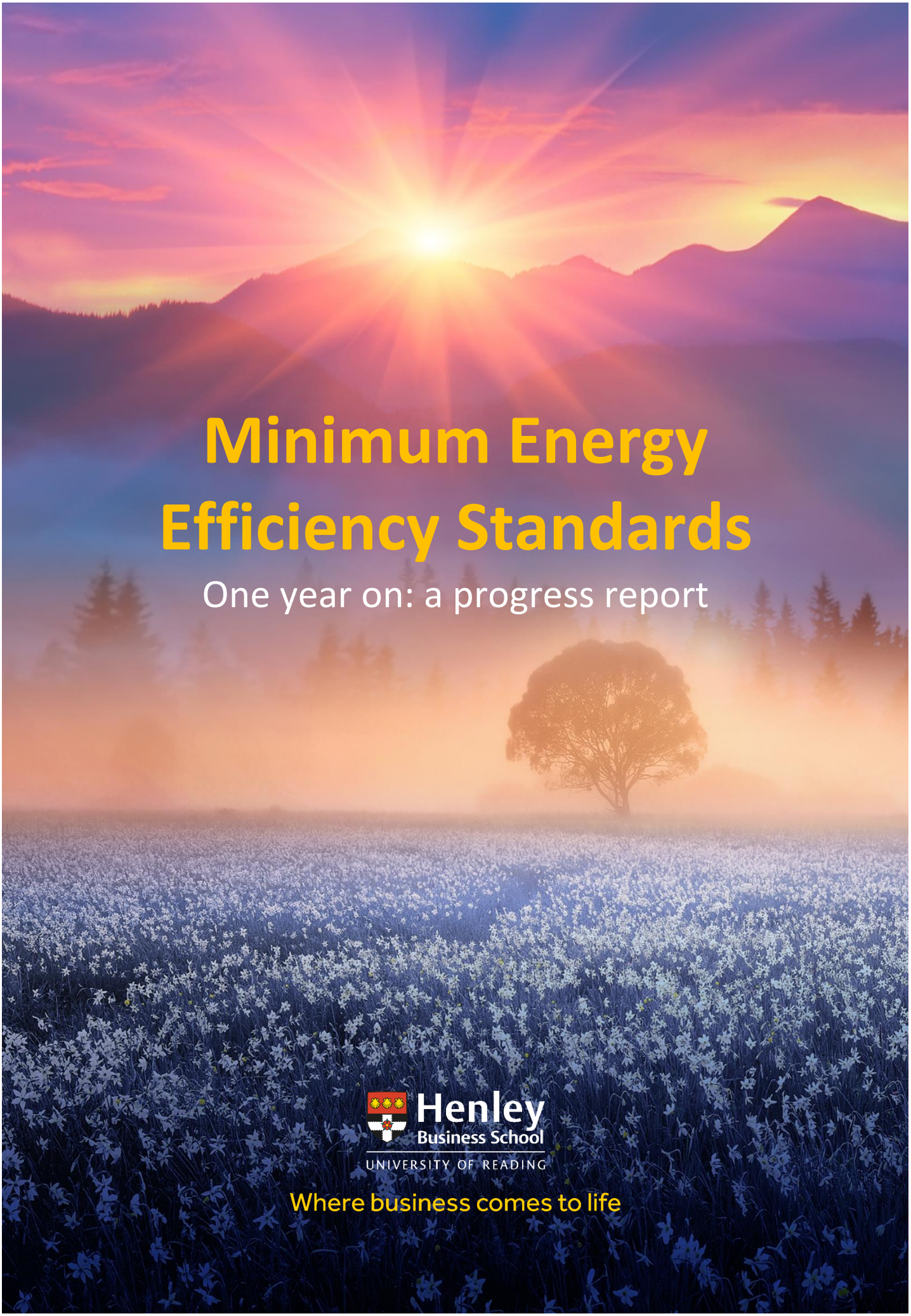

Minimum Energy Efficiency Standards

One year on: a progress report

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Where business comes to life

Minimum Energy Efficiency Standards (MEES): one year on: A Progress Report

A Pilot Project on the early impacts of the introduction of MEES in England

February 2020

A study undertaken with the support of the Reading Real Estate Foundation

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Reading Real Estate Foundation

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The UK building stock is both old and energy inefficient and there is an acknowledgement that this needs to be addressed through energy improvement in order to meet UK government objectives towards a low or zero-carbon economy. Until recently, policy has been to use a system of market 'nudges' to encourage private sector investment. The main instrument for raising awareness has been the Energy Performance Certificate (EPC) introduced in 2008. However, the introduction of Minimum Energy Efficiency Standards (MEES) which affect private sector lettings, is the first measure which mandates action by making unlawful the new letting of non-compliant stock from April 2018 and continued lettings by 2020 (domestic) and 2023 (non-domestic) assets.

The Pilot Study

This report presents the findings of a pilot study of property advisers (valuers, asset managers lawyers and building specialists) in relation to the initial market response to the implementation in April 2018 of mandatory minimum energy efficiency standards (MEES) at the point of new lettings of most buildings (domestic and non-domestic). MEES, originally enacted in the Energy Act 2011, is due for full implementation by 2023 and represents the first mandatory measure requiring upgrading of existing buildings. At the time the study was undertaken it was expected that in the future enhanced requirements might be introduced but no timetable or details were known. MEES is widely viewed as an important initiative aimed at reducing carbon emissions from buildings and, thus, contributing to meeting national carbon reduction targets.

A series of interviews was conducted over the Summer of 2019 exploring the initial market response in terms of values, valuation practice, asset management and leasing practice. Views were also obtained in terms of whether the regulations would help in the quest for the required change to the building stock in response to climate change imperatives.

Findings

The headline finding was that, although it could have been viewed as a financial and administrative burden on the property market, it was not. Participants generally welcomed MEES; it had been widely expected and there was unanimous agreement that it was widely regarded as a positive step throughout the industry. However, the range of findings revealed a more mixed picture.

- *Basing MEES on the Energy Performance Certificate (EPC) was not considered appropriate by several respondents. Further, concerns were expressed about the accuracy of EPCs; several respondents would prefer a system based on actual building performance, rather than an asset rating*
- *There are significant penalties for non-compliance, yet there is a current lack of enforcement. Potentially, this risks the effectiveness of the regulations if owners know they are unlikely to be penalised.*
- *There was limited knowledge of temporary exemptions among some respondents and they have not been used extensively in the commercial sector. There was a prevalent view that landlords would prefer to just bring buildings into compliance than seek a temporary exemption which could lead to a potential value loss.*
- *Overall MEES compliance was viewed as 'too easy' thus encouraging minimal action – sometimes even changing the lightbulbs or commissioning of a new EPC is enough to satisfy the regulations.*
- *Some investors, notably those with strong corporate responsibility policies, have already aligned their strategies to take account of MEES; but to others this process is less advanced – and achieving compliance or divesting is still in prospect; there was little evidence of significant retrofitting planned as a result of MEES.*

- *In terms of valuation practice, MEES has become embedded in the due diligence process, though valuation reporting practice varies and, in some cases, technical knowledge around MEES is insufficient to pick up the whole range of implications. Valuers were cautious of reporting on MEES implications where upgrade costs would be required as to comment on this could be outside their competence.*
- *In terms of market value impacts, some 'price chipping' was reported leading to the likely emergence of brown discounts for buildings deemed to be at risk.*
- *Lease practice is adjusting with most landlords seeking to exercise greater control over their buildings; this is being accompanied by some resurgence of interest in green leases but the position at lease end and transfer of costs to tenants via service charge is still uncertain.*
- *There was limited knowledge of the likelihood of the regulations being strengthened and with the exception of major investors, respondents confirmed that market participants were only dealing with the 'here and now'. Very little, if any connection was being made in the market between the regulatory framework and the ramping up of government policy in respect of de-carbonisation*

Conclusions

As this is a small-scale pilot study it is not possible to draw firm conclusions or recommendations. However, the findings point to the following:

- *MEES is proving to be effective as an awareness raising tool; it is also seeing some buildings brought into compliance, but mainly through minor work, not deep retrofits. As long as it continues to be viewed as an easily met regulatory measure, it is not thought likely to engender large-scale market transformation and upgrading of buildings; for this to be achieved the requirements need to be raised significantly.*
- *EPCs may not be the most appropriate measure on which to anchor MEES, given that they do not measure carbon. Therefore, linking the regulations to another measure is possibly worthy of further investigation.*
- *MEES will not succeed in achieving even modest change if enforcement is not seen to be effective; it is important that it is implemented and that results of enforcement are publicised widely. Market values are beginning to respond to MEES by the down marking of non-compliant buildings. If, and as, MEES regulations are tightened, negative impacts on values could lead to non-compliant stock becoming stranded, which has potentially undesirable economic and social consequences.*
- *Finally, the study revealed a disconnect between interviewees' personal acknowledgement of the need for rapid and real change to deliver a zero-carbon economy and the market response of short-term compliance. This disconnect underscores that a 'business as usual' approach to property asset management and valuation still prevails, which is incompatible with government ambition. If the latter follow through, there is a major market disruption potential which is not yet being foreseen or anticipated. This suggests a need for education and further investigation as to how such connections between the climate crisis and property management can be made.*

Chapter 1 Introduction

1.1 The case for Minimum Energy Standards in Buildings

UK government has long held ambitions to move towards a low carbon economy and over more than a decade has introduced a range of measures in order to deliver this. The first, and most defining step, was taken in 2008 with the passing of the Climate Change Act which, *inter alia,* set up a Committee on Climate Change

tasked with ensuring the government deliver on its carbon targets. As part of the measures introduced, most recently in June 2019, this ambition has led to a formal undertaking to increase the ambition from an 80% reduction in carbon by 2050 from 1990 levels, to a zero-carbon position by the same date (BEIS, 2019[a]). Most recently a bill has been introduced to further speed up the transition to a low carbon economy (BEIS, 2019[b]).

Part of the solution is radically to upgrade the UK's building stock which is acknowledged to be both old, by world standards, and energy inefficient. This issue is not solely a UK one and the actions of the EU to encourage energy improvements through the introduction, among other measures, of Energy Performance Certificates (EPCs) have been an important catalyst for action. The scale of the issue is well illustrated by the work of the Buildings Performance Institute Europe (BPIE) which estimated that only 3% of stock is constructed or improved to the highest energy standards (BPIE, 2017). Further the World Green Building Council (WGBC, 2018) found that the energy efficiency of stock correlates closely to its age; and rented stock is likely to have a lower efficiency than owner-occupied stock. A study for the Green Construction Board (Sweetts *et al,* 2014) estimated that a significant percentage of commercial stock fell short of even fairly low levels of efficiency if measured by their EPC ratings. This has led the UK government to adopt a stance towards concentrating on rented stock.

A significant factor that inhibits swift improvements in energy efficiency is the slow rate at which buildings are replaced. It is estimated that full replacement seldom exceeds 1% per annum and less in periods of economic slowdown (see Balaras *et al.* 2007). This leads to the, perhaps inevitable, conclusion that there is a need for a much faster speed and depth of upgrade (Artola *et al.*2016). Reporting in 2018 (IPCC, 2018) the IPCC (Intergovernmental Panel on Climate Change) stated that building renovation is critical to achieving climate change targets and called for "*rapid and far-reaching transitions"*[1] based on reduction in energy use demand, as well as moves from fossil fuel to clean electricity and better insulation to building envelopes to reduce the need for heating and cooling.

The implication of the above is that policies and regulations aimed at influencing the speed and specification of building renovations and overall occupier behaviours are essential.[2] The need is two-fold: to improve the energy efficiency of existing buildings, thereby reducing demand, and to shift the source of power to carbon-free energy sources[3]. Decarbonising the 'grid' is occurring but shifting individual buildings to fossil-free sources of power is possible in many cases through appropriate retrofit technologies, albeit that this is more complex than integration within new construction.

Delivery against these objectives is challenging. It requires motivation to improve, finance and knowledge and availability of trusted, proven, technical solutions. However, in support of the objectives, the UK has put in place a legislative and policy framework to drive delivery. Quite how this will be delivered is far from certain; undoubtedly it will require large scale investment by both public and private sectors. Such investment will have to include investment in existing buildings, which, by most estimates, contribute some 40% of carbon emissions.

[1] http://report.ipcc.ch/sr15/pdf/sr15_headline_statements.pdf

[2] This should be put in the context of an already steep trajectory in the volume of social and environmental regulations as evidenced in Datamaran (2018) *Global Insights Report 2018* available at
The Rise of ESG Regulations https://www.datamaran.com/global-insights-report/

[3] See for example https://www.theccc.org.uk/tackling-climate-change/reducing-carbon-emissions/what-can-be-done/

Although there has been now a longstanding policy to drive building improvements these have been primarily delivered by 'nudge' techniques such as fiscal incentives (including the Feed-in Tariff and the largely unsuccessful Green Deal) and through reliance on voluntary actions of investors and owners. The reluctance by UK government to use significant taxation measures to reduce carbon, as evidenced by the introduction and subsequent abandonment of the Carbon Reduction Commitment is embodied in the Clean Growth Strategy (BEIS, 2017) which argues for low energy prices and limited taxation; this is despite many calls for pricing policy to make carbon more expensive, most recently, the International Monetary Fund (IMF, 2019).

The only mandated requirement, until recently, that has been placed on buildings since 2008 was the requirement under EU regulations for an Energy Performance Certificate (EPC) to be obtained prior to sale or letting of a building and, for some buildings, a Display Energy Certificate. The EPC is not a true measure of energy demand because it is an asset (or fabric) rating. The ambition of the EPC was to raise awareness of energy efficiency and, through this, shift demand towards more efficient buildings. It is the EPC which is the cornerstone on which the UK Government have designed and implemented Minimum Energy Efficiency Standards (MEES) which form the subject of this study.

1.2 Introducing the Minimum Energy Efficiency Standards (MEES) Regulations

The EPC demands no action on the part of the owner, except its production at the time of marketing. It was only in 2011 that UK government, through the Energy Act, 2011, signalled an intention to use the EPC as a tool to effectively mandate upgrades to investment properties that were deemed to be inadequate in terms of energy efficiency. In 2015 the regulations were issued setting out the basic levels of EPC required for compliance with further guidance to landlords issued in 2017.

The Minimum Energy Efficiency Standards (MEES) regulations came into force for lettings granted from April 2018 as part of a phased programme. Existing tenancies fall 'in scope' on 1st April 2020 for residential and 2023 for non-domestic. The minimum standard is calibrated at E (on an A - G scale) though the intention, enshrined in the Clean Growth Strategy (BEIS, 2017), was understood to be to increase the minimum required progressively in order to help deliver the required carbon levels. The regulations also make provision for both permanent and temporary exemptions on a range of grounds including lack of cost effectiveness, using a formula approach for non-domestic and absolute cost for residential or of non-consent by tenants for works to take place. Enforcement measures, with significant penalties, particularly for non-domestic buildings, aim to provide a strong dis-incentive for non-compliance.

Whilst the intention to tighten regulations and require higher levels of efficiency was clearly articulated in the Clean Growth strategy, the proposed timetable and degree of change had not been announced for consultation at the time the research took place. It was only in October 2019 that a consultation opened as to the next steps (BEIS, 2019[c]). Part of the concern by government has been the recognition that to set the bar too high would result in financial hardship and/or potential 'stranding' of assets, but too low and carbon targets will not be met. For these reasons the regulations allow for exemptions based on the need for measures to be capped financially (residential) or subject to pay back viability. The consultation announced that the preferred option is for an EPC B to be mandated from 2030; this represents a very steep curve for improvements to the stock given that, for existing stock in 2019 only 3% of domestic EPCs and 14% of non-domestic EPCs were issued at B or above (MHCLG, 2019).

Despite these measures, the Committee on Climate Change stated in their 2018 report that, in relation to buildings, the necessary progress had not been made in improving energy efficiency (Committee on Climate Change, 2018). In their 2019 (Committee on Climate Change, 2019[a]) report, whilst expressing optimism at the intention to move to full zero carbon, it concluded that action was still insufficient. This was further confirmed in July 2019 by the government's own committee on Energy and Industrial Strategy (BEIS Committee, 2019[b]) and the subsequent introduction of the Environment Bill 2019.

Currently, MEES is the only mandated measure to formally drive energy efficiency through linking EPC ratings to an ability to let. However, whether compliance by building owners will achieve carbon reduction is not certain for several reasons. First, as it is a measure which impacts only on rented stock (and even then, with some exceptions) it concerns a minority of the built stock (PIA, 2017). Second, it is not strictly a carbon measure because, it is based on the EPC and this is not currently calculated to fully account for the source of energy into the building. Indeed, domestic EPCs take account of the cost of fuel so electricity supplied form renewable sources but delivered and sold through the national grid will generally result in a lower EPC rating than a dwelling heated by a gas-fired system[4] . Finally, its validity as a policy rests on the accuracy of the EPC, compliance by landlords and enforcement by local authorities acting on behalf of government.

In order to make a meaningful contribution to carbon reduction targets, MEES will need to be set at a level that leads to significant upgrades in buildings and has a scope that will capture the majority of stock – not just those that are let. In the commercial sector, it is estimated (PIA, 2017) that approximately half of properties by value are let, although this might underplay the situation in terms of actual building numbers. In the domestic sector, far fewer buildings are in scope as it applies only to private rented sector lettings which account for approximately 20% of dwellings[5]. Social housing lets are excluded.

Nonetheless, despite the exclusions which also extend to short-life buildings and some heritage assets, MEES represents an important and European leading mandatory measure. For example, BPIE (2014) in their survey of measures being undertaken across a range of member states found a range of initiatives but few mandated requirements. An exception is the Netherlands which, by 2023 is introducing a mandatory C EPC rating on office buildings[6]. This, like the MEES, is a requirement on the building owner, not the tenant.

In summary, the case for introducing minimum energy standards in rented stock in the UK is predicated on the overall national and international policies to drive towards the reduction and elimination of carbon from the built stock by 2050. It is acknowledged that it must be only a part of a suite of measures, given its restricted application in terms of scope. Further, the current levels introduced are part of a gradual process whereby there is an intention to ratchet up requirements.

Overall, the aim of the regulations is to assist and encourage market transformation towards more energy efficient stock as a co-requisite to other measures to enable the achievement of carbon reduction targets. Further, with especial reference to the domestic sector, improving energy efficiency through MEES aims to help tenants who experience fuel poverty, thus providing a social and economic as well as environmental dividend. Whilst it is coercive in some cases, as currently calibrated at an E EPC, and restricted to let stock, it can only be one strand of an overall package of measures, if significant carbon reduction is to result.

1.3 The Anticipated Impacts of MEES

In the lead up to the introduction of MEES, there was substantial 'grey' literature highlighting the introduction of the provisions (see for example, Knight Frank, 2017). Whilst there had been some concerns expressed regarding the potential impact and value risks for investment property, , other investors were quoted as having taken sufficient steps to 'future-proof' their portfolios.[7] Typical of the views being expressed following the issuance of the scheme details was that attributed to Alker (2017) that *"This could be the single most significant piece of legislation to affect our existing building stock in a generation, affecting a huge swathe of rented properties"*[8].

[4] See for example commentary at https://www.elmhurstenergy.co.uk/help-support/how-to-read-an-epc
[5] According to Department for Work and Pensions statistics published at https://www.ons.gov.uk/economy/inflationandpriceindices/articles/ukprivaterentedsector/2018
[6] Reported by DLA Piper at https://www.dlapiper.com/en/uk/insights/publications/2019/04/real-estate-gazette-34/energy-performance-regulations-and-investing-in-dutch-real-estate/
[7] As reported by Better Buildings Partnership (2017) at http://www.betterbuildingspartnership.co.uk/cls-holdings-de-risks-entire-uk-portfolio-mees
[8] Quoted by the National Energy Foundation at http://www.nef.org.uk/about-us/insights/2015-energy-efficiency-regulations-a-real-game-changer-for-the-property-sec

One of the most comprehensive studies of potential impacts was that undertaken for the Green Construction Board prior to the issuance of regulations. As introduced above Sweetts *et al*, (2014) concluded that, for commercial stock, approximately 36% of EPC rated properties were likely to be affected by MEES regulations initially with offices being the most affected asset class, notably within a London concentration. However, they also concluded that compliance was likely to be quickly cost effective in most cases, except for some industrial premises.

The impact on investment value and the need for proactive management, therefore, were two prime considerations. In the light of this, in early 2018, the RICS published guidance to both asset managers and real estate valuers to assist them in advising clients as to liabilities, appropriate portfolio actions and potential value implications (RICS, 2018 [a]). This guidance, and that published by other bodies across a range of media sources aimed to ensure good knowledge and optimal advice.

Since the commencement of MEES in April 2018, only limited evidence of possible impact has taken place. McAllister and Nase (2019) in a study of London offices found little evidence of upgrade to EPC ratings, except in larger buildings, pointing to a possible lack of pre-regulatory action, except among owners of larger (and potentially more valuable) buildings. Similarly, Booker's hedonic study of regional offices (Booker, 2019) could not establish any discernible MEES impact. These findings sit against the expectations of Montlake and Gelb (2018) who anticipated that many landlords would seek to 'rush to the top' in terms of improvements to future proof their investments, although this could be a matter of timing. Other papers concerned with asset management rather than value impacts, (for example Turley and Sayce, 2015; Dowding *et al.* 2019; Hartley, 2019) are again speculative rather than informed by empirical evidence of owner's responses.

Chapter 2 MEES: a pilot study

2.1 Aim of the Study

This report provides the findings of a pilot study conducted over the summer of 2019, with the aim of establishing initial views of a range of stakeholders into both the impacts to date and views as to the effectiveness of the measures moving forward. Given that one year on was too early to assess the impact of MEES quantitatively, the decision was to use in-depth interviews with a range of informed and engaged market participants. The questions probed a number of issues around the participants' experience and knowledge of MEES, including matters around compliance, enforcement and exemption and to the relationship with the EPC. However, the chief focus of the study was to establish the ways in which market practice of advisers had incorporated consideration of MEES and the impact on:

- valuation processes and reporting,
- leasing arrangement; and
- investment and asset management strategies.

Through these, it was intended to explore the impact on the dynamics of the property market, including the steps that were being taken either through the lease arrangements or active management strategies to ensure compliance or/and upgrade buildings and to gain views on whether there has been an impact on property asset values. The study also sought to establish the extent to which participants were aware of the wider context within which the MEES regulations are part and views concerning the potential trajectory, consultation proposals for which had not at the time been published.

2.2 Working Method

The project aimed to provide some insight into the initial effectiveness of the regulations by conducting a series of interviews with key stakeholders/advisers who might hold information as to actions taken and planned by landlords either to work ahead of regulation; to comply, or, alternatively, to circumvent.

This paper reports the findings of the pilot study. The main research instrument has been a series of semi-structured interviews, conducted either face to face or by telephone. Interviewees were chosen based on their experience and, in many cases, their acknowledged expertise in the area. The names of all interviewees and their organisations are being held confidentially, but their categorisation and identifying number are given wherever direct quotations are made from the agreed transcripts. Care was taken to ensure a regional spread of respondents to avoid an over 'London-centric' view. It is however, acknowledged that the sample is possibly not fully representative, particularly for the domestic sector for which fewer interviewees had significant experience.

In total 25 people took part in interviews; they comprised a mix of valuers, asset managers, lawyers, building surveyors, sustainability experts, a property investor and an investment owners' representative group.[9] All had extensive experience of dealing with property owners and tenants, primarily through an advisory capacity often advising specifically on MEES or valuing or managing assets for which there are MEES regulatory implications. Whilst the majority (18 respondents) were exclusively concerned with commercial stock, seven respondents were operating exclusively or partially within the residential field. This was considered important as the intention of the pilot has been to both assess the impact to date and to gain perceptions as to how far the regulatory framework is likely to help drive the government's longer-term ambitions. The decision was taken not to interview individual investment organisations, but to garner the views of those who worked with or for a wide range of landlords and/or tenants, thus maximising the spread of opinion and allowing opportunities for interviewees to reflect from a wide range of experience.

[9] A list of interviewees is being kept anonymous under ethical rules. However they represented a range of national or international organisations and independent expert consultants.

Further, several interviewees had experience of public speaking about MEES at conferences and were able to share the insights and opinions that they had gleaned from delegates in so doing; the views recorded here, therefore, are shaped by a wider engagement with practitioners. On average each interview lasted for approximately one hour. In addition to interviews being recorded, a written record of key findings was compiled for each interview and verified by the interviewees who had the opportunity to consider, reflect and confirm their views. The summary transcripts form the basis of the thematic analysis which has been conducted manually and using NVivo software using a series of nodes.

As indicated above, interview questions explored a range of issues relating to the interviewee's knowledge of MEES including some technical issues around enforcement and exemptions, but the primary focus was on their experience of market impact and owner responses to the regulations, including impact on values and valuation practice, asset management and lease structures and clauses, depending on the interviewee's experience and client base. Finally, all interviewees were asked for other insights they could provide, including the prospects for MEES delivering market transformation and whether the ambitions for a future trajectory had penetrated market awareness.

Chapter 3 Findings

The findings are presented under a series of themes that arose from analysis of the transcripts. Brief quotations have been included, but not attributed, in order to preserve full anonymity.

3.1 MEES: a welcome move and effective in raising awareness

The headline result, and a view expressed by all those interviewed, is that MEES is a welcome "*step in the right direction"*; interviewees, almost unanimously, viewed the introduction of the standards as having succeeded in raising awareness of the need to promote energy efficiency in buildings. Views as to the *scale* of the effect, however, differed with the perception that the 'leading players' had been aware of the impending regulations since the Energy Act 2011 was first passed whereas smaller landlords and some lenders lacked much awareness. The 'baseline' is that MEES has raised awareness, though, as reported below, some interviewees noted that, although initial awareness was strong, it has partially retracted, due to the lack of enforcement.

What came through strongly, was that, although the introduction of MEES had raised awareness in general terms, the knowledge base among clients, and some advisors, regarding the actual regulations was not high. Whilst specialist consultants and some assets managers displayed an expert and deep knowledge, several valuers reported that their clients had little knowledge of the impending application to existing tenancies or reported that their clients had "*not taken this date on board yet".* This was so, in one case, even where the interviewee was dealing with residential properties, where the application to existing tenancies was, at the time, less than one year away. What can tentatively be drawn from this is that, whilst MEES has raised awareness, the depth of knowledge among much of the client base is very shallow: yes, they are aware but, in some cases, only of the extent to which immediate action is required. However, there is clear differentiation across the market and between advisor groups.

Whilst some respondents reported that actions are being determined by the "*here and now"* and have found "*little evidence of clients being stimulated by MEES to upgrade their buildings"* those acting for larger, institutional landlords are not just aware but are interested in going '*beyond compliance".* One respondent reported that "*the vast majority"* of the large property companies have planned well before the introduction date. Such planning often involved disposals of vulnerable assets which did hold a strategic importance.

Interpretation as to whether MEES has prompted action towards investing in energy efficiency measures or been viewed as a regulatory hurdle, with which compliance is required, is discussed below; in terms of moving the debate on, it has been welcomed by those in the industry if the interviewees could be regarded as representative of sentiment.

3.2 Matters concerning the EPC

MEES regulations are intrinsically linked to EPCs; the presumption of the regulations is that the EPC is an appropriate measure of energy efficiency in buildings. By implication, buildings, which achieve better ratings, will be more efficient, emit less carbon and hence, be better able to support shifts towards a low (or zero) carbon economy. However, many of the interviewees had concerns about EPCs, possibly because before MEES, as several interviewees opined *'EPCs were simply a tick box – now they have meaning'*. Whilst criticisms of EPCs is not new (see for example RICS, 2019) the views expressed by interviewees provide further insights into both matters of accuracy and appropriateness.

3.2.1 Accuracy

The accuracy of the EPC is fundamental to delivering the ambitions of MEES; if it is not a trusted measure, MEES will be viewed not as a positive move towards delivering government targets, but, more importantly, an EPC that does not present an accurate measure of efficiency at the asset level will not yield fabric efficiency.

Previous research (European Commission, 2013; RICS, 2019) has recognised that EPCs, particularly those that pre-date 2012, are often inaccurate with the results being dependent in no small measure on the thoroughness of the EPC survey, the skill of the assessor and the fee paid. There was an almost full consensus view that an old EPC is almost worthless, with several interviewees expressing the view that newer ones are both more accurate and more rigorous with the result that the property previously achieving, for example, a C grade under the early pre-2012 system might not achieve a rating of even 2 letters less- for example a previous 'C' might not only be just compliance at an E. However counter to this many respondents are of the view that commissioning a re-assessment, even where no 'trigger' requires it, if more rigorously conducted, can often lead to a higher grade meaning that many seemingly non-compliant buildings can be brought into compliance without any work being undertaken. In summary, old assessments may be unrepresentatively low due to poor assessor skill or the low level of fee charged resulting in inadequate inspection; but more modern assessments may be more accurate but lower due to more rigorous methodology. Whatever the reason, many interviewees were of the view that, to be accurate, the EPC should be recent and undertaken by a highly skilled assessor who is adequately remunerated.

Whilst the interviews confirmed that accuracy has tended to improve, many of the valuers still had limited confidence in the accuracy of EPCs, although most considered the accuracy had improved , at least where the commissioning client has been prepared to instruct an appropriately qualified assessor. However, valuers opinions were not always fully accurate themselves as their views that *"assessors are not monitored for competence"*; and that they might "*succumb to client pressure"* would appear to be over sceptical given that auditing is carried out EPC accreditation bodies.. Nonetheless, some worries over accuracy still persist. Furthermore, it was noted by another that EPCs were not always correctly entered into the register, leading to client decisions being based on wrong information. Whilst no system is ever likely to be completely accurate, it seems that confidence has some way to go before the EPC becomes a fully trusted measure.

Valuers tended to be concerned not just with the accuracy of the final grade awarded, but the information in the commentary. In terms of this, the view was expressed that often this is not useful. In the words of one respondent "*they don't say how and on what basis the assessor came to their conclusions"* and "*the EPC is not sufficiently transparent and accurate: the list of recommendations is too simplistic."*. This lack of clarity makes it hard for valuer, who are not building specialists to adjust whether it would be expensive or not to upgrade to compliance without specialist input, which may not be practicable within fee and time constraints.

The issue of accuracy was noted as being a particular issue for some retail premises, where fit-out works – such as lighting - may belong to the tenant and this could have a material impact on the EPC awarded.

In summary, accuracy may not be the concern that it was some decade ago, but some mistrust still exists, especially among those who lack the technical knowledge to really understand the basis on which EPCs are calculated. This is a matter recognised by government who state that it is often "*difficult to understand how accurate a rating of energy performance EPCs are*" (BEIS/MHCLG, 2018 p:25). The overall view was well summarised by one asset manager who opined that "*even though it is no longer the 'wild west' that it was, there is still the view out there that you can shop around for a better EPC.*"

3.2.2 Appropriateness of EPC as a basis for MEES

To several interviewees, more fundamental than matters of accuracy, were concerns about the appropriateness of EPC as a tool to use to support the policy of reducing carbon and enhancing energy efficiency. Many interviewees did not question the use of the EPC; however, those who had deeper technical knowledge of EPCs considered them to be an inappropriate measure as they do not directly measure either carbon emissions or energy efficiency in terms of consumption. Primarily this view arises from the recognition that the EPC is an asset rating – not a performance measure; it therefore measures energy efficiency in theory, but not in practice. Several interviewees pointed to the Australian system, NABERS, which measures performance, suggesting that this might provide a more useful measure as it has "*made a difference"* in Australia. However, it was recognised that, whilst there are plans to develop a UK

version of NABERS on a voluntary basis for commercial property, this would apply initially only to the 'top end' of the market – and only to offices. EPCS are currently the only mandated metric.

Further, several interviewees considered that linking any regulation to a measure that lasts for ten years makes little sense. They argued that it is simply the wrong measure to achieve moves to a low or zero- carbon built environment. For this reason and because it has a stronger relationship with energy use, some respondents supported Display Energy Certificates (DECs) as being more appropriate, although it was acknowledged that currently DECs apply, albeit that, in theory, their use could be extended to all buildings. do only to some buildings. Within the domestic sector, asset managers argued that there is a stronger correlation between the energy profile and the use of the building with one saying "*it is about the boiler, the insulation: the more efficient these are the more efficient the building use for energy – and this can also have a direct impact/benefit on lifting people out of fuel poverty".* Therefore, MEES, it was argued, cannot necessarily deliver a carbon reduction as it doesn't tell the occupier how efficiently the building is operating.

For this a measure in addition to the EPC was argued to be required with one specialist consultant suggesting that examining the variance between DEC (Display Energy Certificate)[10] and EPC results and the use of smart metering could have a role to play.

3.3 Enforcement

Under the extant MEES regulations there are provisions for enforcement and penalties. Fines for non-compliance are significant, particularly for breaches in the commercial sector, where fines can be up to a maximum of £150,000. Fines for breaches in the domestic sector are much lower (maximum of £4,000), but here capital values are likely to be commensurately less. These penalties, if enforced, should, it was suggested by some interviewees, provide a deterrent. Whilst asset managers and lawyers were generally well informed as to the severity of potential penalties, it was pointed out by one asset manager that his clients didn't need to know, because they ensure that their clients are compliant. Among the valuer group, who, for most valuations are less likely to require detailed building technology knowledge, there was far less awareness, although most, in general terms, knew that penalties existed.

Enforcement of MEES standards lies with local authorities trading standards officers. Overall there was concern about the lack of enforcement to date. Whilst a few, mainly assets managers, were aware that some trials were being undertaken towards enforcement, for the most part, there was little knowledge as to whether any enforcement had taken place; this was accompanied by the general view that the lack of action was a detriment to the effectiveness of MEES moving forward. There was also the suggestion made by a wide cross-section of respondents that the lack of enforcement could be leading to large-scale non-compliance as *"enforcement needs to be set at a suitably high level such that it will drive behaviours".* Further, it was observed by one consultant that the "*lack of any sign of enforcement has meant that people are now taking MEES less seriously than they were prior to April 2018"*. The lack of enforcement was a particular concern given that non-compliant properties were viewed as being more likely to be held in lower value portfolios owned by investors who might lack specialist asset management advice.

Lack of enforcement had also been acknowledged in Government sponsored research citing matters such as the difficulty in identifying owners and lack of local resourcing, but this report was concerned with domestic property (RSM, 2019). Exploring the reasons for the lack of enforcement action for breaches in the commercial sector, several interviewees had the perception that this was simply a matter of lack of resources in local authorities, whilst another pointed to the lack of property knowledge held by Trading Standards Officers; two interviewees said this made no sense as penalties extracted could be a useful source of revenue, although in the view of one respondent education rather than enforcement should be the priority.

[10] Display Energy Certificates are required for buildings to which the public have access. They record actual annual energy consumption.

3.4 Temporary Exemptions

Temporary exemptions from the MEES are available under several circumstances, notably in relation to obtaining tenant consent, under the financial tests, including a seven-year payback for commercial building, or if the work would devalue the asset be 5% or more. Further exemptions are available where compliance would be in conflict with a particular heritage feature, but there is no exemption of listed buildings *per se*.

However, among the interviewees the knowledge of what exemptions exist, other than (sometimes inaccurate) knowledge related to listed buildings, was limited and experience of obtaining them lower still with most asset managers and lawyers of the view that it wasn't worth applying for an exemption for one of the following reasons:

- it is not generally costly to gain compliance so that many landlords *"would rather meet the problem head on"* particularly as the issue can often be fixed by "*changing the light bulbs or other cheap compliance 'tricks'*";
- the payback period is normally less than the seven-year rule even where significant upgrade works are undertaken;
- any exemption on cost grounds has to be accompanied by several quotes for the work and contractors are reluctant to quote for work which is not intended to be commissioned;
- to be seen not to have done the work and rely on an exemption could be considered to be a reputational or value risk; or
- there are no cases envisaged in which value depreciation would result.

As a result of these issues, very few respondents had any experience of claiming exemptions; indeed, in the works of one respondent, "*temporary exemptions are a 'complete nightmare"*.

The findings from the interviews relate primarily to the commercial sector and support the data compiled by BEIS[11], which revealed that, in the 12 months since MEES was introduced only 130 exemptions in relation to non-domestic buildings had been registered, of which almost two-thirds were on the grounds of failure to comply with the seven year rule, and only 25% claiming that either all possible works had been undertaken or consent had been denied. Whilst there is no data on the number of leases granted in this period, it points to very few landlords seeking exemption and could, at least in part, why interviewees generally gave very limited support for the retention of temporary exemptions.

These findings do not apply for domestic property; first, the experience of interviewees of domestic exemptions was too limited to report and second, the number of exemptions registered in the period from April 2018 to April 2019 were far higher, standing in excess of 4,500, the majority being claimed on the grounds that all relevant improvements had been made, with far fewer claiming that the cost exceeded the landlord cap[12]. The greater numbers within the domestic sector might be a reflection of the size of the sector in terms of number of new tenancies granted in the period. But it may also be a reflection of the average condition of the stock and the percentage which would, without exemption, become stranded or shift to the owner-occupied sector. Given that so many existing residential buildings have low EPC ratings, this could be a major issue when the level for compliance is raised.

3.5 MEES compliance is too easy

The low figures for exemptions claimed in the non-domestic sector point to the possibility that MEES compliance is easy to achieve; if this is the case, and building on the findings from, for example McAllister and Nase (2019), MEES, by itself is unlikely to provide a major drive towards low carbon buildings. Accordingly, interviewees were asked about the likely overall prospects of MEES achieving market transformation through building upgrades. The response of many interviewees was that, although they genuinely welcomed MEEES, there was a lack of ambition as compliance could be achieved very easily. A widely held view was that, to obtain compliance, it was simply a matter of "*either*

[11] Figures on exemptions supplied by BEIS in correspondence with the author.
[12] Figures supplied by BEIS in correspondence with the authors

change the assessor or change the lightbulb"; this was notably so among the asset managers and building consultants respondents. Whilst some cynicism was expressed around this and other "*cheap compliance tricks*", the majority view is summed up in the words of one building consultant who opined that "*even a switch of lighting to LED is a move in the right direction"* .. and *"the EPC/MEES interface is forcing some improvements*". However, one of the reasons cited for the low level of significant work being undertaken was the need to ensure "*little interruption to tenants*" during existing tenancies. Therefore, it remains to be seen to what extent this argument will hold when MEES affects existing as well as new tenancies.

3.6 The impact on investor strategies

Given the potential impact of the ability to continue letting property, it was anticipated that the prospect of and introduction of MEES would see an increase in the rate of retrofits both to achieve compliance and to 'future-proof' assets. Therefore, asset managers and consultants were asked about the impact on the strategic behaviour of investors. What the interviews revealed was a range of differing market behaviours. Perhaps predictably, it was reported that many large investors had been adjusting their strategies ever since MEES was first placed on the statute book in 2011; whilst many still do own stock that is not energy efficient, they have audited their portfolios and, where the stock has strategic importance to them they have invested in improvements - not just for compliance but beyond. Indeed several interviewees reported that an impact of MEES had been that, in general terms, investors were not seeking to invest in stock that was just compliant: a minimum of D is normally sought, although there was little reported evidence of going beyond this in terms of expectation at the time the interviews took place. Two asset managers summed this up with shared views that, although there are outliers who will purchase non-compliant stock and then seek to future proof the asset, "the *easiest way to do this is to buy those assets with no issues*". For this an asset that was seen to have 'no issues' was regarded as ones with a minimum of at least a D or possibly a C. There was little or no recognition that assets rated D would in time, possibly, a short time, become non-compliant if regulations changed.

In stating this, it is accepted that the interviewees did not include any institutional or major portfolio owners as the purpose of the pilot was to gain an insight across as wide a spectrum of the property market as possible. However, those valuing for such investors, although they had no direct evidence were of the view that the overall portfolio strategy of such investors towards ensuring very energy efficient stock as part of their corporate responsibility policies. This is turn is potentially impacting disposal and acquisition strategies as much as retrofit actions. For those with smaller or secondary portfolios *"just complying is more likely to be the aim"*. In the experience of one valuer acting for national clients "*The big funds have already, through a process of strategic planning, largely already divested of those with below C; the smaller funds are buying D/E with a price chip – and if the price is right they will buy F/G with a view to upgrading"*.

In summary, the pilot study confirms the views that many large-scale investors have taken steps to align their portfolios beyond regulatory requirements well in advance of the formal introduction; for others the aim is compliance and no more.

What did not come out through the interviews was any real sense that significant retrofit works have escalated over the short-term; instead disposal and acquisition strategies are seeing the lower grade stock being sold to other investors with lower sustainability aspirations or those with active 'value-add' policies.

3.7 Valuation Practice

3.7.1 Due diligence

Under the RICS professional requirements (RICS, 2017: VPS 2) valuers are "*strongly advised to collect and record appropriate and sufficient sustainability data, as and when it becomes available, for future comparability, even if it does not currently impact on value."* To supplement this global requirement, specific guidance was issued to valuers and asset managers in the UK in 2018 (RICS, 2018[a]) in advance of MEES' implementation.

Previous studies of valuation practice in relation to sustainability, both in the UK and elsewhere, have revealed little evidence that sustainability issues had become integrated routinely into instructions and data collection and analysis (Michl *et* al. 2016; Sayce, 2018; Warren-Myers, 2018; Le and Warren-Myers, 2019). Therefore, valuers were asked to comment on what impact MEES had made on these processes and practice.

All valuers interviewed reported that valuers were beginning to take greater note of the EPC and to reference this in their valuations. However, when asked about their knowledge of this additional guidance, whilst most interviewees were well aware of it, and for the most part found it useful - they were conscious that many valuers had little or no knowledge of it.

Under the guidance, valuers are advised on both the necessity to take account of MEES in their due diligence processes and on the challenges that it presents in value terms, especially where a property is, or is at risk of becoming, not compliant. Notwithstanding variable knowledge of the issued advice, the consensus view is the MEES is having some effect on the due diligence process with some opining that dealing with "*MEES/EPC is now fully embedded in the valuation process"* and *"it is integrated and now just part and parcel of the day to day work".* However, on deeper questioning, it became clear that some valuers take the EPC at face value without questioning whether it is old or likely to be inaccurate for any other reason. Albeit that recently assessed EPCs are now generally regarded as more accurate than older ones, it is advised (RICS, 2018a) that valuers should verify the EPC's data and validity. Therefore, this is an area in which due diligence appears still to require deepening, but it is recognised that the time allowed to conduct the valuation and the fee level may lead to very heavy reliance on information supplied by the commissioning client.

3.7.2 Building consideration of MEES into valuation analysis and reporting: impact on value

It is one thing to collect data; it is another to use that data systematically in analysis and in the formulation of judgment as to the impact on value.

Globally, there has been much research seeking to link real estate values with sustainability ratings but the number of studies specifically analysing the impact within the UK has been limited. Exceptions include Mudgal *et al* (2013) and Fuerst *et al.* (2015). Whilst early studies relating to sustainability and pricing (for example, Sayce *et al* 2010 and Fuerst and McAllister, 2011, Mudgal *et al.* 2013) found little evidence of price differentiation, more recent studies (see for example Fuerst *et al* , 2015; Fuerst *et al* 2016) have concluded that there is emerging evidence of differentiation in the market place between the prices obtained for highly energy efficient buildings, based on their EPC ratings and those which are less so. Although many studies and much of the 'grey' literature refer to this differentiation as a 'green premium' for highly efficient buildings, it could be argued that in some cases this relates to a shortage of high grade stock (Fuerst *et al.*, 2017) or to an emergence of a 'brown discount' for less good stock (RICS, 2019).

However, not only are such studies normally macro in scale and therefore difficult to apply at the level of the individual building, there is, as yet, no large scale reported study assessing value change occasioned by MEES. From the interviews the dominant view of valuers was that a 'brown discount' is more likely to occur than green premiums. Whilst a reduction in value to reflect the need for investment to bring into compliance was to be expected and has been anticipated in professional guidance (RICS, 2019). Where markets are weak, valuers viewed a brown discount as likely but stated that "*generally 'green' issues do not really arise*", although in the view of three valuers, it is still a little early to say this with any confidence, although they too agreed that "*brown discounting is likely to emerge*".

Valuers and asset managers also pointed to a possible unintended consequence of MEES: some assets simply cannot be made compliant with the alternative that they will become stranded assets, notably in low value areas (see also Muldoon-smith and Greenhalgh, 2019; Booker, 2019). In their view, it in such cases that "*government also have a role in terms of working with private landlords to undertake regeneration*". Where assets were viewed as uneconomic to bring up to standard and might result in demolition, the point was made by one building consultant, that to drive forward the date at which a building is demolished is "*not good*" … in terms of embodied carbon "*but at the end it will simply be a commercial decision".*

The result has so far been that some, though not all, properties, which are non-compliant or deemed likely to become so when a new EPC is obtained, are being marked down in value, as was anticipated to be the case (French and Antill, 2018). This is being done either through an adjustment to the capitalisation yield, based on the perception of risk to the future lettability and risk of 'stranding' or to reflect a potential capital expenditure to ensure ongoing compliance. One interviewee expressed the view that, whilst there was evidence of increases in yield resulting in lower capital values for properties at risk of non-compliance, it was hard to say whether this was "*due to opportunistic chipping or a conclusion about real risk*".

Both approaches are consistent with RICS guidance on MEES (RICS, 2018 [a]). However, one valuer reported that they did not consider they could accurately assess the impact on value and, therefore, reported figures based on assumed ongoing compliance, even if this was not the fact, as they do not consider themselves to competent to cost the work to ensure compliance. But even in this case, where the valuer considered the costs involved could be significant, they would flag up that there might be an issue that would require address. Other valuers were of the opinion that, depending on the exact instruction, they would look at the application of MEES regs and the costs of upgrade and deduct the costs when finalising their valuation after having, if appropriate and possible, taking cost consultant advice.

Whilst MEES is deemed by most to already having some impact on value, not all valuers reported a discernible impact, with one stating that, in their experience that "*there is no evidence at rent review of it impacting rents and realistically you cannot decompose yield evidence to show the impact of energy*".

The challenge of isolating the impact of one single factor (in this case the impact of MEES) when analysing comparable sales or rental evidence, is fairly self-apparent. And to many of those interviewed, other concerns such as the economic uncertainties around Brexit and the matter of defective cladding systems were seen to be bigger risks to value. The latter was particularly, but not exclusively, the case where the valuer specialised in domestic secured lending work for which cladding is the key current factor; the former in the case of commercial valuations in markets sensitive to international money flows where uncertainties surround Brexit are paramount.

3.7.3 Secured lending valuations: a specific concern

One emerging relationship between MEES and value concerns is the attitude of lenders. It emerged that practice is very variable. Whilst some banks do not yet include EPC data on their loan portfolios, most at least "*have it on their radar"* to ask for the EPC – if not for MEES compliance - when commissioning a valuation and have adjusted their pro-formas so to do. However, to simply ask for the EPC without qualification gives no useful information as to the credit risk of income moving forward. But whilst some lenders appear to lack awareness, this is not true of all. Some lenders, it was reported, do ask about MEES compliance and in some cases all non-compliant stock is "*labelled as not suitable for secured loan and therefore nil rated*". Whilst the interviewee related this practice as concerning residential lending they opined that it might extend to commercial lending as well.

Where banks require EPC data, this is normally restricted to letter grade only – not numeric score, but the date that the EPC was granted will be noted. For commercial assets, where the EPC score is such that capex will be required to achieve a new letting, it was reported by one valuer operating in this specialism that this will be flagged by the valuer on the report but the costs of compliance will not normally be detailed – as that is for the bank to take a view. The valuation will be on the assumption (if not a fact) that the property will continue to be lettable and compliant and if this is considered to be a risk to value, it will be reported but not quantified.

3.8 Leasing practice

It had been expected that MEES would impact on the landlord and tenant relationship and the drafting of new commercial leases. In particular, questioning sought to discover whether the practice of 'green leases' had grown as a result of MEES. So-called 'green leases', which seek to encourage or coerce enhanced environmental practices by either or both landlords and tenants have been advocated for several years but have not become widely embedded (see for example, Hinnells et al, (2008); Bright and Dixie, 2014; Patrick and Bright, 2016).

Turley and Sayce (2015) argued that the regulations might have significant impact on the actions of landlords and tenants, especially at lease end in terms of potential liabilities for dilapidations. Mulliner and Kirsten (2017) in their study of large investors' preparedness for MEEs, conducted after the publication, but before the implementation, of the regulations, found that lease drafting implications were likely to relate to (in descending order of importance) lease end/dilapidations, service charges, alterations/improvements; alienation clauses and rent reviews.

In the light of this, all interviewees were asked about their experiences in relation to lease drafting provisions. Most of the comments made were from the specialist consultants, asset managers and lawyers. Whilst some valuers offered opinions, it was pointed out by more than one interviewee that valuers do not always read the lease, which could be regarded as concerning, though understandable in some cases where the instruction is for a quick response, at a low fee and on the assumptions that the valuer will rely on the client's information.

The overriding concern that came through the responses was that the landlord's "*key objective is to mitigate risk*" and therefore "*what is important is that the landlord has control of the process around EPCs*". For these reasons, the single most reported lease drafting response raised by interviewees concerned the ability of the landlord to prevent the tenant from carrying out any work which could impact the EPC and a prohibition on the tenant to apply for a new EPC without the landlord's consent. Many of the changes required to achieve this had already been introduced in the Model Leases Clauses[13] published in 2016 in anticipation of MEES, to which several interviewees made reference.

However, the comments made go far beyond these provisions and have resulted in potential and actual changes to lease terms in relation to fit-out resulting in greater use of licences to carry out work prior to lease grant, especially for retail premises. Whilst interviewees recognised that "*tenants understandably wish to control fit-out – this can damage the EPC in some cases, particularly where they wish to change the lighting".* Therefore, the expectation was this this might lead to less 'shell and core' arrangements in offices; for retail, particularly in the current weak market, the wishes of the lessee in terms of fit- out were more likely to prevail. However, it was acknowledged that this is "*a whole area in which litigation will ensue in the future"*.

Additionally, in terms of control some interviewees also reported that landlords are seeking to put in specific clauses to enable them to gain access to undertake works in relation to MEES, thus obviating any issues around gaining tenant consent.

A standard lease clause in commercial leases is that tenants have a liability to undertake works to ensure statutory compliance. However, whilst one respondent was of the view that they "*wouldn't be surprised if landlords were attempting drafting to try and get round the provisions*" and pass on liabilities, most did not think that landlords would seek to use such a clause to shift the responsibility with one respondent of the view that although "*some landlords have looked at this, they have backed away"*.

Where the question of passing on financial liability was most commonly raised was in relation to service charges. These are often the source of dispute between landlords and tenants, both in terms of what are legitimate costs to cover, sinking funds against future costs and apportionment. Several respondents pointed to the RICS Commercial Service Charge Standard (RICS, 2018[b]) and expressed the opinion that landlords would seek to comply with the Standard now that it had become mandatory, rather than voluntary. Despite this, views were split as to whether this meant that MEES and service charges was now *"not a big issue"* or whether landlords were likely to recover compliance costs through 'sweeper' clauses. However, there was consensus that to do so could result in tenant resistance which

[13] The Model Lease Clauses website and model leases were originally commissioned by the British Property Federation and the terms are kept up to date by a working group which aims to act impartially between landlords and tenants. The MEES alterations can be found at https://modelcommerciallease.co.uk/july-2016-changes/

might lead to litigation. Further, the Standard itself would appear to be slightly ambiguous in terms of potential inclusion when it states that, although the costs of obtaining an EPC were not legitimate as a service charge cost, "*any subsequent costs of improving energy efficiency might comprise a legitimate service charge item, as long as there is a proportionate cost benefit to tenants*." (RICS, 2018[b] p:44)

A very positive finding was that several asset managers and lawyers had observed a resurgence of interest in 'green leases' with tenants said to be "*getting used to them*". This finding mirrors those of Patrick and Bright (2018) who concluded that, at least for institutional and large property companies, some green lease clauses are beginning to be embedded as part of company sustainability strategies. Whilst the findings of this pilot are less conclusive, the interviewee base was more widely drawn and covered those dealing with both prime and secondary properties.

Finally, studies prior to the introduction of MEES had highlighted that lease end and dilapidations negotiations were likely to be potentially contentious issues (e.g. Turley and Sayce, 2015; Hartley, 2019). However, among these group of respondents, this is not the case - at least so far - although concerns about the uncertainly at lease end and lease renewal were mentioned by interviewees. Given that this pilot study has been conducted at a time when MEES still only applies to new lettings, it is perhaps reasonable to conclude that matters in relation to dilapidations have not yet arisen widely. However, leasing practice changes consequent on MEES aiming to shift control back to the landlord could go some way to avoiding issues at lease end but only for leases granted recently, and notably since the publication of revisions to the Model Lease Clauses.

In summary, planning for lease changes had been taking place prior to 2018; however, it is only as the regulations have come into force that issues such as dealing with fit-out and control of the EPC level have really come into play, as the potential and actual consequences have become more apparent, not least in relation to the observed shift from shell and core lettings and towards much greater landlord control over fit out and a resurgent interest in green leases. However, there appears still to be some uncertain territory around the position at lease end and, to some extent, service charges.

3.9 Wider implications: a trajectory to a zero carbon economy

The final part of the interview sought to gain wider views about both the likely impacts of MEES moving forward, and the interface between MEES and the wider carbon reduction and climate change arguments. To that extent is was intended to be open-ended and speculative. At the time that the interviews were conducted, the Committee on Climate Change had recently published its 2019 progress report which advised UK government that it should increase its carbon targets from an 80% reduction by 2050 to zero carbon by 2050 (Committee on Climate Change, 2019 [a]); however, it subsequently provided further information as to the scale of investment required to achieve these targets and estimated that it would require a decarbonisation investment in buildings of some £15-20 billion (Committee on Climate Change, 2019 [b] p:28) to deliver zero-carbon new builds by 2030 and all buildings by 2050. These recommendations passed into law in June 2019[14] at the start of the study period.

The responses are split into the specific views about the potential of MEES to effect market transformation and the wider discussion regarding the level of awareness of policy changes.

3.9.1 The potential of current MEES regulations to effect meaningful change.

The findings started with an endorsement of MEES as being a welcome measure. In this question interviewees were asked more specifically whether MEES *would* lead to market 'transformation'. Several interviewees reinforced the points already made including the need to ensure that enforcement is effective and properly resourced and that MEES is simply the wrong tool to reduce carbon.

[14] As announced by BEIS on 29th June. Available at https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law

Other views were split between those who were optimistic and those who were less so. Those that were optimistic expressed views such as "*even a switch to LEDs is a move in the right direction";* and *"for clients without an CR (Corporate Responsibility) the penalties for non-compliance are so high that they are an effective stick".* However, to others, although welcomed, the regulations are insufficient to really make large-scale impacts. Reasons for these views varied but included "*MEES will take too long – but one has to start somewhere*"; and "*MEES does not address owner-occupation- and that is a "sizeable chunk*". Several were of the view that "*MEES is simply not radical enough"* although it was also contended that it was difficult to "*gain market shift without damaging the market and many people going bust*" which would have been an undesirable and unaccepted outcome. It was acknowledged that this had not happened and therefore it had not led "*to the sort of drastic actions that were seen when empty rates were introduced, and many properties were demolished*" notwithstanding concerns about potential stranding of some assets.

3.9.2 A wider awareness of connecting buildings to the Climate Change agenda

Within the major institutional property investor community, the issue of how to address the climate change agenda through their strategic actions is not new. As long ago as 2005, Pivo and McNamara (Pivo and McNamara, 2005) first advocated responsible property investment with the ambition of minimising environmental and social impact of buildings whilst maintaining investment returns. Whilst, at the time, that was radical, the movement has grown and UNEP-FI (2016 p:4) argue that every real estate owner, investor and stakeholder should recognise that they have a fiduciary duty " *to understand and actively manage … climate-related risks as a routine component of their business thinking, practices and management processes."* It is recognized that the UNEP-FI represent major investors, who are those most likely to have undertaken work to 'future-proof' their portfolios, both to protect their investors and to serve the common good.

It could be expected that, in interviewing a group of advisers, some of whom advise such clients but some of whom do not, the integration of climate-change considerations would be less clear cut. Nonetheless, with the strong media attention to such issues, the protest activities led by Thunberg and Extinction Rebellion (XR) and the change to government policy just preceding the interview period, it was considered that at least some interviewees would have a view as to whether participants within the property markets had begun to make the connection between the regulatory framework and the strengthening climate change agenda.

Not all interviewees ventured a view, but of those who did, none saw that the market had begun to factor in the likelihood that MEES was only the start of a regulatory road in which the need for very significant investment would be required. As one valuer stated "*If government wish to create a stronger impact then the trajectory should be set and announced clearly. People do not relate the issue of carbon reduction and plastics etc with the MEES regime*".

The reasons for this lack of connectivity varied from the reported disconnect between EPCs and carbon, to the need for the government to spell out the trajectory much more clearly to the dominant explanation that the "*market has simply not made the connection yet between (aspiration of zero carbon) and the property market"* and "*with short term leases it will not impact values currently*". Further, there was a view that some of this related to a lack of awareness among some advisers; for example, one valuer expressed the view that "*The journey will be difficult... no one is talking about a zero carbon scenario – people are not even aware yet of the phasing out of gas in new build from 2025*".

This did not mean that interviewees were disconnected personally with the climate change agenda, although several ventured the opinion that, in the words on one asset manager "*there is a generational issue going on – as per the Greta/Extinction Rebellion. The youngsters want change- in climate responses - and how they work (e.g. WeWork). They want strong environmental targets"* and another who stated "*the younger generation coming through have much stronger awareness – over time there will be an alignment to a common purpose and a tipping point will be reached"*.

In summary, MEES was viewed essentially as a matter of immediacy – a requirement to comply and one that in general was welcomed - but not one that had impacted on the market in a major way as the start of the journey to zero carbon.

Chapter 4 Discussion and Conclusions

4.1 Discussion of Issues

The research was conducted over the summer of 2019. This was just over a year after the first stage of MEES had been introduced by which time the regulations had been widely trailed and advice had been issued to many professionals using a range of media. It could have been expected therefore that most of those interviewed would have a good working knowledge of the regulations and a view as to their impact on the property market. This was particularly the case as interviewees were selected from those who, for the most part, advised a wide range of clients over property management, leasing, sales or valuation of buildings. Although some interviewees were drawn from the residential advisory base, most were concerned with commercial buildings where the potential penalties for non-compliance are higher and lease commitments longer.

The timing of the research also coincided with a period during which much media attention had been focused on climate change issues, including the calls for faster moves towards carbon reduction and the government's own policy changed from a target of 80% reduction by 2050 to one of zero-carbon by the date that the interviews were conducted. It was therefore anticipated that at least some of those interviewed would be advising their clients in relation to the longer-term trajectory towards the imposition of far more stringent targets. What became apparent was that the baseline knowledge is variable, as illustrated to answers in relation to exemptions, enforcement; even knowledge of the fuller introduction of standards in 2020 (residential) and 2023 (commercial) was not fully appreciated in some cases. Further, the findings pointed to very little connectivity made between the public concerns as to the climate 'crisis, the active and increasing policy ambitions concerning the need for radical solutions and the operation of the property market in the light of the regulations and the stated intention to implement a trajectory.

Despite this a major 'takeaway' is that MEES is perceived as being influential on behaviours. The literature had demonstrated that many of the large investors had already been taking steps to 'future-proof' their portfolios and this was borne out by some of the asset managers, although it is clear that many have not, notably the smaller scale portfolio owners who take a shorter term perspective on their portfolio decision making. Certainly, MEES regulations have raised awareness and placed energy efficiency firmly on the investment table.

Logically, the consequence of raised awareness among building owners of the increased importance of energy matters should be either investment in their assets both to ensure current compliance and prepare for further tightening of the regulations, or divestment. The interviews revealed a range of responses with the ease of compliance to current required standards being cited by several people as the normal response. If indeed, in most cases can be achieved by commissioning a better EPC, the regulations will have no significant impact; even if they lead to changing the lighting system to ensure compliance, carbon savings will be very limited.

Little evidence was found that the minimum level for compliance was leading to deep retrofits except where this would have been undertaken anyway. One of the reasons for this that was cited was that, for let buildings, the most appropriate time to undertake significant work is when there is a void; however, despite this, there was no evidence that temporary exemptions were being sought, but the use of these might be expected when the regulations extend to existing tenancies.

What was a clear message coming through was that lease practices are adjusting to ensure that landlords are not exposed to non-compliance through the actions of their tenants. However the moves reported by some interviewees that at least some, though the minority of, landlords are considering ways to place the financial burden of compliance on to the tenant by means that as service charges or the granting of agreements for lease until works of compliance are completed, suggests that the regulations are viewed purely as a hurdle to overcome in order to protect immediate investment value, rather than a measure intended to secure long-term enhancement. Whether such moves will work in the longer term if tenants resist such attempts is not yet known and may depend on market conditions. Possibly, as stated by one interviewee, it will take litigation to establish the legal ability to transfer the burden.

One of the aims of the pilot study was to consider the impact on value; hence the concentration on interviewing valuers. Given that non-compliance potentially impacts on most lettings, the variable knowledge shown by valuers was perhaps surprising; even more so was the fact that some valuers were not questioning the veracity of the published EPC or, even valuing on the assumption of compliance, whether or not this was a fact. This is clearly in contravention of the advice given by the professional body. Conversely, other valuers were extremely knowledgeable, but it was valuers undertaking residential secured lending valuations where values appear to be most impacted, with a binary approach taken to compliant/non-compliant stock. Overall whilst due diligence processes have embraced MEES, the impact on value is not yet fully felt.

4.2 Conclusions

In drawing conclusions, it must be stressed that this has been a pilot study; it was also primarily focused on the commercial sector. Whilst every effort was made to ensure that a wide range of views were accessed, the study is not comprehensive, and the conclusions can only be tentative at best. They do, however, provide some positives – and negatives – in terms of the effectiveness of MEES to date and perhaps offer insights into how the regime could be strengthened moving forward.

A very positive conclusion is that MEES had had a very significant effect of raising awareness of energy efficiency matters within those sections of the property investment community who were not previously positively engaged with the corporate responsibility and climate change agendas. It has placed energy matters firmly on the 'day to day' agenda of property asset management, although, judging from the responses from valuers, the impact has been towards 'price chipping' - so far on a minor scale.

But, judging from the interview responses, it has not had a large impact on driving retrofit works, which is a key objective of the regulations. This supports the findings of McAllister and Nase (2019) but may be a result of a combination of the prior actions of some vanguard investors, and the early stages of the regulations in terms of most building owners.

For MEES to be deemed effective in the longer term, refurbishment is key. However, deep retrofits, which can significantly improve the performance of buildings are best undertaken 'in-cycle' when, for example, a tenant leaves at lease end, and the market conditions are appropriate. In this pilot, no evidence of such action emerged. In part this may be because it is 'early days' but this is not the whole story. Whilst the pilot did not include interviews with major investors, it was apparent from the views of their advisers that many major investors have already taken asset management action to 'future-proof' their portfolios by using stock selection and disposal policies, among other measures. This potentially, may result in the poorer stock becoming concentrated in the portfolios of those with less ability to lever funds for improvements and where the rental return on investment may not be high.

In part this is already being realised in value terms as the research found reports that value change in response to MEES is resulting in some 'price-chipping' on compromised assets. This decline in value may lead, not to improvement works but to stranded assets or loss of stock, with inevitable social – and carbon – consequences.

For those with smaller or lower value commercial portfolios, the approach is more likely to be towards doing the minimum work – such as lighting upgrades – to ensure compliance. Connected to this is that, within a commercial context, compliance is seen as relatively easy and cheap to achieve; indeed, it may involve little or no more than obtaining a more rigorous EPC certificate. This reinforces the findings from BEIS's own statistics that, to date, few exemptions in the commercial sector have been registered. If this is the case, it will not drive significant change in the actual performance of the built stock.

It was in leasing policies that MEES could be argued to be creating a subtle, but positive, change. The onus for compliance rests with the landlord and, although there was indication that some landlords might be seeking to pass on the costs to tenants via service charges or other means, this was not a prevailing view. What was a strong theme coming through was that landlords were now seeking more control over the management of their asset with a view

to ensuring their energy performance and to the promotion of dialogue between the parties. If this is so and more active engagement is engendered, it presents real opportunities for timely and appropriate investment in buildings.

Overall, based on this pilot study, MEES is beginning to have an impact on asset management and leasing practices. However, the general market uncertainties prevailing and, for residential stock the issues of cladding, have overshadowed those of MEES in value terms, although a brown discount was beginning to show.

Looking forward, MEES is the start of a journey; currently it is primarily seen as a matter of compliance; even the next steps of application to all existing leases has not yet been fully embraced in all investor behaviour based on the views expressed. And, it is not in and of itself likely to provide the mechanism for fundamental upgrading of stock sufficient to meet government objectives. Whilst it has so far not been fully associated with the wider social movements towards combatting climate, change, it is an important step in the right direction on which the next iteration of policies can build. But it is clear that, in and of itself, the imposition of minimum energy standards within the investment stock, is but one small building block.

A pilot study provides an insufficient basis on to develop firm recommendations, except to identify areas for potential further and deeper investigation. In terms of these, clearly, the linking of EPCs with MEES has produced some scepticism. As the requirements of MEES are tightened, the basis on which those standards are based would benefit for deeper investigation as to whether EPCs remain the measure of choice. Second, the preliminary findings suggest that, so far, the combination of easy compliance, lack of enforcement and (at least within the commercial sector) low usage of exemptions, is not yet proving to be a trigger for deep retrofits. This suggests that market participants require stronger measures to provide the stimulus for retrofit investment., or a more effective grant regime. Whilst, it is recognised that government are consulting regarding the trajectory, more understanding of how such retrofits work could be incentivised without too high a cost in terms of stranded assets could help. Whatever route the government do decide to take following their recent consultation, pushing up energy standards and strengthening enforcement will be likely to result in a loss of stock that has social importance to small businesses and some residential tenants.

Finally, the disconnect revealed in this small study between personal acknowledgment by respondents of the need for rapid and the level of real change required to deliver a zero-carbon economy and the planned actions of short-term compliance invites further investigation as to how such connection can be made. Such a disconnect of ambition: compliance to enable a business as usual model against radical action for climate change is not conducive to success. Yet to succeed is imperative. If the government do follow through there is a major market disruption potential which is not yet being foreseen or anticipated. This suggests a need for vision, education and, almost certainly, grants as well as private sector funding.

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