



Home & Local Energy
Directorate
Department for Business,
Energy & Industrial Strategy
6th Floor,
Orchard 1
1 Victoria Street
London
SW1H 0ET

The IHBC National Office
Jubilee House
High Street
Tisbury
Wiltshire
SP3 6HA
Consultations@ihbc.org.uk
23 November 2017

Dear Sir

Response to call for evidence on the reform of the Green Deal Framework

The Institute of Historic Building Conservation 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.

We are very pleased to have the chance to comment on the consultation document. We have responded to the consultation questions (appended) but we would like to offer the following general comments regarding points not covered directly by the consultation:

1. Different approach to retrofit urgently needed for traditional buildings

The IHBC welcomes the UK Government's commitment to reforming and improving mechanisms for funding retrofit. There is an urgent need to change not just the funding mechanisms, but even more urgently, the Government's whole approach to retrofitting of

traditional buildings, which make up 35% of those requiring change (BRE Solid Wall Study Literature Review, published by DECC January 2015).

2. Whole House Approach

The Each Home Counts Report recommends a “Whole House” approach to retrofit. However, the Green Deal is currently framed around retrofit “measures” which is not consistent with Each Home Counts. Any one measure has an impact on how the rest of the building behaves (interactions), and there have been well-documented failures in retrofit where a whole house approach has not been used; in these cases, moisture has built up, fabric has been damaged, air quality has been reduced, and there have been impacts on health. Grenfell is of course the most terrible example of where a narrow agenda of simply saving energy, coupled with multiple failures (perhaps including standards, design, procurement, quality control, compliance) can lead. A whole building approach would have prevented such a disaster, and will prevent many lesser failures if adopted in future.

The present “measures” approach of the Green Deal also fails to value proper repair and maintenance. If an older building is correctly maintained it will be dry and well sealed and perform better not only in terms of energy but also in terms of health and heritage. Repair and maintenance is cheaper than most Green Deal measures (and a pre-requisite for their success) and should therefore be included and encouraged wherever possible.

3. Training of Assessors

From its inception, the Green Deal process has been badly flawed in that successive iterations of PAS 2030 have failed to recognise that a “one size fits all” approach will not work for traditional buildings. Consequently the requirements for, and training of, assessors advisers and installers have not been fit for purpose for 35% of the building stock.

Buildings are complex, and traditional buildings are particularly complex; it is not yet fully known how they behave even without retrofit, and much research remains to be done on the effects of adding impermeable insulation to previously vapour-open structures, on issues regarding thermal bridging, and the effects of retrofit on air quality. Existing Green Deal assessors have at best a limited knowledge in a specialist area. The training provided to assessors needs to be reviewed, standards developed and externally validated. These problems have been compounded by

DECC's failure to insist on or promote the Occupational Standards for Older, Traditional and Vulnerable Buildings which were developed specifically for this purpose, under the auspices of DECC's own Older Properties Working Group.

The Green Deal Providers Guidance (Nov 2012) section 2.3 notes the need to consult experts where vulnerable buildings are under consideration and it is essential that this requirement is retained and strengthened for the "1 in 3" in any new Green Deal scheme. At present there are very few people in the UK qualified to provide this assessment for traditional buildings and at the very least they need a full understanding of BS7913. The STBA would be willing to assist in the development of appropriate training and qualifications for surveyors of traditional buildings.

4. Other ways to improve the take-up of the Green Deal

The complexity of the Green Deal process is only one reason why it failed, but there are others which may be more important. The scheme is much more likely to have higher take-up if the interest rate is below that which borrowers may obtain elsewhere, and if the loan does not attach to the property.

5. Relevance to other energy efficiency schemes

These issues apply equally to measures installed under ECO, with no safeguards whatsoever for vulnerable buildings.

6. Urgent need for radical change

Yours sincerely



Fiona Newton
IHBC Operations Director

Appendix 1: Responses to specific questions in the consultation

1. Assessors and Advisers should work to PAS2035 (in development through the Each Home Counts Standards Committee). Buildings differ widely in terms of construction, location, orientation, exposure, heritage value and patterns of occupation. It is therefore essential that assessment is carried out on a whole building basis¹ by professionals who understand the interaction between all elements of a building's structure, its services, and its occupants. This requires understanding of moisture movement, of ventilation and, for heritage buildings, of significance according to BS7913.

2. Measures cannot be installed in isolation, due to the risk of unintended consequences². Installers therefore need to be linked via the GD provider to ensure that all aspects of the assessment are complied with - so for example a measure which improves thermal performance but reduces natural ventilation does not run the risk of decreasing indoor air quality.

3. Yes - see response to (1) above. Consumers are not well placed to carry out such assessments as buildings are deceptively complex. The Green Deal approach is one size fits all and fails to consider the complexity of retrofit works, typologies, locations, condition, patterns of occupation and use.

4. GDARs are based on RDSAP which at present does not assess solid walled buildings correctly (though improved through amendments to SAP November 2017 awaiting final confirmation). Solid wall insulation is a default recommendation on many EPCs and GDARs in situations where it is completely inappropriate either due to:

- the heritage impact
- the risk of moisture build-up in the wall matrix
- the negligible energy savings available - for example in a terraced house with minimal front elevation and significant fenestration - i.e. most cases

5. We have to be realistic about energy savings. Savings must be based on empirical trials and not on flawed models, otherwise they will overstate savings and create false expectations.

6. Many items on the existing list are not energy efficiency measures but energy supply alternatives. The STBA would welcome

¹ See "What is Whole House Retrofit?" <http://stbauk.org/stba-guidance-research-papers>

² <http://discovery.ucl.ac.uk/1432987/>

² <http://discovery.ucl.ac.uk/1432987/>

a principles-based approach - one which should include consideration of the embodied energy and other environmental impacts of retrofit measures.

7. Research clearly demonstrates that retrofit measures cannot be installed in isolation. Any change to a building's fabric or services has an impact on other aspects of the building - so for example insulation reduces heat demand so should not be installed without considering what adjustments should be made to the heating system. Similarly, insulation of one thermal element makes others relatively cooler and thus increases the potential for condensation to form elsewhere. On this basis it would be better to have a set of high-level principles which guide the selection of an appropriate suite of measures, including the provision of adequate ventilation, as many retrofit measures reduce air leakage.

8. No comment.

9. It is well known that a building in a good state of repair functions more efficiently than a damp and draughty building. Repair must be carried out prior to any measures to improve the thermal performance of the building fabric and these repairs should be funded under the same mechanism as retrofit measures.

We do not see merit in including battery storage as at present it appears to have a cost (and potentially an environmental impact) which exceeds the saving it might provide through actual reductions in grid electricity delivered.

Replacement of condemned boilers must take place in any case and does not therefore need any form of public subsidy or encouragement.

Connections to existing heat networks should be encouraged where the carbon intensity of the heat network is below that of a new gas boiler (or ASHP in the absence of mains gas).

Replacement of failed double glazing should also be included as a measure.

10. No comment

11. Green Deal Plans and EPCs are at present inappropriate for 1 in 3 of UK houses which require retrofit - i.e. those that are of traditional construction.³

³ See the revision to SAP published Nov 2017

12. The point of a Golden Rule is that it should not be broken.

13 - 19. No comment

20. Non-domestic buildings are subject to the same challenges as domestic buildings. The safeguards which should be put in place to protect human health, building fabric and heritage in housing should also be applied to non-domestic buildings. It is essential that a whole-building approach is adopted which considers interactions⁴, prioritises health of the building users and assesses heritage according to BS7913. This approach must be incorporated into the assessment process, the installation and the post-retrofit monitoring regime.

⁴ For a comprehensive explanation of interactions backed by peer-reviewed and published research see the STBA's Retrofit Guidance Wheel: <http://responsible-retrofit.org/wheel/>