

calfordseaden Breakfast Seminar

# 2019: Rules, Regulations and Guidance Fact Sheet

Wednesday 23rd January 2019

## Are the Current Decent Homes Standards Only a Half-Decent Solution? Presentation by Guy Rapley

### A Quick Review of the Decent Homes Standards

#### Social Housing Green Paper

The Social Housing Green Paper “A new deal for Social Housing” was published in order to try to re-balance the relationship between landlords and residents, to tackle stigma and ensure social housing can act as a stable base and support social mobility.

It was published for consultation on 14 August 2018 and ran until 06 November 2018.

Over 1,000 residents shared their views on social housing with ministers at 14 different events. In addition, over 7,000 residents submitted their opinions and comments online.

The green paper set out 5 core themes:

- i. Tackling stigma and celebrating thriving communities;
- ii. Expanding supply and supporting home ownership;
- iii. Effective resolution of complaints;
- iv. Empowering residents and strengthening the regulator;
- v. Ensuring homes are safe and decent.

The Green Paper also considers how the Decent Homes standards should be revised to ensure it delivers the right standard for Social Housing residents.

#### What are the Decent Homes Standards and what constitutes a decent home?

The Decent Homes Standards are technical standards introduced by the Government for social housing. Housing must meet the current statutory minimum standard for housing, with homes being in a reasonable state of repair and having reasonably modern facilities and services.

#### What counts as a decent home?

The Decent Homes is a minimum standard that council and Housing Association homes should meet.

They should:

- i. Be free from any hazard that poses a serious threat to your health or safety. This is based upon a **Housing Health and Safety Rating System**. Category 1 is most serious and includes items such as exposed wiring, dangerous or broken boilers, leaking roofs, mould growth, rats or other vermin or security issues;
- ii. A reasonable state of repair;
- iii. Have reasonably modern facilities;
- iv. Have sufficient heating and insulation.
- v. DCLG Publication “A Decent Home: Definition of Guidance for Implementation” June 2006

There are examples of where there has been a failure to meet the above and such instances include the following:

- i. Persistent damp or heating or electrical system that is in poor condition;
- ii. The bathroom has not been improved within the last 30 years;
- iii. The kitchen does not have enough space;
- iv. It is not warm because of ineffective heating system or ineffective insulation.

### **When were the standards introduced and why?**

The Decent Homes Standards was first introduced in 1997, when at that time the UK government conceded there were 2.2 million non-decent homes. The current Decent Homes Standards is the June 2006 update. This was published on 07 June 2006.

Regarding the 2.2 million homes identified in 1997, by 2010 3.6 million had had work carried out, including those identified between 1997 and 2010.

### **Is the current accompanying legislation “fit for purpose”?**

Suggestions have been made that any hazard identified within a property should in future be addressed as to how they may affect the most vulnerable of residents who may live in that home in the future, as opposed to the resident who is inhabiting the property at the current time.

## **Private Rental Sector vs Social Rental Sector**

### **The rise in the Private Rental Sector against the Social Rental Sector**

The Private Rental Sector remains the second largest tenure in England and has grown in the last decade. In 2015 to 2016, 4.5 million households were renting in the private sector. This represented 20% of all households in England.

In contrast, throughout the 1980s and 1990s the proportion of private rentals was steady at around 10%. The sector has more than doubled in size since the late 1990s to 2016.

The Social Rental Sector consists of 4 million homes.

### **Strengths and weaknesses**

The energy efficiency and the quality of the private rental sector has improved, but standards lag behind the social rental sector.

In 2015, the average SAP rating amongst private rented homes was 60. The private rental stock is less efficient than the comparable social rental stock, which has an average SAP rating of 67.

Over a quarter (28%) of private rental homes failed to meet Decent Homes Standards in 2015. The comparative figure for the social housing rental sector was 13%.

Social rental homes are more likely to be without health and safety hazards and to have central heating and the best energy efficiency. However, a recent review found that social housing was more likely to have damp than residents in other tenures.

Private rental homes account for 29% of the homes that pose a significantly higher than average fire risk.

### **Common standards for all homes to ensure regulations are clear and straightforward**

There have been calls for improvements in health and safety standards for some time, specifically stating that the provisions of the Landlord and Tenant Act 1985 and the Housing Act 2014 were insufficient.

Under the Landlord and Tenant Act 1985, the landlord of the qualifying dwelling is required to ensure that the dwelling is reasonably suitable for occupation.

In addition, the HHSRS, referred to in the Decent Homes Standards, require social homes to be free from hazards that pose a risk to residents.

The HHSRS have been criticised upon its limitations, including that health and safety obligations can only be enforced by the Local Authority and not by tenants.

Where a Local Authority is a landlord, it cannot take enforcement action against itself which can leave tenants at major disadvantage if a hazard not attended to in a timely manner. This is deemed to be one of the issues highlighted within Dame Judith Hackitt's independent review.

Construction Manager Publication 29<sup>th</sup> August 2018.

## Fire Safety, Energy Efficiency and Fuel Poverty

### **Calls for improvement – Secretary of State and Dame Judith Hackitt give their voice**

Within the green paper, the Secretary of State for Communities was concerned about fire safety and cited Dame Judith Hackitt's independent review with the aim of giving residents a much stronger voice in an improved system of fire safety.

The green paper referenced Dame Judith Hackitt's review of building safety adding that whilst legislative change will take some time, the Government has identified an opportunity to accelerate a social housing sector early response. The Government announced £400 million of funding for Local Authorities and Housing Associations to remove and replace unsafe aluminium composite material cladding on social residential buildings.

### **Community involvement and engaging with residents**

The report also pointed to a greater need for transparency from landlords on fire safety assessment. It called for better information for engagement with residents on safety issues and the green paper proposed piloting, with a small group of social landlords, new approaches to community with engaging residents on safety issues.

One of Dame Judith Hackitt's recommendations was that residents should proactively be given information about building safety, including setting out what the responsibilities are and they should have a right to access detailed safety information for Fire Risk Assessments.

### **Energy Performance and Clean Growth Strategy**

The green paper stated that the Decent Homes Standards should be reviewed to consider whether it is demanding enough and delivers the right standards for social housing alongside other tenures.

In any review of the Decent Homes Standards, there should be regard to whether the thermal performance of social homes should be upgraded to at least Energy Performance Certificate Band C by 2030.

The Chartered Institute of Housing went one stage further by saying they felt there was an issue regarding energy efficiency and to eliminating fuel poverty for social housing tenants.

The Energy Saving Trust also responded to the Government's consultation on improving energy efficiency in the sector by saying that clear effective policy is much needed as it has the potential to improve lives and reduce tenants' bills.

Reference is made and is supported by the Energy Saving Trust to the Clean Growth Strategy. The Clean Growth Strategy aims to bring private rental homes to Energy Performance Certificate Band C by 2030.

Whilst there are potential loopholes in terms of improvements by landlords, it is this drive under the Clean Growth Strategy initiative that states that there should be parity between social housing and private rental homes.

## Financial Implications in the New Decent Home Strategy

### **Current backlog and the effect of raising the standards**

There is still a significant backlog of homes across the country that do not meet the current Decent Homes Standards.

If the standards are raised to include additional safety measures under guidance on fire safety or that thermal efficiency is increased, the number of affordable homes falling into the category of “non-decent” will inevitably increase.

Therefore, it has to be that any review of Decent Homes Standards has to include the calls from social landlords in terms of government funding to meet the current backlog and improve future social housing standards.

### **What has it cost so far?**

Between 2001 and 2010, £37 billion was spent on improving social homes. £22 billion of this was via the Department for Communities and Local Government’s Decent Homes Programme.

House of Commons Committee of Public Accounts publication “The Decent Homes Programme”.

As a result, non-decent homes fell by more than 1 million from 39% in 2001 to 15% in 2012.

In contrast, just £1.6 billion was committed between 2011 and 2015.

Social housing non-decent homes fell by only 2% between 2012 and 2016 from 15% to 13%. Between 2015 and 2017, 20% of the estimated 23 million households in England lived in a non-decent home.

The aim is for no more than 10% non-decent homes at any one time.

Tweet from Parliamentary Under Secretary (Housing, Communities and Local Government) Heather Wheeler 5<sup>th</sup> March 2018.

### **Housing Revenue Accounts and 30-year business plans**

An *Inside Housing* publication, dated 28 August 2018, thought Local Authority Housing and Business Plans could be rendered unsustainable if the Government raised the Decent Homes Standards.

The Association of Retained Council Housing felt the problem is resourcing. The Housing Revenue Accounts allow Local Authorities the income of borrowing over a 30-year business plan period. If there were significant changes to the Decent Homes Standards, it would make the plans unworkable.

It was felt that the Government would need to re-visit the Housing Revenue Account if there are significant changes to the Decent Homes Standards.

## Quality Control

*Inside Housing* published a review on 27 November 2018 titled “Why it is time to consider a Decent Homes Standards Version II”.

They stated that following the Social Housing Green Paper’s recognition of the need to re-build trust, it is time for a review of the Decent Homes Standards.

Highlighting that the Decent Homes Standards should be updated and simplified, the report does state that there is a final related point – although not necessarily under the Decent Homes Standards – concerning the need to have greater quality control on site. It recognises the role of the Employer’s Agents and Clerks of Work and that they can bring real value to monitoring quality and the delivery of building works.

## SAP 10 and How This Will Affect You

### Presentation by Emily Mansfield

In July 2018, the draft SAP 10 methodology was released to allow readers, designers and consultants to review the changes ahead of its official release. The new SAP methodology initially went out for consultation in July 2016 under the name “SAP 2016”.

SAP 2012 is still the current methodology to be used for Building Regulation compliance and for producing Energy Performance Certificates (EPCs). SAP 10 methodology will likely be applied when the new Part L is released after consultation, which is expected to take place in spring 2019. It is likely that the SAP 10 methodology will require some updates once the new Part L has been confirmed.

There have been a number of changes made to the SAP methodology. Below are some of the smaller changes:

- Heating Pattern – In the current SAP 2012 methodology, the heating pattern is different for weekdays and weekends. However, following research it has been found that occupants generally have their heating set to a similar pattern at weekends as they do weekdays which has been reflected in the SAP 10 methodology.
- Lighting – The lighting calculations have been updated to allow recognition of new lighting types with higher efficacy.
- Default Efficiencies – Default heat pump efficiencies have been updated.

There are also a number of key changes that have been made and are discussed below.

### Key Changes to the SAP Methodology

#### Heat Network Distribution Loss Factors

The default distribution loss factors associated with heat networks have been increased. This will have a significant impact on the energy use and carbon dioxide (CO<sub>2</sub>) emissions. It is therefore important to insulate any pipework associated with the heat network to ensure that heat loss is reduced.

#### Thermal Mass Parameter

Currently, there is a simplified method to input the Thermal Mass Parameter (TMP), with the option to calculate the TMP. The simplified method allows a Low, Medium or High TMP to be selected, depending on the construction type (i.e. timber, lightweight blockwork or dense blockwork). In SAP 10, the TMP will need to be calculated manually. This may prove to be beneficial compared to using the simplified method as an accurate figure will be used in the SAP calculation.

#### Summer Overheating Assessment

This is still a basic calculation compared to dynamic simulations. However, the inputs are slightly more stringent. It is the responsibility of the design team and SAP Assessor to identify if there are any local noise or air pollution issues which may prevent occupants from opening their windows during the day and night.

#### Thermal Bridging (γ-value)

The Thermal Bridging (γ-value) default has been increased to 0.20W/m<sup>2</sup>K, from 0.15W/m<sup>2</sup>K. It will become difficult to achieve compliance with the Target Emission Rate and Fabric Energy Efficiency when using the default γ-value without making improvements elsewhere to the building fabric specification. Therefore, it is essential that careful detailing is carried out during the key design stages to ensure that cold bridging is reduced, particularly for balconies where supports penetrate the wall insulation. It is likely that individual modelling will be required for each junction to calculate the psi-value being achieved. Accredited Construction Details (ACDs) will no longer be applied but the concept can still be used to minimise cold bridging. A collection of “Project Standard Details” could be formed using some of the better details so that they can be applied to all future projects and improved where possible.

### Solar Photovoltaic

In SAP 2012 methodology, communal solar Photovoltaic (PV) array installed on the roof of a block of flats could be shared between the dwellings on an area-weighted basis. This meant that each dwelling was provided with a small CO<sub>2</sub> emission saving from the solar PV system. This did not affect the EPC rating. The proposed SAP 10 methodology does not allow the dwellings to benefit from communal PV systems and does not achieve a CO<sub>2</sub> emission saving, therefore individual connection will be required to each dwelling, which incurs additional costs for inverters, meters and extended cable runs.

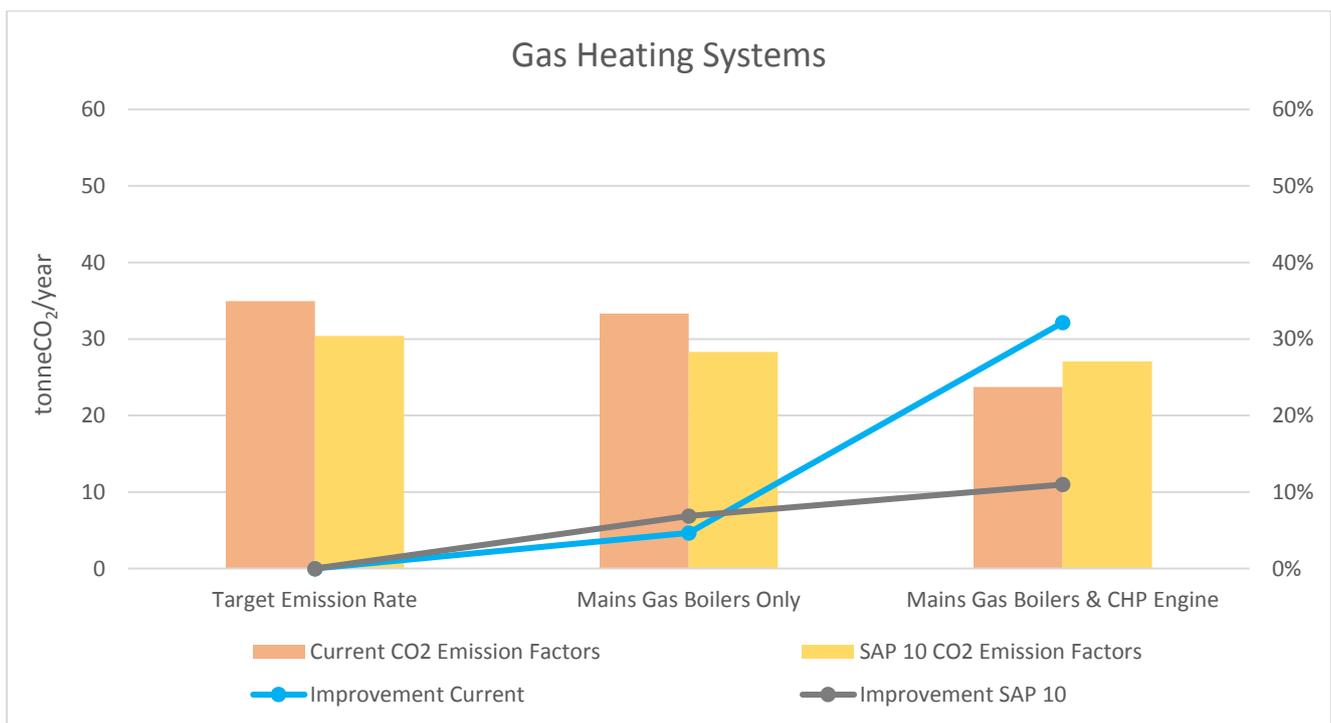
Furthermore, the Government has decided to close the Feed-In-Tariff (FIT), with the final applications required by the end of April 2019. This removes the incentive for installing renewable technologies. However, SAP 10 does take into account battery usage and diverters to hot water storage, which allows more electricity generated to be used within the dwelling rather than exported back to the National Grid. This will be more beneficial to the occupant, especially when the FIT is closed.

### CO<sub>2</sub> Emission Factors

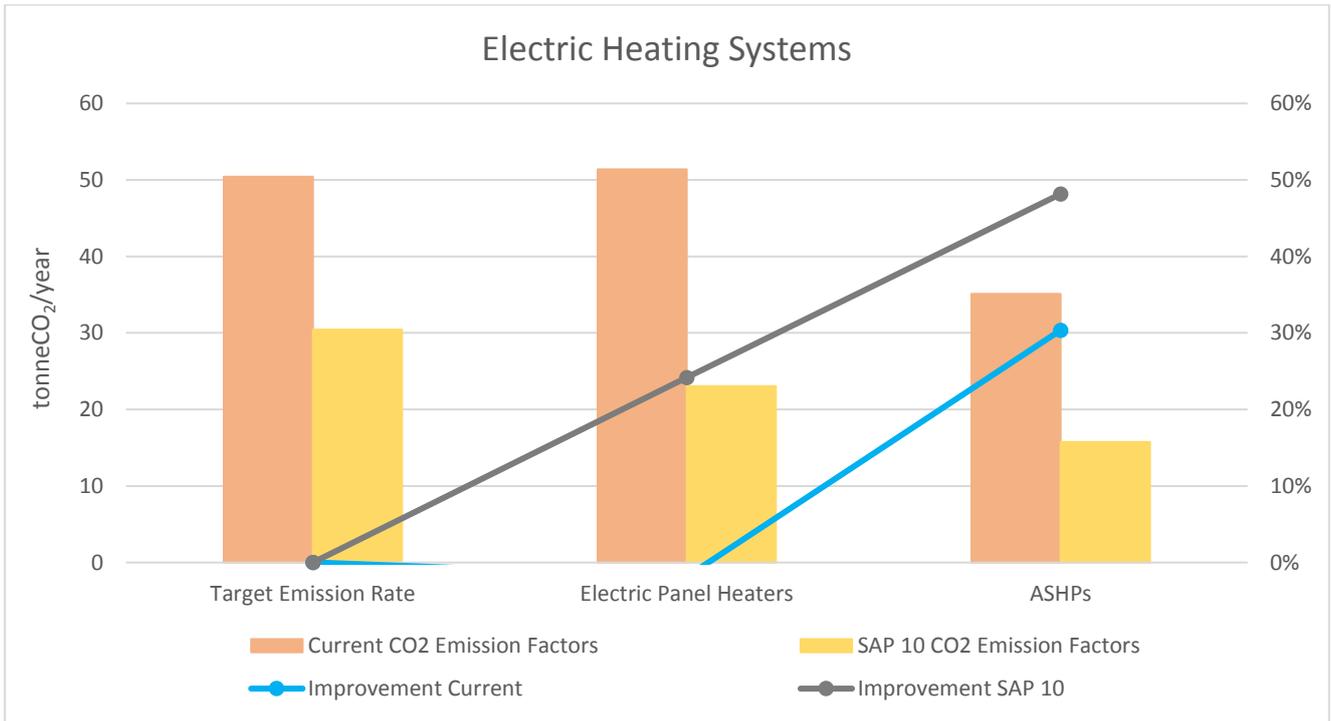
The biggest impact is the changes being made to the CO<sub>2</sub> emission factors. The CO<sub>2</sub> emission factor for mains gas has only been slightly reduced to 0.210kgCO<sub>2</sub>/kWh, from 0.216kgCO<sub>2</sub>/kWh, which is a reduction of 3%. However, grid electricity has been significantly reduced, taking into account the decarbonisation of the National Grid. CO<sub>2</sub> emission factors for electricity have been reduced to 0.233kgCO<sub>2</sub>/kWh, from 0.519 kgCO<sub>2</sub>/kWh, a reduction of 55%.

The reduced CO<sub>2</sub> emission factors proposed in SAP 10 allows electric heating to become a potential option and more favourable. However, technologies that produce electricity on-site, such as Combined Heat and Power (CHP) and solar PV array, will be less beneficial when calculating CO<sub>2</sub> emission savings compared to SAP 2012, as the CO<sub>2</sub> emission savings for onsite electricity generation are less significant.

The below graphs demonstrate the above by comparing the estimated CO<sub>2</sub> emissions for gas and electric heating systems (**Figure 1** and **Figure 2**, respectively) when applying the CO<sub>2</sub> emission factors in SAP 2012 and SAP 10:

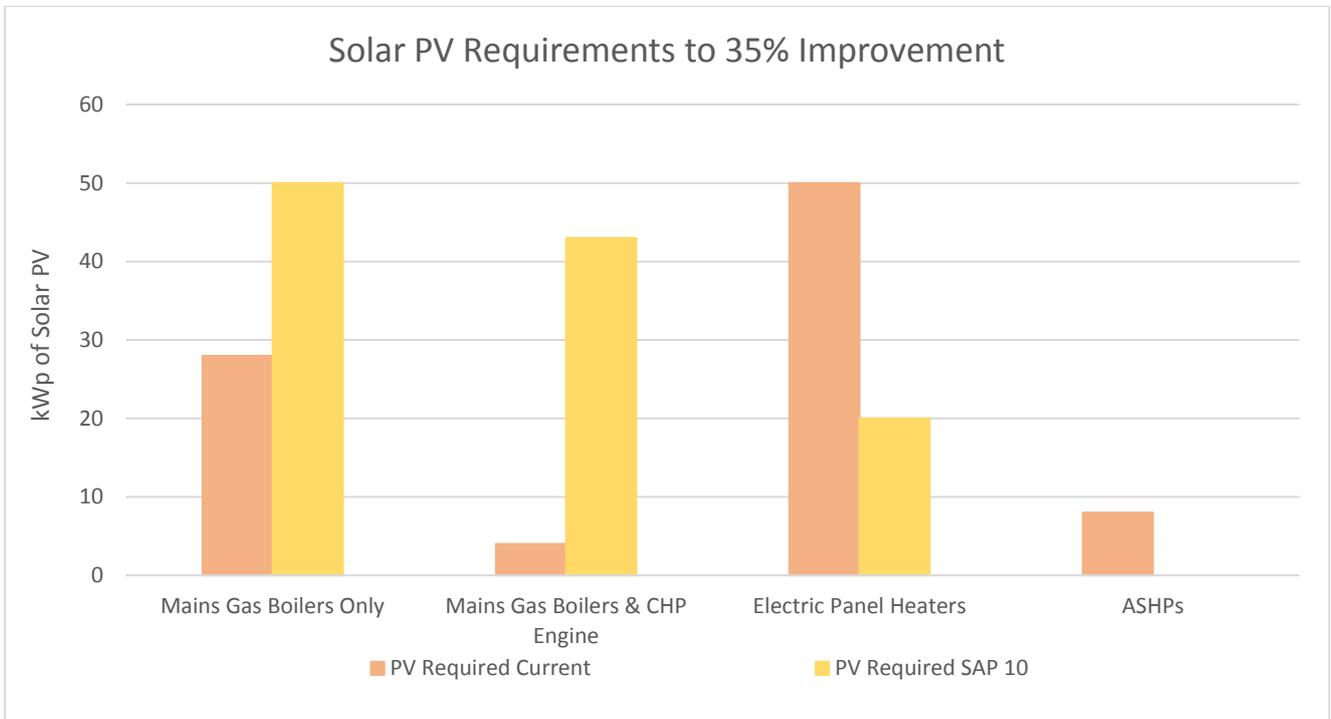


**Figure 1** – CO<sub>2</sub> emissions for gas heating systems



**Figure 2** – CO<sub>2</sub> emissions for electric heating systems

New major residential developments in London are required to achieve zero carbon (regulated energy only) and as a minimum achieve a 35% improvement over Part L1A of the Building Regulations (Policy 5.2 of the London Plan March 2016). The graph in **Figure 3** shows the amount of solar Photovoltaic (PV) array required to achieve the 35% improvement for each heating system type shown in **Figure 1** and **Figure 2** above.



**Figure 3** – Solar PV requirements to meet the 35% improvement required in Policy 5.2 of the London Plan March 2016

The above graph indicates that with gas heating systems a significant amount of solar PV array may be required when assessing to SAP 10 methodology.

As explained previously, this is due to the lower CO<sub>2</sub> emission factor for electricity, causing on-site generated electricity to be less beneficial. With electric heating applied, more solar PV array is required when assessing to SAP 2012 methodology. This is because a greater CO<sub>2</sub> emission saving is already achieved when applying electric heating to SAP 10 methodology than when applying to SAP 2012 methodology, so less improvement is required to meet the 35% reduction.

**Note:** The Target Emission Rate (TER) for SAP 10 comparison has been calculated using the same specification for the notional dwelling as SAP 2012 (Appendix R) but with SAP 10 CO<sub>2</sub> emission factors applied. The notional dwelling specification is likely to be updated once new Part L consultations have been completed.

## Key Recommendations

Below are some key recommendations to consider when starting a new project:

- Appoint a Sustainability Consultant at an early stage
- Take a fabric first approach
- Investigate different technologies

It is important to have a Sustainability Consultant on board at an early stage in the design. Not only will they be able to investigate different routes to achieve the most CO<sub>2</sub> emission savings but they can also take other issues into consideration which can affect the SAP calculation results, such as summer overheating risks, plant space requirements etc. If the proposed development has commercial elements as well as residential, the BREEAM requirements should also be taken into consideration at an early stage, especially as some of the key credits are obtained around RIBA Stage 2.

Taking a fabric first approach is nothing new. Reducing heat loss through exposed elements, around junctions and heating appliances and pipework has a significant impact on the energy demand and CO<sub>2</sub> emissions. Therefore, making small improvements to the insulation goes a long way. Improving the thermal performance of the building envelope reduces the space heating demand, which reduces the energy demand. This will also reduce the running costs for the end user. Furthermore, the New London Plan will require a 10% reduction in CO<sub>2</sub> emissions through energy efficient design.

Consideration should be given to who the end user of a technology is going to be i.e. are they going to be able to operate the system efficiently and will there be a financial benefit? For example, ASHPs may provide the greatest CO<sub>2</sub> emission savings for a development, but what will the running costs be for the occupant? New and existing technologies are being developed all the time. Therefore, it is important that all avenues are investigated when deciding what technology is best suited for a proposed development.

## Key changes under the BREEAM UK New Construction 2018 scheme Presentation by Jacqui Clarke

The BREEAM UK New Construction scheme was released in March 2018 and presented some significant updates to the previous criterion. These changes range from minor clarifications and alignment with new guidelines and standards, to major changes to assessment procedures and complete restructuring to some assessment categories. An explanation of how the major changes will affect your BREEAM assessment have been expanded below.

While use of the BREEAM assessment method is voluntary, obtaining a BREEAM rating can help to pave the way to planning approval, and is a mandatory requirement for many London-based Local Planning Authorities (LPAs).

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### NEW Post-Occupancy Stage Assessment Stage and Certification

A stronger emphasis has been placed on the Post-Occupancy Stage, which offers seven available credits if it is implemented (excludes shell-only assessments). Although voluntary, this stage will encourage developers and contractors to monitor and report on the 'actual performance' of their buildings throughout the first two years, with the use of an independent third party for assessments and reporting.

From energy and water use to variances in performance, valuable data can be collated to enable stronger building performance through maintenance and create a feedback loop that strengthens sustainable design.

### Energy and the Energy Performance Gap

All assessment types will have nine credits available, with an additional four credits available for Prediction of Operational Energy Consumption (with the exception of shell-only assessments), where the developer undertakes additional Design and Post-Occupancy Stage energy modelling and reports on their progress. Tying in with the Post-Occupancy Stage, the majority of the new credits fall under Ene01.

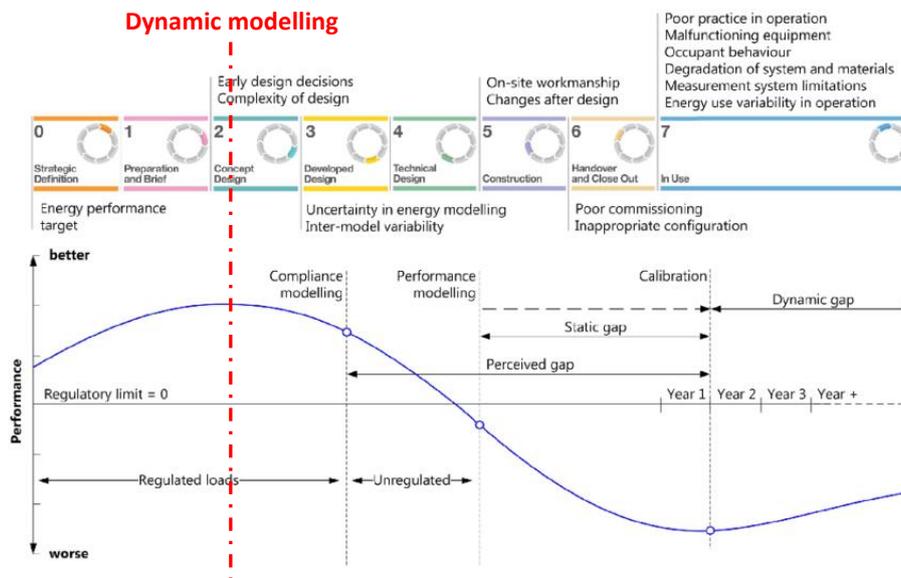
Emphasis has been placed on undertaking detailed Dynamic Modelling during RIBA Stage 2 as a means of reducing the poor performance in use. This will require the design team to undertake additional energy modelling during the design and post-construction stage to: generate predicted operational energy consumption figures; report predicted energy consumption targets by end use, design assumptions and input data (with justifications); and carry out a risk assessment to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.

A workshop should be held as early in RIBA Stage 2 to establish the levels of risk pertaining to the operational energy performance of the building. Consideration should be given to how the energy performance of the building will be affected by future weather patterns, changes of use and variations in the expected usage of the building and consider the resilience of building systems.

The outcomes of the workshop should be used to inform improvements to the design of the building and to the operational, maintenance and handover strategies. The energy performance risk assessment should inform the scenarios that are to be modelled.

A standard energy model (SBEM) represents the speculative design of a building. The below diagram provides an overview of the underlying causes of the performance gap that may exist during the different stages of the

buildings life cycle. It is drawn in relation to an S-curve visualization of the building's performance (Bunn & Burman (2015), and demonstrates the unstable nature of building performance during the design stages and early stages of operation which can lead to performance issues when the building reaches a steady state of operation. These performance issues have been identified as underlying causes of the energy performance gap. Designers rarely revisit the building once it is constructed to see how the building is performing and therefore, feedback mechanisms on the energy performance are not sufficiently developed as it is often assumed that buildings will perform as designed. Consequently, there is a knowledge gap between what works and what doesn't, making it difficult to improve performance.



Source:  
Bunn & Burnam 2015

The aim of the methodology is to incentivise better understanding of energy modelling techniques and reward more accurate predictions of energy use at early stages to support better design and construction of new buildings.

## Transport

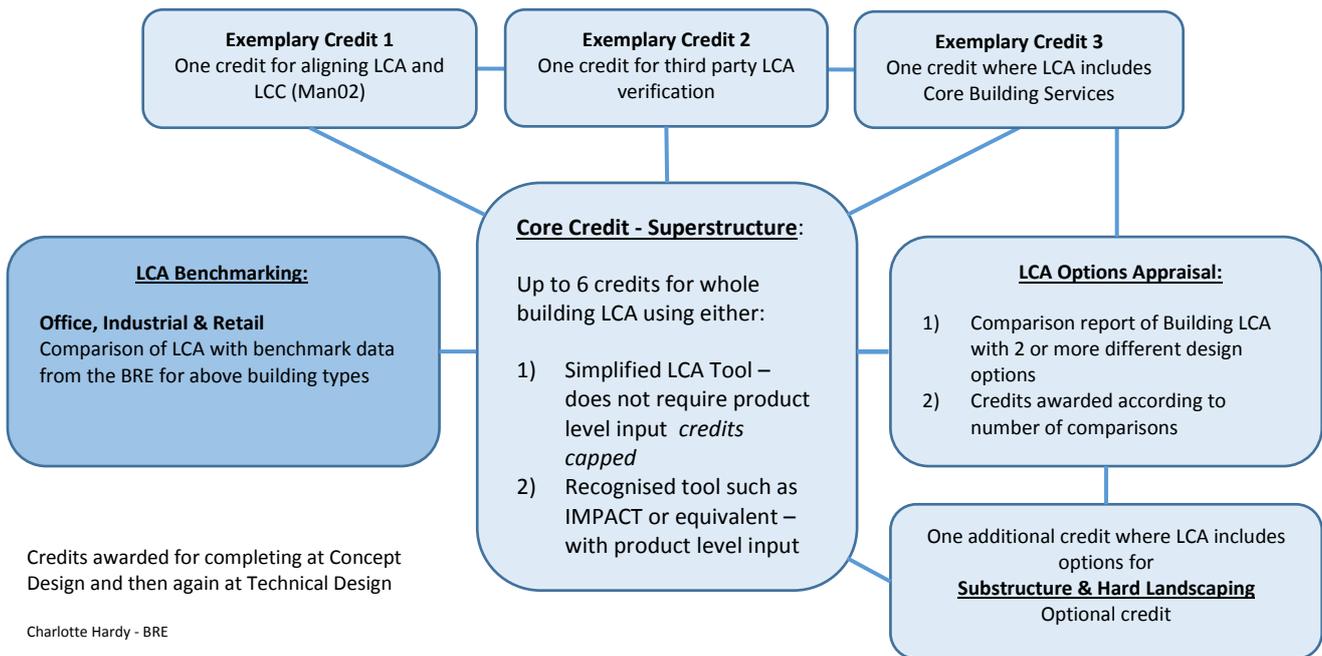
With five sections now reduced to two and the transport category completely restructured in the new scheme, the onus now falls on developers and contractors to highlight access to local amenities and transport links within their projects, particularly in mixed-use developments.

Under Tra01, a Travel Plan is now mandatory, and failure to provide one negates scoring in Tra02. Despite the number of credits for Tra01 being reduced to just two, those for Tra02 have been increased to 10, reflecting a need to analyse the existing situation to implement improved and appropriate public, private and active sustainable transport measures.

Appropriate measures should, in the first instance, be negotiated with the Local Authority with the intention of promoting sustainable and active travel and delivering transport related benefits to the development and the wider community (in the form of improved choice whilst also promoting health and wellbeing).

## Materials

The revised Mat01 incorporates the assessment of hard landscaping and insulation, encompassing the previous Mat02 and Mat04 issues. This issue now shifts the emphasis away from the elemental approach towards a Whole Building Life Cycle Analysis (LCA). Developers can choose whether to follow the 'simplified' Life Cycle Assessment model from BRE or progress with the more detailed IMPACT lifecycle assessment; the latter is recommended due to the additional seven credits it offers.



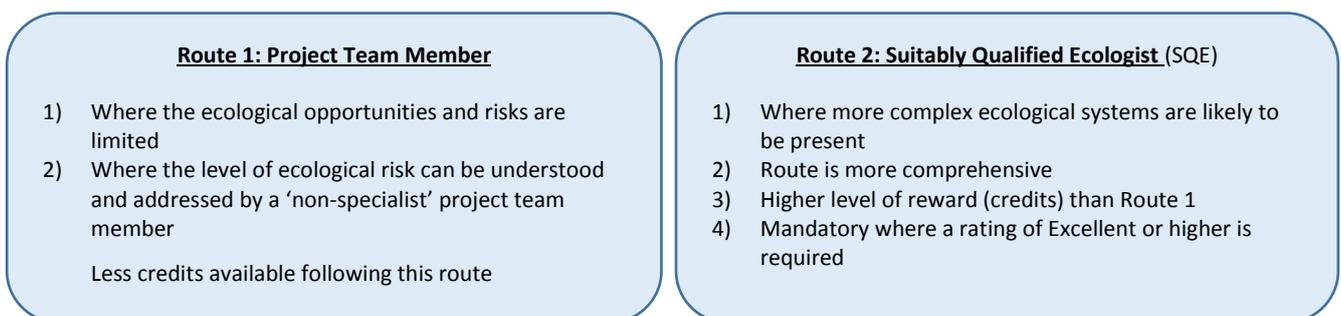
Mat03 Responsible Sourcing of Construction Products, remains largely intact but has been amended slightly to include the methodology and required definitions from the International 2016 scheme; the benchmarks for achieving credits have also been reduced.

## Land Use and Ecology

Le02-05 have been completely revised and take a new approach to assessment. The criteria now focuses on understanding the ecological baseline of the site; managing negative impacts on site; assessing the solutions taken to enhance ecology on site; and maintaining new and existing ecological features.

BREEAM focuses on rewarding enhancement of local biodiversity, on the site under development or, where that is not possible, within its zone of influence which includes any areas of land or water bodies impacted by the site undergoing assessment. These areas can be adjacent to the site or can be areas that are dependent on the site but not physically linked, including areas downstream from a site. Areas within the zone of influence can be negatively affected by changes on an assessment site but they also provide further opportunity to maximise enhancement activities.

The Ecology Risk Evaluation Checklist must first be completed to establish the appropriate assessment route for the development: (GN34)



This provides for a flexible and holistic approach to embed ecology into the entire project lifecycle and enables alignment with future Government methodology.

## Pollution

Pol02 now focuses on local air quality; NO<sub>x</sub>, VOCs and particulate matter emissions are to be assessed, with benchmarks for NO<sub>x</sub> emissions being significantly reduced. The aim of this issue is to contribute to a reduction in local air pollution through the use of low emission combustion appliances in the building.

Poor air quality has a detrimental effect on humans, fauna and flora and gases such as nitrous oxides (NO<sub>x</sub>) can react with other gases and environmental factors, including sunlight, to create substances that have a major impact on health and wellbeing.

Legislation covering the UK sets maximum acceptable limits for measured air pollution and therefore, it is important in the first instance to establish if your development lies within a 'High' or 'Low' pollution location. Developments where any part of the site are within an Air Quality Management Area (AQMA), are automatically considered to be in a high pollution area.

This issue has now also been broadened to include particle pollution from biomass to solid fuel systems, and offers a further two credits by using low emission OR non-combustion appliances to provide heat and hot water in buildings.

Appliance Type & Unit	Fuel	1 credit (low pollution location)	1 credit (high pollution location)	2 credits (low pollution location)	2 credits (high pollution location)
Boiler (mg/kWh)	Gas	27	27	24	24
Boiler (mg/kWh)	Oil	56	56	55	50
Boiler (mg/m <sup>3</sup> )	Biomass and solid fossil fuel	130		70	
Cogeneration or heat pumps using external combustion (mg/kWh)	Gas	34	34	30	30
Cogeneration or heat pumps using external combustion (mg/kWh)	Oil	96	56	70	50
Cogeneration – using internal combustion engine (mg/kWh)	Gas	119			
Cogeneration – using internal combustion engine (mg/kWh)	Oil	140			
Local space heaters (mg/kWh)	Gas and oil	76			
Closed fronted local space heaters (mg/m <sup>3</sup> )	Biomass, solid fuel and wood pellets	130			

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### Recommendation:

To fully achieve enhanced building performance and therefore the targeted BREEAM rating, early engagement with a licensed BREEAM Assessor is advised, optimally from RIBA Stage 1 and no later than the Concept RIBA Stage 2. Doing so provides benefits such as a wider choice of design solutions, more flexibility in spending decisions, cost savings and the ability to steer design along a route that maximises ratings.

This immediate introduction is set to allow realistic targets to be met, required documentation to be collated, appropriate responsibilities to be understood, and low-cost solutions to environmental impacts to be applied.