Certification Scheme).

The operation and maintenance of the data repository could be financed through a levy imposed on each certificate produced, which would cover the cost of making the information available to Local Authorities and other interested parties as necessary.

The data repository could be provided by a third-party under license from ODPM, although as a monopoly service the terms of the license would need to prevent excessive charging and prevent inappropriate use of the data.

2.10 Implementation Timetable

The proposed framework is considered both technically robust and operationally effective. However, concern has been expressed about the time required to put the proposals into place.

Recommendation 14: The working-group recommend that the development of an implementation programme for compliance with Article 7 requirements as a matter of urgency.

The following table shows the current understanding (target date) of when the obligations arising under the Directive will be implemented in UK, together with the latest possible date allowed under the Directive^{§§§}.

Building Type	EPBD Purpose	Implementation Legislation	Implementation Date	
			Target	Latest
Dwellings	Construction / First Sale / First Rental	Building Regulations	January 2006	January 2006
Dwellings	Refurbishment	Building Regulations	January 2006	January 2006
Dwellings	Sale – marketed sales of existing homes	Housing Bill Section 5 (HIP)	January 2007	January 2009

^{§§§} The assumption has been made that the provision of certificates for new-build and refurbishment for both dwellings and other buildings is inextricably linked with the implementation of Articles 3 through 6 for which no deferment from the January 2006 deadline is permitted.

Dwellings	Rental / Non-Marketed sales of existing homes	TBA		January 2009
Other buildings	Construction / First Sale / First Rental	Building Regulations	January 2006	January 2006
Other buildings	Refurbishment	Building Regulations	January 2006	January 2006
Other buildings	Sale / Rental of existing buildings	TBA		January 2009
Other buildings	Public display certificate	TBA		January 2009

Whilst the methodologies for dwellings are well progressed, there is clearly an urgent need to finalise a methodology for other buildings. It is also apparent that a phased implementation is desirable in those sectors where flexibility does exist in order to meet the training and development needs of sufficient candidates to ensure an adequate provision of qualified individuals and avoid an overwhelming demand for resources arising in January 2009.

The working-group also recognises that a properly phased introduction in the various sectors identified could. Key issues in respect of the introduction timetable include:

- The introduction of a legal requirement for certificates on change of tenancy in the dwellings sector from the start of 2006 would help to stimulate the training and qualification of Home Inspectors. This is essential if the proposed introduction of Home Information Packs from early 2007 is to be achieved. This could be phased in by a number of routes, for example starting with Local Authority housing, then extending to Housing Association housing, then to all social housing and finally to the private rented sector. By linking the requirement for a valid energy performance certificate to the requirement for a gas safety certificate, it would be possible to reach a very substantial proportion of all properties very quickly.
- The requirement for the public display of certificates will create an overwhelming and transitory demand when the requirement is first introduced unless the requirement is rolled-out gradually. Since the last possible date for compliance is January 2009, it is considered essential that the requirement start to be introduced at the earliest possible opportunity. Phasing should be by building type, features or use rather than geographical region, which would be ineffective and potentially counter-productive

2.11 Resource Requirement

Recommendation 15: The working-group recommends that resources be made available to allow development work to commence immediately in key areas.

These include:

- Accelerated development and piloting of national calculation method(s) for buildings other than dwellings
- The formal development of the necessary Technical Standards;
- Liaison with UKAS to secure their support for the proposals;
- The promotion of the proposed approach to industry and institutions that may be interested in establishing Competent Persons schemes; and
- The development of an interim approvals procedure for Competent Persons schemes in advance of the formal UKAS accreditation.

The experience of the development of the Home Inspector Certification Scheme suggests that successful implementation will require:

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- The establishment of a combined industry, regulator and consumer steering group;
- A substantial project management and communication resource;
- Adequate funding to allow accelerated development and piloting of national calculation method(s) for buildings other than dwellings together with the the commissioning of key documents; and
- Clear policy guidance in terms of scope and timetable.

Figure 3 Schematic of Proposed Competent Persons Scheme Structure

