

2012 Consultation on Changes to the Building Regulations in Wales Part L (Conservation of fuel and power)

Consultation – summary of responses

Part 4

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The UK zero carbon house myth.

What is the definition of a zero-carbon home?

'A home that produces zero or even negative CO2 emissions by maximising the use of energy efficiency and renewable energy.'

Guardian 2009

'A zero carbon home is one that generates as much power as it uses over the course of a year and therefore has net zero carbon dioxide emissions.'

Tree hugger 2009

A building can be considered fully 'zero carbon' when there is no net emission of carbon dioxide (CO2) arising from the energy use within the building. This includes space heating, water heating, lighting, appliances and so on.

www.idea.gov.uk

The government has set the following targets for zero-carbon buildings:

All new-build homes in England and Wales to be 'zero carbon' by 2016 . All new schools to be zero carbon by 2010 . All new public sector buildings to be zero carbon by 2018 . All new non-domestic buildings to be zero carbon from 2019.

(Local Government Improvement and Development 2011)

What is wrong with the current definition of a zero carbon home ?

The definitions all neglect to allow for :-

The energy used in extracting the materials for the home.

The energy used in transporting the materials to the manufacturing plant.

The energy used to run the manufacturing plant.

The energy used to transport the materials from the manufacturers to the wholesalers to the retailers to the consumers to the site for the home.

The energy used by the people involved in the manufacturing, transport, wholesale, retail, consumer and construction of the works.

The running costs of the refurbished property neglect to allow for a national grid energy distribution system that requires that the whole of the UK energy generation grid be switched on 24 hours a day 365 days a year to allow one home to use a single power socket, turn on a light bulb, treat its water, treat its sewage, receive communications.

Questions to lead to a new definition of a zero carbon home.

1. Is a zero carbon home or building needed at all ?
2. Is there another building that can be improved and used instead ?
3. Is another site available for the project ?
4. Can the sites existing resources be replenished by the work.?
5. Is the building removable ?
6. What is the total energy required for materials, people, transport, construction and running costs ?
7. What is the total energy potential of the resources of the site ?

Having answered these questions you then arrive at.

A new definition of a zero carbon building.

'A building that is needed, that enhances; through passive energy use; peoples quality of life and that increases natural resource duration.'

Ian K Whittaker

UK Registered Architect

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474 words over 1 page

Gordon Russell

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Building Regulations Consultation
C/O enquiries.brconstruction@wales.gsi.gov.uk

17th October 2012

Dear Sir / Madam

Re : Welsh Government Part L Consultation

Thank you for inviting me to the Part L consultation held in Carmarthen on 6th September 2012. I would note the following observations from the perspective of a small architectural practice involved with small scale development :

- A 25% improvement rather than 40% would be preferred. Jumping straight to 40% during a recession is not reasonable. I feel everything is leading to mass produced 'pre-fab' construction methods in the long term, in tune with the global economy. If this is the case local builders, plumbers, electricians, suppliers etc., rooted in traditional methods should not be legislated out of existence in the short term.
- I agree with the aggregate approach to meet the carbon target.
- The elemental recipe is good.
- Good to omit the fuel factor given most of rural Wales is off gas.
- The Conservatory exemption for dwellings should be removed because it is abused and a source of significant energy use in homes - I visit many houses where people occupy such conservatories as their main living space heating them in winter and cooling in summer. Removing this exemption and educating people is essential if there is to be any hope of capping energy use in houses.
- Consequential improvements should not insist on cavity fill. Reasonable improvements should be considered on a case by case basis. If the legislation assumes cavity fill is appropriate in all circumstances in Wales, then is the Welsh Government prepared to accept liability where it goes wrong ?
- Please work towards dropping the code for sustainable homes for developments of less than 5 houses. The costs are wholly disproportionate for a one off house and the few useful sections already overlap with building regulations. Private Clients consider it nothing more than a 'jobs

Building Regulations Consultation
Construction Unit
Environment and Sustainable Development Directorate
Welsh Government
Rhyd y Car Offices, Merthyr Tydfil
CF48 1UZ

16th October 2012

Dear Sirs

BUILDING REGULATIONS IN WALES - PART L 2012 CONSULTATION
ROBUST DETAILS LIMITED

Robust Details Limited (RDL) is a UKAS accredited product certification body (number 4171) and operates a Building Regulation Part E Robust Details certification scheme within the scope of this accreditation. More than half a million new homes have been registered with RDL since the scheme was enabled following the last revision of Part E affecting England and Wales.

Recently, Robust Details Ltd carried out its 10,000th sound test since the date of the scheme launch, in May 2004. RDL has also carried out site inspections on a further 10,000 (different) dwellings under construction. Overall, 98 per cent of all of our tests have met or exceeded the Building Regulations requirements, with an average performance 7dB above the regulatory minimum. The RDL scheme for sound insulation is currently available for builders to use, under the various applicable Building Regulations, in Wales, Scotland, Northern Ireland and England.

The principal area of interest for RDL in the area of Building Regulations is compliance and performance (Questions 47 to 50 of your Consultation Response Form). Accordingly, RDL's observations are limited to these specific matters, which are set out in this letter (below).

In general, RDL considers that there are aspects of the robust details' model that can be effectively applied to parts of the Building Regulations other than Part E and would be very pleased to work with Welsh Government and the wider industry to establish how we could use our particular experience to bring about effective self-regulated, self-funded and cost-efficient standards improvements, ensuring high levels of traceable compliance, narrowing the 'performance gap' that besets many other areas of regulation, including the current Part L.

Specifically, it is RDL's view that:

- the principles of the Robust Details scheme in Part E of the Regulations could usefully be extended into Part L for Wales.
- RDL's experiences with Part E can be shared with industry, Welsh Government and all other interested parties in furtherance of the development of the required knowledge and skills base for closing the 'performance gap' for Part L in Wales.
- Part L in Wales should include 'alternative routes to compliance', such as Robust Details.

With reference to the consultation documents, RDL would offer the following information to support this view:

In principle, RDL supports the objective of moving closer to 'zero carbon' for new-build homes, though it is apparent that the step changes along the way, of which this proposed change to Part L in Wales is one, will need to be made such that technical risk is minimised. The ability of systems, products and new technologies to contribute effectively to zero- and near-zero-carbon building performance needs to be rigorously evaluated and tested.

Additionally, it has to be said that, as well as the issue of technical risk, the question of financial viability needs also to be addressed, especially so given the prevailing economic climate. The additional costs (demonstrated in the RIA) of meeting very high energy conservation targets will impact negatively on the viability of many sites in Wales and it may be sensible, rather than to strive for 40%/25% 'theoretical' improvement over current (unmeasured) standards, to focus on measures that will close the performance gap and deliver homes that more closely meet design expectations.

From RDL's experience with Part E, it would be inappropriate for house builders to be held wholly accountable for a 'performance gap' (implied by the PAS proposal) which is also affected by, for instance, immature renewable technologies, unreliable product performance claims and inaccurate design tools. Accordingly, RDL would suggest that the principal focus, in this 'next step towards zero' should be a systematic collection of evidence relating to building design tools, product/system certification and post-construction evaluation. RDL would offer to share its own evidence about compliance, in the spirit of cooperative knowledge transfer.

RDL has much statistical evidence to show how performance varies across a variety of building forms (masonry, timber- and steel-framed new homes), including seasonal and geographic factors, volume builders and SMEs, etc., which could be used as an indicator of 'buildability' and from which the 'builder' contribution to the performance gap could be assessed. The case for the use of a PAS for Part L focusses unduly on the builder's area of responsibility (work on site) and does not address the accuracy or efficacy of design or, for that matter, post-completion evaluation. Accordingly, the extent to which the 'performance gap' might be narrowed in the event of the introduction of a PAS, mandatory or otherwise, is both uncertain and, ultimately, incalculable.

RDL considers that changes to regulations should be based upon evidence, in order to be effective and to avoid future compliance gaps - and to help gain the support of the industry. RDL itself has carried out its own research to justify its decisions regarding assessment and

approval criteria (for Part E) within its RD product certification scheme. RDL would be happy to provide Welsh Government with examples of this and believes that, wherever possible, the same approach should be taken for Part L in Wales.

RDL is aware of a Zero Carbon Hub (ZCH) initiative (in England) which has been advanced as an alternative to a PAS-type approach to improve compliance with their proposed Part L 2013. This has many attractive features, not least of which is the use of 'real' buildings as the principal source of performance data upon which to make regulatory decisions. Accordingly, RDL has offered to work with ZCH, HBF and the wider industry with a view to establishing which aspects of the current Part E RD scheme might be usefully transferred into a new industry-led Part L initiative.

There may indeed need to be differences in the way a Part L compliance assessment scheme works compared to Part E Robust Details – for instance, sampling homes for heat loss measurements might be confined to the heating season. But it clearly makes more sense to arrange this using a large national database than on a site-by-site basis, particularly if the intention is to learn lessons and share best practice. Knowledge transfer is probably the biggest success story of Part E Robust Details and the opportunity to apply the same principles to an industry-led Part L initiative for Wales should not be missed.

For illustration, and subject to positive engagement with the wider industry, some of the 'outputs' that could be expected if the RDL Part E scheme was extended to cover suitable elements of Part L in Wales:

- a database containing unique number plot registrations for new homes built under the scheme, enabling whole-population analysis (from sample field-tests, once these have been developed, and from during-construction inspections) – to enable tracking of what has been built, where and by which company (and, in time, an analysis of how various house types actually perform).
- a handbook viewable on a dedicated website, with downloadable checklists for use by site operatives, (supported by...)
- a programme of seminars, conferences and training events, based on the principles contained in the scheme handbook(s), aimed at designers, housebuilders and building control professionals
- a framework for a scheme to ensure that pattern book principles are adhered to on site, involving independent surveillance and performance monitoring activities, all linked to unique plot registration data.

Built into the Part E scheme is a feedback and improvement loop, ensuring that everyone learns quickly from mistakes, errors or construction inaccuracies. Patterns are updated and amended (or even deleted) - this way, performance levels remain high and, in most cases, improve over time.

RDL has many thousands of sound test results on houses and flats built post-2004. The next review of Part E can thus be founded on this bedrock of reliable data, in the full knowledge that the solutions will be buildable and workmanship-tolerant. To date, reviews of Part L have not been informed by such large-volume, high quality as-built test data. An industry-led Part L initiative such as that proposed by ZCH, if properly developed, perhaps gives cause for optimism that this need not be the case in future.

On the particular matter of compliance checklists, RDL would support their use as part of an overall compliance scheme – they have proved to be useful, under Part E in assisting builders and building control bodies to identify and address key elements of construction. It would, however, be optimistic to imagine that, by themselves, they could solve the ‘performance gap’ problem. Aside from the Part E Robust Details precedent, the project work undertaken by RDL in partnership with BBA to develop ‘Constructive Details’ in response to the proposals in Part L 2010 for the control of linear thermal bridging, including the CDL handbook, could provide the basis for a more general Part L compliance guide. The checklists included in the CDL handbook are offered as an example of a simple and practical form that may be suitable for this purpose.

For the next step-change in the regulation of building energy performance, if we are serious about getting it right on-site, it is RDL’s view that we will need to import some of the Part E principles into Part L, perhaps under the umbrella of a new Part L compliance scheme. This will not only assist builders and building control bodies to meet regulatory targets, but it will give customers confidence that their new home does ‘exactly what it says on the tin’, as far as energy consumption and carbon compliance is concerned.

I trust that these views will be helpful to you – please feel free to give me a call if you’d like any further information on any aspect of RDL’s response.

Lastly, I would confirm that RDL is content for this response to be made public.

Yours faithfully



Dave Baker

CEO

for the boys' exercise, where they need to employ a code assessor, ecologist, hydrologist, etc., for little gain. The code is held in contempt, treating individuals like idiots. Clients would far rather spent the extra £5,000 - £10,000 on additional insulation and products to benefit the home in the long term, rather than employing an ever growing army of consultants driving around Wales administering legislation worthy of a Communist Dictator.

- Please also work towards scrapping the recent legislation on adopted sewers and lateral drains for developments of less than 5 houses. Drains for a few houses can easily be managed by Building Control and Approved Contractors, without the bureaucratic and very costly new system. (more 'jobs for the boys' employing Solicitors, camera surveys, requiring cash bonds, etc.)

A local builder recently said to me that it is a wonder any private individual wants to build anything in the climate of unreasonable bureaucratic legislation. Building your own home or even considering extending it is already only within the grasp of the wealthy elite. It is simply not sustainable or proportionate to expect individuals to employ the regular army of specialist consultants kept by big developers. Do we really want development to be carried out only by multi million pound developers and housing associations in Wales ?

Please work towards really making it simpler for small development !

Yours faithfully,

G. Russell.

22 October 2012

e-mail response sent to: enquiries.brconstruction@wales.gsi.gov.uk

Dear Sir/Madam,

RESPONSE TO: Building Regulations Part L Review

Thank you for the opportunity to respond to the above consultation. The Royal Town Planning Institute (RTPI) is the largest professional institute for planners in Europe, representing some 23,000 spatial planners. The Institute seeks to advance the science and art of spatial planning for the benefit of the public. As well as promoting spatial planning, the RTPI develops and shapes policy affecting the built environment, works to raise professional standards and supports members through continuous education, training and development. RTPI Cymru represents the RTPI in Wales, with 1,100 members.

This response has been formed drawing on the expertise of the RTPI Cymru Policy & Research Forum which includes a cross section of planning practitioners from the private and public sectors and academics from different parts of Wales.

If you require further assistance, have any queries relating to the enclosed or require clarification of any points made, please contact RTPI Cymru on 029 2047 3923 or email Roisin Willmott at walespolicy@rtpi.org.uk

Yours sincerely,



Dr Roisin Willmott MRTPI
RTPI Cymru
National Director

2012 consultation on changes to the Building Regulations in Wales

Part L (Conservation of fuel and power)

Consultation

Response Form

Your name: Dr Roisin Willmott

Organisation (if applicable): RTPI Cymru

Email: walespolicy@rtpi.org.uk

telephone number: 02920 473923

Your address: RTPI Cymru, PO Box 2465, Cardiff CF23 0DS

- (i) **Are the views expressed on this consultation an official response from the organisation you represent or your own personal views?**

Organisational ☒ Personal Views ☐

- (ii) **Are your views expressed on this consultation in connection with your membership or support of any group? If yes please state name of group:**

Yes ☐ No ☐

Name of group:

- (iii) **Please tick the one box that best describes your organisation:**

Designers/Engineers/Surveyors:	Specific Interest:
Architect <input type="checkbox"/>	Competent person scheme operator <input type="checkbox"/>
Civil/Structural engineer <input type="checkbox"/>	National representative or trade body <input type="checkbox"/>
Building services engineer <input type="checkbox"/>	Professional body or institution <input checked="" type="checkbox"/>
Surveyor <input type="checkbox"/>	Research/ academic organisation <input type="checkbox"/>
Planner <input checked="" type="checkbox"/>	

(iv) Please tick the **one** box which best describes the size of your or your organisation's business?

Micro – typically 0 to 9 full-time or equivalent employees (incl. sole traders) ☐

Small – typically 10 to 49 full-time or equivalent employees ☐

Medium – typically 50 to 249 full-time or equivalent employees ☐

Large – typically 250+ full-time or equivalent employees ☐

None of the above (please specify) ☒

(vi) Are you or your organisation a member of a competent person scheme?

Yes ☐ No ☒

Name of scheme:

N/A

(vii) Would you be happy for us to contact you again in relation to this consultation?

Yes ☒ No ☐

WG will process any personal information that you provide us with in accordance with the data protection principles in the Data Protection Act 1998. In particular, we shall protect all responses containing personal information by means of all appropriate technical security measures and ensure that they are only accessible to those with an operational need to see them. You should, however, be aware that as a public body, the Welsh Government is subject to the requirements of the Freedom of Information Act 2000, and may receive requests for all responses to this consultation. If such requests are received we shall take all steps to anonymise responses that we disclose, by stripping them of the specifically personal data – name and e-mail address – you supply in responding to this consultation. If, however, you consider that any of the responses that you provide to this survey would be likely to identify you irrespective of the removal of your overt personal data, then we should be grateful if you would indicate that, and the likely reasons, in your response, for example in the relevant comments box.

Questions:

New homes

1. Do you agree with the Government's preference for a CO₂ saving of 40% reduction in carbon dioxide emissions compared to Part L 2010.

No change to 2010

☐

40% CO₂ saving

☒

25% CO₂ saving

☐

Something else (please explain below)

☐

Don't know

☐

Comments

2. Do you agree with the proposal for an 'aggregate' approach to CO₂ target setting for new homes in 2015? The CO₂ target for any individual dwelling varies depending on the ease with which the building can achieve the target, with the overall required CO₂ saving achieved when aggregated over the build mix.

Yes ☒ No ☐ Don't know ☐

Comments

3. Do you agree with the proposal for a compliant option based on a consistent recipe of elemental specifications for fabric, services plus an additional CO₂ saving equivalent to an amount of photovoltaic (PV). Please justify your choice.

☒☐☐

Yes No Don't know

Comments

This option would give a level of certainty to all concerned and a consistency across Wales. Alternatives to PV would be encouraged where PV isn't feasible due to building orientation or roof type for example.

4. The main difference between the recipes is the required system efficiency for each fuel, which is appropriate for the heating system type. By adopting this approach to different fuel types, there is no need for a separate fuel factor. Do you agree with the proposed approach?

Yes ☒ No ☐ Don't know ☐

Comments

The benefits to rural housing will likely be high in that developers in off-gas locations will no longer need to build to high specification and higher cost standards in order to meet the same emissions targets.

5. For the CO₂ savings proposed, are the recipe specifications a sensible way of achieving them? Please justify your choice.

Yes ☐ No ☐ Don't know ☒

Comments

6. In approaching the selection of the amount of PV to be installed on dwellings, do you prefer?

Fixed percentage of building foundation area ☐

Proportion of gross internal floor area with a practical cap ☐

Don't know ☒

Comments

The installation of PV relies on a number of factors including orientation of roof, angle of roof and design of roof (ie. dormer windows). It will therefore be important for developers to consider additional factors when designing the location of PV.

7. Do you agree that the limits on design flexibility 'backstop' values for fabric elements in new homes should be changed from the current reasonable provision in the technical guidance to become mandatory?

Yes ☐ No ☐ Don't know ☒

Comments

Any constraints on fabric should not affect the ability to change the external appearance of a building to suit its environment which is an important part of the consideration of a planning application, particular in National Parks, Conservation Areas and for Listed Buildings.

8. Do you agree with the changes to the 'backstop' values proposed? Please explain your decision.

Yes ☐ No ☐ Don't know ☐

Comments

No comment

9. Do you have any other comments on the proposed changes to Approved Document L1A or the domestic National Calculation Methodology? Please make it clear which issue each comment relates to by identifying the relevant paragraph number.

Comments

No comment

10. The Impact Assessment makes a number of assumptions on fabric/services/ renewables costs, new build rates, phase-in rates, learning rates, etc for new homes. Do you think these assumptions are fair and reasonable? Please justify

your views.

Yes ☒ No ☐ Don't know ☐

Comments

As long as these assumptions are based on current information, trends and market conditions and are linked to all the other current consultation documents relating to planning then these have to be accepted as the best information available at the time the document is published.

11. Overall, do you think the impact assessment is a fair and reasonable assessment of the potential costs and benefits of the proposed options for new homes? Please justify your view and provide alternative evidence if necessary.

Yes ☒ No ☐ Don't know ☐

Comments

Subject to the document using the most up to date data available at the time of publication (see above).

New non-domestic buildings

12. Do you agree with the proposal for 2013 for non-domestic buildings to explicitly regulate energy efficiency separately from low carbon technologies through the assessment of primary energy consumption (PEC)? Does PEC seem like a reasonable basis for standard setting?

Yes ☐ No ☐ Don't know ☐

Comments

No comment

13. Which package of fabric and services should be selected: 7% or 10%? Please give reasons for your choice.

7% ☐

10% ☐

Don't know

☐

Comments

No comment

14. Do you foresee any particular issues for certain categories of building to meet the TPEC or TER?

Yes ☐ No ☐ Don't know ☐

Comments

No comment

15. Which approach should be utilized to incorporate the contribution of low carbon technologies into the setting of the Target Emission Rate (TER), for non domestic buildings?

Fixed carbon reduction (in kg.CO₂/m²/year)

☐

Percentage of roof area of PV

☐

Other

☐

Don't know

☐

Please give reasons for your choice

No comment

16. The proposals explain the Government's preference for a 20% aggregate improvement in CO₂ performance standards for new non-domestic buildings from October 2013. Which option do you prefer and why?

No change

☐

Target A: 10% aggregate improvement (1% PV)

☐

Target B: 11% aggregate improvement (No PV)

☐

Target C: 20% aggregate improvement (5% PV)

☒

Don't know

☐

Please give reasons for your choice

17. Do the proposed 2013 notional buildings as set out in the changes to the National Calculation Methodology seem like a reasonable basis for standards setting?
Please provide comments on the method used to develop the notional buildings and particular elements of one or more of the notional buildings, if relevant.

Yes ☐ No ☐ Don't know ☐

Comments

No comment

18. Do you think that a further recipe should be created for buildings under 250m² and aligned with the proposed domestic recipe? Are there particular reasons why smaller buildings find compliance with the non-domestic recipes difficult? Please justify your views.

Yes ☐ No ☐ Don't know ☒

Comments

19. Although we recognise that some buildings may need to be serviced in a particular way for legitimate functional or environmental reasons, should Part L incentivise a lower carbon servicing strategy (as with the current Energy Performance Certificate methodology), by basing the notional building on mixed-mode ventilation?

Yes ☐ No ☐ Don't know ☐

Comments

No comment

20. Do you have any other comments on the proposed changes to Approved Document L2A or the

Comments

No comment

21. The Impact Assessment makes a number of assumptions on the costs of fabric/services/ renewables, new build rates, etc for new non-domestic buildings. Do you think these assumptions are fair and reasonable? Please justify your views.

Yes ☐ No ☐ Don't know ☐

Comments

See answer to Q.10

22. Overall, do you think the impact assessment is a fair and reasonable assessment of the potential costs and benefits of the proposed options for new non-domestic buildings?

Please justify your view and provide alternative evidence if necessary.

Yes ☐ No ☐ Don't know ☐

Comments

See answer to Q.10

Cumulative impact of policies

23. Overall, do you think the assessment of the impact on development is broadly fair and reasonable? Please justify your view and provide alternative evidence if necessary.

Yes ☐ No ☐ Don't know ☐

Comments

While this question relates directly to the impact assessment, it is worth pointing out the assessment suggests that with a 40% CO2 saving and sprinklers scenario, development might be pushed away from everywhere except Cardiff. In addition, the energy savings of buildings for future occupiers must be acknowledged in any viability calculations to help

24. What role should planning play in facilitating higher carbon standards? Should it

focus on facilitating site wide energy opportunities that will be needed as we move towards zero or near zero carbon buildings?

Views

Planning needs to balance a number of different issues when granting consent for a wide range of developments. This means that planning is unable to solely focus on one specific issue. Currently Planning policy is changing and the importance of all development being 'sustainable' has increased, as part of this more holistic approach 'carbon reduction' can be considered but still balanced against a number of other considerations.

25. What are the implications from future (and regular) changes to the Code for Sustainable Homes and BREEAM on the implementation of the policy?

Views

Consideration will need to be given to the timings of all the proposed changes to ensure that currently planned new documents do not become out of date by changes in other related documents. This is particularly relevant due to the high number of related policies currently being consulted on.

26. Are the costs of assessment and certification now disproportionate to the costs and benefits of achieving a minimum sustainable buildings standard level?

Yes ☐ No ☐ Don't know ☒

Comments

27. What should be the role of local planning authorities in setting local standards above and beyond Building Regulations? How can we ensure there is a level playing field of standards across Wales?

Views

It is important to have a level playing field otherwise the pattern of development across Wales could be unduly influenced. There appears to be no strong reason why a national standard should be complicated by adding the ability for it to be changed at a local level.

28. What do you see as the positive/negative impacts of removing Part B of the policy expecting buildings to be certified against Code/BREEAM?

Views

Many of the issues dealt with in the Sustainable Building Standards contained in Planning Policy Wales, may be better handled through Building Regulations. However some aspects, such as the orientation of buildings are best considered at the planning application stage. It is important that the process of designing a building takes on sustainable building standards as a central principle, rather than relying on potentially expensive renewable energy bolt-ons to meet energy savings.

29. Is there a better, alternative, way to rewards and secure sustainable buildings (above the regulatory minimum) other than using national planning policy? What opportunities are there for future changes to Building Regulations?

Views

There will be a need for any requirements to be regularly reviewed in order that they keep pace with technology. Clearly 'green technology' is something which is currently changing very rapidly and is likely to continue to.

30. To what extent are duplication of standard and approval systems an issue? Would the removal of the PfSB policy assist in reducing duplication?

Views

No comment

31. What opportunities are there for higher standards to be delivered on strategic sites identified as part of the Local Development Plan?

Views

The idea of using LDPs is considered appropriate, however there is a timing issue due to the current position with regard to timescales associated with the adoption of these documents across Wales.

Existing buildings

~~32. Do you agree with the proposal to raise performance standards for domestic replacement windows? Please explain your answer.~~

~~Yes ☐ No ☐ Don't know ☐~~

Comments

33. Do you agree with the proposal to raise performance standards for domestic extensions? Please explain your answer.

Yes ☒ No ☐ Don't know ☐

Comments

The findings of the recent Sustainable Traditional Buildings Alliance (STBA) report need to be heeded with respect to traditional buildings (available at <http://www.building.co.uk/Journals/2012/09/27/x/u/l/RESPONSIBLE-RETROfit.pdf>).

34. Do you agree with the proposal to raise performance standards for non-domestic extensions? Please explain your answer.

Yes ☒ No ☐ Don't know ☐

Comments

The findings of the recent STBA report need to be heeded with respect to traditional buildings (available at <http://www.building.co.uk/Journals/2012/09/27/x/u/l/RESPONSIBLE-RETROfit.pdf>).

35. Do you agree that the exemption for conservatories or porches should be removed where an individual room heat or air conditioning unit is installed? How effective would this change be in limiting energy use/emissions, or are there other ways by which energy performance might be improved where conservatories or porches are installed?

Yes ☒ No ☐ Don't know ☐

Comments

36. Do you agree with the proposal to require consequential improvements upon extensions or increases in habitable space in existing homes below 1000m²? Please explain your view.

Yes ☐ No ☐ Don't know ☐

Comments

This proposed change and others is welcomed by RTPI Cymru as a demonstration of WG's commitment to tackling climate change by reducing CO2 emissions. However, careful consideration of the standards and assessment methods is required for traditional buildings in line with the recent STBA report <http://www.building.co.uk/Journals/2012/09/27/x/u/l/RESPONSIBLE-RETROfit.pdf>.

37. The consultation explains that the regulatory requirement for consequential improvements upon domestic extensions or increases in habitable space would be limited to a list of measures comprising a minimum standard of loft insulation, hot water cylinder insulation and the installation of cavity wall insulation.

Do you agree with this list of measures? ☐

Should this list be different (please explain below)? ☐

Another approach (please explain below) ☐

Don't know ☐

Comments

Not sure that the list should be limited to any set of measures. If they result in a more efficient building, then the measure should be allowed. Limiting the list also precludes future technological advances. Specific measures may be required for traditional buildings as per the STBA report (available at:

<http://www.building.co.uk/Journals/2012/09/27/x/u/l/RESPONSIBLE-RETROFit.pdf>)

38. What effect do you think the requirements for consequential improvements may have on the demand for repair, maintenance and improvement activity? Please use evidence to explain your answer.

Increase demand

☐

Reduce demand

☐

No effect

☐

Don't know

☐

Comments

No comment

39. Do you agree with the proposal to introduce consequential improvements upon extensions or increases in habitable space in non-domestic buildings under 1000m²? Please explain your view.

Yes ☐ No ☐ Don't know ☐

Comments

Response as per Q36

40. The consultation proposes that for non-domestic buildings, any measure from list

which is used to generate Green Deal assessments, the list in SBEM used to generate Energy Performance Certificate recommendations and the existing list of typical consequential improvement measures from Approved Document L2B should be eligible to be a consequential improvement. Do you agree?

Yes

☐

No

☐

Prefer a different list (please specify)

☐

Don't know

☐

Comments

No comment

41. Do you agree that there should not be major problems in extending the requirement for consequential improvements for the building control process? If you do foresee issues, what are they and how might these be addressed?

Yes ☐ No ☐ Don't know ☐

Comments

Provided adequate training and information is given to the Building Control bodies, consequential delay should be avoided.

42. Do you have any other comments on the proposed changes to Approved Document L1B? Please make it clear which issue each comment relates to by identifying the relevant paragraph number.

Comments

No comment

43. Do you have any other comments on the proposed changes to Approved Document L2B? Please make it clear which issue each comment relates to by identifying the relevant paragraph number.

Comments

No comment

44. Do you think that the Impact Assessment is a fair and reasonable assessment of the potential costs and benefits of raising the performance standards for replacement domestic windows and domestic/non-domestic extensions? Please justify your view and provide alternative evidence if necessary.

Yes ☐ No ☐ Don't know ☐

Comments

As per q10.

45. Overall, do you think the impact assessment is a fair and reasonable assessment of the potential costs and benefits of the proposed options for consequential improvements in existing homes? Please justify your view and provide alternative evidence if necessary.

Yes ☐ No ☐ Don't know ☐

Comments

As per q10.

46. Overall, do you think the impact assessment is a fair and reasonable assessment of the potential costs and benefits of the proposed options for consequential improvements in existing non-domestic buildings? Please justify your view and provide alternative evidence if necessary.

Yes ☐ No ☐ Don't know ☐

Comments

As per q10.

Compliance and Performance

47. For new dwellings, Welsh Government is proposing to develop a compliance checklist. Do you think such a checklist would be used sufficiently to warrant its development?

Yes ☐ No ☐ Don't know ☒

Comments

Unless it is mandatory (penalties attached if not used) then there is a high risk that it would not be used.

48. If such a checklist was developed, what should it cover?

Comments

No comment

49. If the checklist was taken forward, who should be involved in its development?

Comments

No comment

50. Would any other approach be likely to prove more effective instead (such as a PAS¹ type approach).

Yes ☐ No ☐ Don't know ☐

¹ A PAS is a Publicly Available Specification, and the PAS would set out a quality assurance approach.

Comments

No comment

- 51a. Would it be preferable for buildings of a domestic nature to be able to achieve compliance through applying the recipe in AD L1A, in acknowledgement of the domestic nature of such buildings, rather than demonstrating compliance with AD L2A?

Yes ☐ No ☐ Don't know ☐

Comments

No comment

- 51b. What are the arguments for and against this approach?

Comments

No comment

52. Additional views and suggestions for addressing compliance and performance issues in new non domestic buildings would be welcome.

Comments

No comment

53. Is the newly formatted ADL1B easier to understand and use?

Yes ☐ No ☐ Don't know ☒

Comments

54. Are there any further amendments to the newly formatted ADL1B that you would recommend? If so, please provide details.

Yes ☐ No ☐ Don't know ☐

Comments

No comment

55. How do the consultation proposals impact on the work of Local Authorities and Approved Inspectors? Please give positive and negative impacts.

Comments

No comment

56. We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:

Please enter here:

There appears to be a very heavy reliance on PV however there are a number of factors such as angle of roof slope, orientation of property, visual impact on street scene, overshadowing from adjacent buildings / vegetation all of which may preclude the use of such technology. Further reduction in FIT may also reduce the availability of such technology.

We suggest that given the historic nature of large parts of the existing stock, efforts are made to address some of the research gaps highlighted by the STBA report, particularly in relation to applicability of measures proposed to improve energy performance.

Responses to consultations may be made public – on the internet or in a report. If you would prefer your response to be kept confidential, please tick here:

☐

October 2012

Submission to the Welsh Government

in response to

Consultation Document Building Regulations in Wales Part L



**cyfeillion
y ddaear
cymru
friends of
the earth
cymru**

Summary

In light of the urgency to mitigate climate change, Friends of the Earth Cymru would like Building Regulations to adopt a zero-carbon standard in the soonest possible timeframe. Such a standard could be a Welsh Passive House standard based on the Welsh Future Homes, Passivhaus or AECB Gold Standard.

Such an approach would drive innovation and enable Wales to gain first-mover advantage, with the potential for Welsh businesses to expand activities into jurisdictions slower to adopt the highest standards.

Friends of the Earth Cymru opposes the removal of Part B of TAN 22 prior to ensuring an equivalent requirement either in planning policy or in Building Regulations. Unscrupulous developers could seize on this opportunity to construct lower-specification developments with little or no regard paid to waste management, water demand, flooding impact and sustainable transport, and with no recourse from the planning system to redress any such failures.

We have an alternative proposal for consequential improvements, which would require dwellings subject to consequential improvements to move to the highest 'potential' level of the Energy Performance Certificate scale for those dwellings not already at the top of the scale for the type of dwelling.

Climate change and the pioneer nation

The consultation document refers to both the Climate Change Act 2008 and the Climate Change Strategy for Wales. While neither of these commits society to anything approaching the urgency that is necessary to tackle the impending climate crisis, we are concerned that the level of ambition shown is insufficient even to help meet the 3% year-on-year Welsh Government reduction target.

For example, the Tyndall Centre considered it essential that all new homes should be “zero-carbon by 2011” in order to meet the 3% year-on-year target¹. The fact that we have not yet met this target is unsurprising because Building Regulations were not devolved until 31 December 2011, and in many respects ambition at the UK Government has been lower than that of the Welsh Government. But since this is the Government’s first opportunity to remedy the situation, it should now act in accordance with the advice provided by the Tyndall Centre. Given that the opportunity to change Building Regulations Part L will come about only from time to time it is all the more vital that full advantage is taken of this occasion to attempt to meet the Government’s 3% emissions reduction target.

Our baseline consideration is that the standard for new homes should be a true “zero-carbon” standard. We know from the Welsh Future Homes project at Ebbw Vale² that a Welsh Passive House zero carbon standard is achievable not at excessive cost and using materials largely sourced from Wales³. The fundamental premise of this approach is to reduce the heating requirement to the point where a traditional heating system is no longer required. If we are to move towards a sustainable Wales with a massive reduction in our current use of fossil fuels, all new properties should be constructed around this basic principle. This would indicate adoption of a Welsh Passive House standard based on the Welsh Future Homes Project, the AECB’s ‘Gold’ Standard, the Passivhaus standard or similar.

Furthermore, the direction of travel in energy efficiency is absolutely clear. Article 9 of the European Directive on the energy performance of buildings⁴ requires that:

- By 1 January 2019, new buildings occupied and owned by public authorities are “nearly zero-energy”
- By 1 January 2021, all new buildings are “nearly zero energy”.

So failure to adopt Building Regulations now that require “nearly zero energy” standards for all buildings will require a further – unnecessary, in our opinion – round of consultation and Regulation at some point before 2019 (2016 is indicated in the consultation document).

We regret that the Welsh Government is minded to provide 12 months’ delay⁵ between publication and implementation of Regulations rather than the customary 6 months. That delay is an additional 6 months in which new housing and non-domestic units will be built that lock-in future householders and occupiers to considerably greater expense as a result of ongoing energy costs. The Welsh Government is, in effect, transferring and magnifying the financial outlay from developers to householders. This seems to be in

¹ Tyndall Centre for Climate Change Research, December 2009, [Towards a 20C future: Emission reduction scenarios for Wales](#)

² BRE, [Welsh future homes project](#)

³ BRE, [Delivering low energy sustainable homes – Welsh Future Homes](#)

⁴ European Commission, 2010, [Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings](#)

⁵ 13 months as stated in the Timetable for introduction of the changes

contravention to the basic tenets of sustainable development, which the Welsh Government acknowledges includes a strong focus on future benefits.

But there are considerable advantages to regulating early for zero energy standards. Wales is a small country with a relatively well-developed sustainable housing sector⁶. Knowledge-sharing and group training can happen much more rapidly and organically in a country of this size than in larger countries. By adopting high performance standards which be valid for the foreseeable future – rather than ones that will need to be modified in a few years' time in any case – Welsh businesses and craftspeople will obtain an early adopter advantage. So in a similar way as Germany now has a very large solar energy industry employing hundreds of thousands of people and exporting worldwide, Wales could develop a body of highly qualified, high-skill entrepreneurs and building professionals who could use their skills not just across the UK (and particularly in England) but all over Europe. As BRE states:

“Thanks to our progressive Government we are leading the UK in low energy building regulations. We have a huge opportunity for **Welsh companies** to be **world leaders in low energy buildings**”⁷.

Given this plaudit, we are disheartened to see that “It is our intention that Wales should move to zero carbon, subject to review in 2015/16 at the latest by 2020”. Under the Directive, “by 2020” is the latest possible date by which “nearly zero carbon” developments are permissible. The Government’s approach seems to be to adopt the legal requirements by the latest possible date and therefore lacks the drive which accorded it such high status in earlier years.

We are disappointed at the Government’s apparent reluctance to consider further reductions in air leakage “until sufficient confidence in the solutions exists”. Fully functioning solutions *do* exist and have been in operation for many years across Europe and beyond. One of the best means of stimulating research and development – and boosting the potential for jobs in a new growth sector – is by regulating to require new approaches. In this case, such regulation would be a win-win-win. Better carbon performance of buildings, the development of a mechanical ventilation industry in Wales along with its associated value chain, and training and development for building professionals to exploit opportunities that are bound to become commonplace across Europe over the coming years. The only apparent loss would be the up-front financial outlay for the developer, but reduced ongoing energy costs for the occupier.

Friends of the Earth Cymru therefore urges the Welsh Government to adopt energy standards equal to the Welsh Future Homes, Passivhaus or equivalent as the minimum for all new buildings, and for the new standard to be implemented no later than 6 months after publication.

⁶ Two of the only companies in the UK to make the triple-glazed units demanded by Passivhaus standards are Thomas Joinery, Crymch, Pembrokeshire: www.thomasjoinery.co.uk and Custom Precision Joinery in Buckley, Flintshire: <http://www.cpjoinery.co.uk/PassivhausWindows.aspx>

Coed Cymru’s Tŷ Unnos scheme has demonstrated the high potential for timber-framed housing to meet exceptional environmental and insulation standards: <http://www.coedcymru.org.uk/tyunnos.html>

Dragonboard is based in Mold, Flintshire, and makes airtight construction materials suitable for Passivhaus standards: www.dragonboard.co.uk

Contact the Sustainable Building Association (based in Llandysul) for further details: <http://www.aecb.net/>

⁷ BRE, *Delivering low energy sustainable homes – Welsh Future Homes*

Proposal to remove Part B of TAN 22

Friends of the Earth Cymru opposes the removal of Part B of TAN 22 prior to ensuring an equivalent requirement either in planning policy or in Building Regulations. Most of the policy areas concerned are critically important to the sustainability of communities and developments. The danger of removing them in the absence of protection elsewhere would be that unscrupulous developers could seize on the policy vacuum as an opportunity to construct lower-specification developments with little or no regard paid to waste management, water demand, flooding impact and sustainable transport, and with no recourse from the planning system to redress any such failures.

An additional unintended consequence would be to reduce the support for sustainable construction materials. For example, the Code for Sustainable Homes offers higher credits for the use of materials with a high proportion of recycled material, low climate change impacts etc⁸. Given the increased cost generally incurred with using higher-specification materials, why would developers preferentially use these more sustainable products in the absence of policy guidance or other incentives to do so?

Existing buildings

Friends of the Earth Cymru supports the Government's intention to include all existing dwellings in the requirement for consequential improvements. However we consider that all three of these obligations should be met in homes where they are applicable, rather than what appears to be the suggestion that any one of them need be met in order for planning permission to be grantable:

"Where the building already meets **one or more** of these criteria, there will be no need to make further improvements to the existing building".

The minimum specified level of loft insulation should be no less than 270mm (the current recommendation of the Energy Saving Trust).

An alternative mechanism – and our preferred option – would be to require dwellings subject to consequential improvements to move to the highest 'potential' level of the Energy Performance Certificate scale for those dwellings not already at the top of the scale for the type of dwelling. This would free the owner to meet that standard in means most appropriate to the particular dwelling, and would tie in improvements to the housing market. This would also have the important psychological effect of apprising owners of the marketability gains of improved energy efficiency.

Energy Performance Certificates are available at very low cost (as low as £34) so this should not present a major financial impediment to owners. The Energy Performance of Buildings Directive is clear that any improvements should be "technically, functionally and economically feasible", and EPCs cover only those modifications that are technically feasible⁹. That would leave the owner to demonstrate that it would be functionally and/or economically unfeasible in order to be relieved of this requirement.

⁸ BRE, [Environmental profiles](#)

⁹ European Commission, DIRECTIVE 2010/31/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 May 2010 on the energy performance of buildings (recast) <http://www.energy.eu/directives/2010-31-EU.pdf>, Article 11



Building Regulations Part L Review

Community Housing Cymru Group response

1. About Us

The Community Housing Cymru Group (CHC Group) is the representative body for housing associations and community mutuals in Wales, which are all not-for profit organisations. Our members provide over 136,000 homes and related housing services across Wales. In 2010/11, our members directly employed 6,500 people and spent over £800m in the Welsh economy. Our members work closely with local government, third sector organisations and the Welsh Government to provide a range of services in communities across Wales.

Our objectives are to:

- Be the leading voice of the social housing sector.
- Promote the social housing sector in Wales.
- Promote the relief of financial hardship through the sector's provision of low cost social housing.
- Provide services, education, training, information, advice and support to members.
- Encourage and facilitate the provision, construction, improvement and management of low cost social housing by housing associations in Wales.

Our vision is to be:

- A dynamic, action-based advocate for the not-for-profit housing sector.
- A 'member centred' support provider, adding value to our members' activities by delivering the services and advice that they need in order to provide social housing, regeneration and care services.
- A knowledge-based social enterprise.

In 2010, CHC formed a group structure with Care & Repair Cymru and the Centre for Regeneration Excellence Wales (CREW) in order to jointly champion not-for-profit housing, care and regeneration.

Community Housing Cymru Group Members:
Aelodau Grŵp Cartrefi Cymunedol Cymru:



Email / telephone number: 029 2067 4800

Address: Community Housing Cymru Group, 2 Ocean Way, Cardiff, CF24 5TG

We would be happy for you to contact us again in relation to this consultation.

Question 1: Do you agree with the Government's preference for a CO₂ saving of 40% reduction in carbon dioxide emissions compared to Part L 2010:

- No change to 2010 ☐
- 40% CO₂ saving ☒
- 25% CO₂ saving ☐
- Something else (please explain below) ☐
- Don't know ☐
- Comments ☐

The review of Part L is coming at a time when there are a lot of difficulties in the sector and there are not just viability challenges but technical challenges to be looked at. Investment in energy efficiency has one of the highest co-efficients of employment to spend of any area and CHC are committed to reducing carbon and maintaining standards within the sector. Whilst there are positive effects from introducing CO₂ savings of 40% reduction in carbon dioxide emissions and whilst we broadly support this option, the economic implications of achieving this need to be considered by asking what does 40% mean in terms in affordability, especially taking into account other financial impacts including the regulations making automatic fire suppression systems compulsory in all new and converted domestic properties. The introduction of a 40% saving in CO₂ may well be a long-term measure although there must be certainty that the regulations would have no negative impact on the economy by making it more difficult to develop in Wales.

It is important that these changes to part L are balanced against the backdrop of the recession, cuts in social housing grant and increasing housing demand, with statistics showing that there are over 90,000 people on social housing waiting lists in Wales and that an estimated 284,000 additional homes are required between 2006 and 2026 (this includes 101,000 homes from the social rented sector) to meet newly arising need and demand. Families are being forced to turn to the private rented sector and the pressures on social housing are exacerbated by stricter lending criteria, a decline in the level of home ownership (prices remain too high in relation to average earnings for most first time buyers and many are unable to find the high deposits required to secure a mortgage)

Community Housing Cymru Group Members:
Aelodau Grŵp Cartrefi Cymunedol Cymru:

and rent rises in the private rented sector (due to increased demand). Furthermore, there is considerable financial pressure on the sector at a time when there is uncertainty about the impact of the welfare reform proposals for example. Due to the cumulative impact of regulation, additional requirements will impact on investment and delivering homes in areas with low land prices could become uneconomical because of such regulation.

We agree that the Welsh Governments preferred choice of a 40% reduction by 2015 would prevent steering developers and the supply in the wrong direction, however, considering that the foundation area (or) a proportion of the ground floor area, of PV (proxy) would be required, we would suggest that the new regulation should provide an option for 'offsetting' the PV, to either: -

- a) An onsite 'PV farm', located on otherwise undevelopable land, such as, railway sidings, drainage easements etc
- b) An offsite PV farm

In doing this, a number of benefits can be achieved, whilst providing an equal amount of PV per dwelling and achieving the necessary carbon targets:

- Maintenance costs would be lower – as all of the PV would be in a single location and easily accessed.
- The longevity of the roof of the dwelling is maintained, as there will be no penetrations through the waterproofing element.
- Developments would be more aesthetically pleasing.
- Developments that would find it difficult to provide sufficient PV at optimum roof orientation, would benefit.
- Homeowner / tenant's may be more comfortable living in a dwelling without renewables bolted on.
- To achieve zero-carbon by 2020, it is inevitable that offsetting will be required in the near future, as a greater amount of PV would be required. We therefore feel that it would be prudent to begin gearing PV farms for residential use now, rather than waiting until later, thus steering the developer in the correct direction for the eventual 2020 targets.

Question 2: Do you agree with the proposal for an 'aggregate' approach to CO₂ target setting for new homes in 2015? The CO₂ target for any individual dwelling varies depending on the ease with which the building can achieve the target, with the overall required CO₂ saving achieved when aggregated over the build mix.

Yes ☒ No ☐ Don't know ☐

**Community Housing Cymru Group Members:
Aelodau Grŵp Cartrefi Cymunedol Cymru:**

Question 3: Do you agree with the proposal for a compliant option based on a consistent recipe of elemental specifications for fabric, services plus an additional CO₂ saving equivalent to an amount of photovoltaic (PV). Please justify your choice.

Yes ☒ No ☐ Don't know ☐

Question 4: The main difference between the recipes is the required system efficiency for each fuel, which is appropriate for the heating system type. By adopting this approach to different fuel types, there is no need for a separate fuel factor. Do you agree with the proposed approach?

Yes ☒ No ☐ Don't know ☐

Question 5: For the CO₂ savings proposed, are the recipe specifications a sensible way of achieving them? Please justify your choice.

Yes ☒ No ☐ Don't know ☐

A recipe would make it easier for smaller builders to operate, however the option of offsetting the PV amount, may make it more cost effective.

Question 6: In approaching the selection of the amount of PV to be installed on dwellings, do you prefer?

CHC prefers the proportion of ground floor area with a practical cap. Otherwise, in our opinion, bungalows and other single storey units would require more PV than necessarily required to achieve the reduction.

Question 7: Do you agree that the limits on design flexibility 'backstop' values for fabric elements in new homes should be changed from the current reasonable provision in the technical guidance to become mandatory?

Yes ☒ No ☐ Don't know ☐

Community Housing Cymru Group Members:
Aelodau Grŵp Cartrefi Cymunedol Cymru:



Question 8: Do you agree with the changes to the ‘backstop’ values proposed? Please explain your decision.

Yes ☒ No ☐ Don't know ☐

Question 10: The Impact Assessment makes a number of assumptions on fabric/services/renewables costs, new build rates, phase-in rates, learning rates, etc for new homes. Do you think these assumptions are fair and reasonable? Please justify your views.

Yes ☐ No ☐ Don't know ☐

It is important that the outcomes of the Registered Social Landlords pilot programme, aimed at achieving code levels 4 and 5 of the Sustainable Homes, informs developing changes to devolved Building Regulations. Costs as well as household savings should be taken into account for example.

CHC believes that cavity wall insulation is not considered a viable option in the exposed coastal higher areas of the country and specifically within West Wales. We need approved solutions to be incorporated within the Approved Document that included non cavity wall insulation options which we believe is not the case at the moment. Our members have reported circumstances in which cavity wall insulation hasn't been viable and removal of it has been costly.

Question 32: Do you agree with the proposal to raise performance standards for domestic replacement windows?

CHC agrees with the proposal to improve performance standards for replacement windows, but would encourage u-values to be the same as new build ($u = 1.4 \text{ W/m}^2\text{K}$ as per table 1 of proposed Part L1A rather than $u = 1.6 \text{ W/m}^2\text{K}$ proposed in Part L1B).

Question 54: Are there any further amendments to the newly formatted ADL1B that you would recommend? If so, please provide details.

We would encourage the development of a “quick start guide” to be provided for existing homes as well as new builds (as proposed in Section 6 Criterion 5 of Part L1A). The Alliance would encourage

the guide to extend its scope beyond solely the building services to cover all energy efficiency measures (e.g. retrofitting of insulation).

Community Housing Cymru Group
23rd October 2012

Community Housing Cymru Group Members:
Aelodau Grŵp Cartrefi Cymunedol Cymru:



· INSTITUTE · OF · HISTORIC ·
BUILDING · CONSERVATION

Making Heritage Work

Building Regulations Consultation		James Caird
Construction Unit		Consultant Consultations Co-ordinator
Environment and Sustainable		IHBC Business Office
Development Directorate		Jubilee House
Welsh Government		High Street
Rhyd y Car Offices		Tisbury
Merthyr Tydfil		Wiltshire
CF48 1UZ		SP3 6HA
23 October 2012		Tel (01584) 876141
		Web site www.ihbc.org.uk
		E-mail consultations@ihbc.org.uk
Dear Sirs		
BUILDING REGULATIONS IN WALES PART L (CONSERVATION OF FUEL AND POWER)		

The Institute of Historic Building Conservation (IHBC) is the professional body of the United Kingdom representing conservation specialists and historic environment practitioners in the public and private sectors. The Institute exists to establish the highest standards of conservation practice, to support the effective protection and enhancement of the historic environment, and to promote heritage-led regeneration and access to the historic environment for all.

Thank you for inviting us to participate in this consultation.

As our interest in the consultation is peripheral to its main purpose we think it inappropriate to complete the questionnaire but offer our comments by letter.

Whilst accepting that the matter is largely a trade-off with costs, we would wish to see the targets for CO₂ reductions set at the highest possible level for both new and existing buildings. Existing buildings, including those of traditional construction such as historic buildings, can contribute considerably to overall energy reduction without affecting their character and appearance so long as they are treated to carefully considered and appropriate intervention.

We approve of the "recipe approach" to these issues, particularly as regards existing buildings. This is because existing buildings are not best served by standardized approaches to insulation and other energy-reduction proposals and need to be treated on a case-by-case basis, taking into account the nature of the construction type and the historic character of the building.

Continues/...

One omission which we would like to see pursued in relation to existing buildings is the use of life-cycle assessment to evaluate both the embodied energy of the existing building and the comparison of energy consumption in conversion and renovation against the energy consumption implied by replacement with new construction. We think this should form a part of the methodology, or at least be allowable under it, in the best interests of not just energy conservation but also the historic environment.

In certain cases life-cycle analysis might be appropriate for new buildings as well.

Yours faithfully

A handwritten signature in black ink, appearing to read 'James Caird'. The signature is fluid and cursive, with a large initial 'J'.

James Caird
Consultant Consultations Co-ordinator

2012 consultation on changes to the Building Regulations in Wales

Part L (Conservation of fuel and power)

Consultation Response from:

Matthew Grey, Construction Director,
Llanmoor Development Co. Limited, 63-65 Talbot Road, Talbot Green

NEW HOMES:

1. Do you agree with the Governments preference for a CO₂ saving of 40% reduction in carbon dioxide emissions compared to Part L 2010

No. Both the preferred option of 40% reduction in CO₂ emissions in 2015 or the alternative of 25% reduction in 2014 with a review in 2016 are both not viable or deliverable at the present time.

The Welsh Government (WG) have confirmed that by implementing the proposed 40% reduction now, no further reduction of CO₂ emissions would be required on-site to meet their zero carbon policy for 2020. However, in Chapter 18 of Section 1 of the consultation, it states "the proposals for new housing are set against what remains a difficult economic climate. In introducing changes we are mindful of the need to not only provide certainty for business planning but also to manage transition. In addition policies and processes other than Building regulations have a major influence on development activity, the key of which is the planning regime and related policies." The information provided as support of the proposals, which has been compiled by WG advisors with the help of industry bodies and individual developers, in fact does not, in any way, demonstrate that what is being proposed is viable and deliverable, especially in this difficult economic climate. It is also clear from that information, what is being proposed also does not stack up in terms of the analysis of costs and benefits. It also does not show that the proposals would be the most effective or practical way to achieve the EU target of near carbon buildings by 2020.

2. Do you agree with the proposal for an aggregate approach to CO₂ target setting for new homes in 2015? The CO₂ target for any individual dwelling varies depending on the ease with which the building can achieve the target, with the overall required CO₂ saving achieved when aggregated over the build mix.

Yes. This will allow for a standard build specification throughout a development regardless of housetype. Simplifying the build process and the requirement for various build methods.

3. Do you agree with the proposal for a compliant option based on a consistent recipe of elemental specifications for fabric, services plus an additional CO₂ saving equivalent to an amount of photovoltaic (PV)

No. Although a recipe approach would help compliance of the regulations and would certainly assist the smaller developer/ individual in understanding how to meet these requirements, there are issues with respect to the practicalities of achieving the proposed recipe on all developments in Wales. This is further explained below.

4. The main difference between recipes is the required system efficiency for each fuel, which is appropriate for the heating system type. By adopting this approach to different fuel types, there is no need for the separate fuel factor. Do you agree with the proposed approach?

Yes.

5. For the CO₂ savings proposed, are the recipe specifications a sensible way of achieving them?

Firstly, it is assumed that Solar Photovoltaics (PV) will be used as a proxy for renewable energy because it represents the most cost effective way to generate energy via renewable sources. However, although this may be the case, the amount of PV required may not be feasible on all developments due to orientation requirements, roof size, topography of area and planning restrictions, etc. This could make the recipe an impractical solution for large areas of Wales. The alternative solution being substantially more expensive. Additionally, the homeowner will be required to service and maintain the PV equipment to ensure that the property remains as energy efficient as originally designed. It is agreed that most homeowners do not currently regularly service their boilers. The reliance on PV to ensure energy efficiency of the home will be heavily reliant on the PV equipment being serviced and maintained.

The assumption for wall u values would make it prohibitive to use traditional materials such as brick & block construction. Many materials used would have to be made to order, as many manufacturers currently do not produce products to the required specification to meet the standards. Not only does this cause logistical problems but also the additional cost of manufacture for a non standard product.

6. In approaching the selection of the amount of PV to be installed on dwellings, do you prefer?
- Fixed percentage of building foundation area. Although, as stated above, PV is not the answer for a recipe specification. If one is required, a fixed percentage of building foundation area would be the preferred approach. However, there must be a clear definition as to what foundation area means.*

7. Do you agree that the limits on design flexibility backstop values for fabric elements in new homes should be changed from the current reasonable provision in the technical guidance to become mandatory

Yes. This requirement would ensure that a good fabric efficiency is gained foremost, without the reliance on energy producing systems such as PV.

8. Do you agree with the changes to the backdrop values proposed?

No. There is too much reliance on the wall u values, which are set at a very low level, whilst other elements are kept at levels which are worse than current manufacturing standards. As an example, 1.60W/m².K for windows and doors is currently the minimum standard produced by most window/door manufacturers. Air permeability fixed at 10m³/h.m² is the current allowable standard. To promote better build quality an improved air permeability should be required.

10. The impact assessment makes a number of assumptions on the fabric/services/renewable costs, new build rates, phase-in rates, learning rates etc for new homes. Do you think these assumptions are fair and reasonable?

No.

New Build Rates - The Regulatory Impact Assessment has made assumptions based on the average house completions between 2008-2011 to base their forecast for new domestic property completions up to 2023. However, there is currently no sign of an upturn in the housing market which would account for or justify, what is effectively a 20% increase in build rates in the first few years.

Phase-in rates – The phase-in assumptions of 40% of housing built in 2014 will be to the new standards and subsequent increases over the years, do not take into account large developments which may take a number of years to complete. It is also likely that prior to any regulation change there will be an increase in building regulation applications to avoid the extra burden the new regulation will bring. It is clearly evident that a large proportion of developments currently in build in Wales are still building to Part L 2006, rather than the current 2010 regulations or TAN22 planning requirements. In this economic climate it is unlikely that such phase-in rates will be met.

Learning Rates – it is acknowledged that unit rates for low carbon technologies and more efficient materials will fall as production volumes increase. However, the estimate of new domestic building completions within Wales will not stimulate manufacturers to invest in these new products until a larger market is available. Many manufacturers, based outside of Wales will be following the requirements of the UK Government policy.

Capital costs – Average costs per dwelling of £3,300 for the 25% improvement and £4,200 for the 40% improvement were assumed. However, it is understood that if the recipe specification is followed, the only difference between the 25% specification and the 40% specification is the use of solar PV. Therefore, it is disputed that the average cost difference of £900 would pay for the provision of PV to the quantity required as part of the recipe. Additionally, as stated above, the use of PV as a standard may not be viable in a large number of developments. The alternatives being vastly more expensive.

11. Overall, do you think the impact assessment is a fair and reasonable assessment of the potential costs and benefits of the proposed options for new homes?

The conclusions of the Regulatory Impact Assessment clearly show that the proposed changes to newly built homes result in a substantial net cost to society. In fact, when studied in detail, it is clear that newly built homes are the only sector that has a net cost. It is also clear that the vast majority of the carbon savings are achieved by alterations to non domestic buildings. As the development of new dwellings does not relate in any way to non domestic buildings it is unfair and inappropriate to amalgamate the results to form an overall conclusion that the proposed regulation changes ‘stack up’.

CUMULATIVE IMPACT OF POLICIES

23. Overall, do you think the assessment of the impact on development is broadly fair and reasonable.

The Regulatory Impact Assessment set out to evaluate the reduction in land values in three locations within Wales. Although the RIA proves that the impact of the Building Regulations will have a severe negative effect on land values within Wales, we feel that the assessment does not fully show the impact this will have over the whole of Wales. The Home Builders Federation has compiled a review of a further nine local authority areas using similar methodologies as the RIA. Their conclusions prove that large portions of Wales will have a low or negative land value. Invariably, these low values are found in areas which are in need of investment, regeneration and affordable housing. The Home Builders Federation report and conclusions have been submitted as part of their consultation response. We fully support their conclusions.

As part of the RIA, no allowance for affordable housing has been made. The Housing Minister has a target of 7500 affordable homes over the next 4 years. If we consider that the Welsh Government expects approximately 26000 homes to be built in total over the next 4 years, the affordable housing element equates to approximately 30% of homes delivered. The viability analysis carried out by the HBF clearly shows that this target will not be achieved alongside the Building Regulation proposals. Furthermore, even when the affordable housing levels are reduced to 10% many sites will still be unviable. As there is a political will to ensure that the 7500 affordable homes are built, it is unreasonable to not include this within the RIA.

Section 106 requirements – in addition to the affordable housing costs within the development, other Section 106 costs must be taken into account. Within the HBF study each council had an assumed average S106 cost of around £5000 per plot. However, recent studies have shown that this cost is substantially lower than actually implemented. We would therefore say that the figures used within the RIA are on the low side, based on current policy and requirements as given within their respective planning policy documents.

Remedials and site abnormal – the Three Dragons Assessment Model was used as part of the RIA. However, there is no allowance made for the cost of site remediation and abnormals. In line with national guidance, most local authorities seek to maximise the re-use of previously developed land. In addition, the general nature of much of the developable land in many areas of Wales will in itself require some sort of remediation. We therefore feel that it is reasonable to make allowance for these additional costs. Although an allowance has been made for remedial costs within the RIA, we feel that the allowances used are substantially lower than experienced. We enclose evidence from Integral Geotechnique outlining a summary of the typical costs on remediating sites in Wales. This averages out at about £250,000 per acre or £15,625 per dwelling. This is significantly higher than the RIA assumption of £2650 per dwelling.

When the element of affordable housing requirement, fire sprinkler legislation, other S106 requirements and the true cost of remedials and site abnormal are taken into account, the HBF have shown that 63% of the 11 areas tested would have very low or negative land values.

CONCLUSIONS:

1. *The evidence put forward by Welsh Government to substantiate the proposals of 40% or 25% improvement in Part L 2010 and the additional review carried out by the Home Builders Federation clearly show that neither option is viable or deliverable for new build dwellings within vast areas of Wales.*
2. *It is also evident that what is proposed does not stack up in terms of the costs and benefits. It is clear that changes to new domestic properties will have a net cost to society.*
3. *The proposals for building regulations will conflict with other policies the Welsh Government are targeting. There is a political will to see 7500 affordable homes delivered in the next 4 years. Both options would severely impact the delivery of affordable housing in large areas of Wales (as proved by the Regulatory Impact Assessment)*
4. *Both options would have a severe detrimental impact on land values and subsequent delivery of housing in Wales*
5. *Both options would severely impact on attracting regeneration, job creation and investment within many areas of Wales*

We believe that the evidence put forward by the Welsh Government to support the Building Regulation changes clearly and unequivocally proves that both proposals put forward in this consultation should not be pursued in the best interests of the home building industry and the Welsh economy as a whole.

We would also like to state that we wholly support the in depth report compiled by the Home Builders Federation, which has been submitted as part of their Consultation response.

If you would like to discuss our comments in greater detail please feel free to contact the undersigned.

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Building Regulations Consultation
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30 October 2012

Dear Sir/Madam

CHANGES TO BUILDING REGULATIONS IN WALES PART L (CONSERVATION OF FUEL AND POWER)

CBI Wales welcomes the opportunity to respond to the Welsh Government's consultation on changes to building regulation standards affecting fuel and power conservation. The CBI is the UK's leading business organisation, representing some 240,000 businesses that together employ about a third of the private sector workforce. In Wales we represent the country's biggest employers, including 75% of anchor companies and a range of growth SMEs.

For the private sector to drive economic recovery in the wake of a shrinking public sector, Wales must be an attractive place to build a business and create jobs. Therefore all government policies must be measured against their capacity to support private sector growth.

Given the current economic climate, there has never been a more important time to ensure Wales is an attractive a place to do business. The Welsh Government must ensure all policies are fit for today's challenging economic circumstances. Pursuing ambitious pre-recession policies risk delaying economic recovery and supressing jobs growth.

Given the English housing market is more able to absorb the additional costs that come from higher efficiency standards, it is concerning that the Welsh Government has not taken into account the UK government's decision not to implement similar reforms in England. While the CBI fully respects that devolution means Wales will navigate its own course, Wales shares a highly porous border with England; faced with higher costs and lower margins, the Welsh Government is creating an environment that risks



Leighton Jenkins Assistant Director/Head of Policy UK Operations

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incentivising Welsh companies to expand their English construction activity. This seems at odds with its economic development goals.

The CBI shares the Welsh Government's ambition for low-carbon homes; however, the current Welsh Government policy prescription may indeed be counterproductive. The Welsh Government must work with the construction industry to look at new ways to deliver low-carbon homes. We recommend the Welsh Government consider adopting the UK government's "one-in-one-out" approach to regulation where the government removes a regulation of similar value to the one they are proposing.

EVIDENCE-BASED POLICY MAKING

The implications of Wales-only building regulations are significant. It is critical therefore that the Welsh Government follows the correct process, openly engages with business early on and pursues evidence based policy making. Given that 90% of Welsh homes are built by the private sector, the failure to respect market fundamentals when developing policy will only result in less construction activity. Given the wider economic benefits of new housing- delivering jobs growth and local investment- the impact on the Welsh economy is likely to be significant.

CUMULATIVE IMPACT OF POLICIES

We were pleased to see the consultation includes an analysis of the cumulative impact of policies on the construction industry. However, the analysis excludes many other government policies that are impacting the sector or take into account of the impact of the economic downturn on site viability issues. In addition, the sector has had to deal with a more challenging business environment in Wales with multiple Wales-only impediments to growth. These include:

- A slower, more costly planning system
- A more challenging Local Development Plan process, leading to delay/costs
- S106 agreements that are demanding pre-recession contribution levels
- The absence of any demand-side incentives (unlike England/Scotland)

When considering the level of Wales' low-carbon housing goal, the Welsh Government must take into account all the challenges facing construction companies in Wales. Failure to do so could hold back housing delivery for many years.

CONTRADICTIONARY GOVERNMENT POLICIES

The CBI is concerned that the consultation outlines an approach to low-carbon homes that is at odds with several other government policies, for example:

- Local development plans and the Welsh Government's Housing White Paper all make clear the need for more affordable homes. As the consultation's RIA shows, the government's low-carbon proposals are likely to result in less affordable housing due to the recalculations needed to keep developments viable.
- The Welsh Government's city regions policy envisages more housing in the valleys which is an area where development viability is likely to be impacted with the creation of negative land values.
- The Welsh Government's regeneration strategy "Vibrant and Viable Places" highlights housing-led regeneration as a key tool for regenerating Welsh communities. CBI Wales agrees. However,

housing-led regeneration is likely to be negatively impacted if the government's low-carbon aspirations- as currently written- are implemented in this economic climate.

As the CBI stated in our report "Greening the dragon: blueprint for a green economy", we support the Welsh Government's low carbon agenda. However, given the economic climate, we believe that much could be achieved if the Welsh Government respects market fundamentals and works with industry to achieve a workable solution. CBI Wales would be willing to work with government and industry to find an acceptable way forward.

Yours sincerely

Leighton Jenkins
Assistant Director Policy
CBI Wales

To F. Samuel

Francis, I you.

cc Kate Heamnd

RSC



THE ASSOCIATION FOR THE BRITISH ELECTROTECHNICAL INDUSTRY

Legal
[Signature]

13/11/2012



Dr Ron Loveland F. Inst. P.
Energy Advisor to the Welsh Government
Welsh Government
Cathays Park
Cardiff
CF10 3NQ

8th November 2012

Dear Dr Loveland

I was delighted to meet you at the Low Carbon Network Fund Conference, at which we discussed the recent consultation for the Part L equivalent of Building Regulations for Wales. As promised, I am writing to outline our concerns with regards the proposals for energy and conservation.

BEAMA represents 300 companies across the building services and energy transmission and distribution sectors. As a trade association seeking to promote business growth and reduce market barriers, our overriding ambition is to promote harmonised standards and policy initiatives wherever possible. Our member companies operate in EU markets which follow the ethos of harmonisation.

However, as the development and implementation of building regulations becomes an increasingly devolved policy matter across the UK, we seem to be countering the general direction of harmonisation. Naturally, this has an impact on business costs, hence my letter. You see, for 6 years now our manufacturers have served customers in Wales and England following a common regulatory framework for new buildings. It is target based and whilst some might consider it cumbersome, it actually provides a lot of flexibility for enhanced building standards and is likely to focus very much on minimum fabric standards in England next year.

Industry generally supports the flexible approach to meeting targets, and through my involvement in various working groups and the Zero Carbon Hub, there is a clear appetite to focus hard on the fabric standards of buildings as these are the long term sustainable element of a building.

The common regulatory framework makes a lot of business sense; helplines/advice support is focused, as is the development of training and product catalogue information. The more the fragmentation of regulations, the higher the business cost to develop and maintain the important support marketing materials and services. The new built target methodology just consulted on for Wales will create extra cost for business through the need for differentiated advice and support. Our companies favour harmonised

regulations with a level of ambition for minimum fabric performance that promotes long term sustainable buildings.

This brings me to my next point regarding the consultation. The Welsh Regulations seem to promote a recipe target setting approach. We believe that this recipe approach will in fact become a standard specification, stifling innovation and performance. Standard specifications as per the consultation will ultimately result in poor fabric efficiency in favour of heat pump installations to deliver energy and CO2 savings. This is a perverse outcome as actually a heat pump needs well insulated and air tight dwellings to perform optimally. The recent consultation promotes what we would describe as average to poor air tightness standards ($>5\text{m}^3/\text{m}^2$) with a favour to naturally ventilate. The consultation goes on to suggest that there are issues with MVHR performance. This is in fact unfounded and our industry installs 23,000 units per annum. I was a co-author of the NHBC Trust report on Indoor Air Quality cited in the consultation and officials should be aware that industry has invested a good deal of financial and human resources on a training and competency regime to promote quality. Indeed, SAP will allow higher MVHR performance figures if a trained and competent installer is used for an installation. MVHR systems promote very good indoor air quality and are a necessary specification for high efficiency dwellings. The NHBC report concluded that the mainstream ventilation system from 2016 will be MVHR.

I hope you can understand our problem here Dr Loveland. We are very much in favour of challenging regulations. However they must be robust and promote best practice whilst allowing industry to cost effectively comply with them. This latter point is becoming increasingly challenging with significantly diverse devolved approaches.

Yours sincerely



Kelly Butler
Marketing Director

Cc: John Parsons (BEAMA)

Simon Harpin (BEAMA)