



Department for  
Business, Energy  
& Industrial Strategy

# Non-Domestic Private Rented Sector Minimum Energy Efficiency Standards Research

Final report

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# Executive summary

## Introduction

This report presents the findings of research into the **minimum energy efficiency standards for non-domestic properties in the private rented sector (PRS MEES)**. The research has been undertaken for the Department for Business, Energy and Industrial Strategy (BEIS) by ICF and The Behaviouralist.

The PRS MEES Regulations establish a minimum level of energy efficiency for all privately rented property in England and Wales. This means, from April 2018, landlords of privately rented domestic and non-domestic property in England or Wales must ensure their properties achieve a minimum Energy Performance Certificate (EPC) rating of E before granting a new tenancy to new or existing tenants. Exemptions are available for reasons related to: the costs incurred by landlords, no relevant improvements being feasible, and other barriers that are outside of the landlord's control such as a lack of third party consent for the works to be carried out. From April 2018, landlords are only required to meet the minimum standard for new, renewed, and extended tenancies. From April 2023 this will be extended to all tenancies for non-domestic buildings.

This **research focuses on the non-domestic rental sector**, with the aims of:

- Providing evidence of early outcomes of the non-domestic PRS MEES;
- Generating data to support this and future research on non-domestic landlords; and
- Providing insight to inform future policy development to improve the energy efficiency of non-domestic properties.

This report is based on analysis of secondary data, qualitative interviews with local authorities and a focus group with organisations representing landlords and tenants.

## Availability and limitations of secondary data

**A 'master' dataset of non-domestic properties and their landlords and tenant businesses was created** using data from four sources:

- The EPC Register, which provides data on EPCs that have been lodged for non-domestic properties in England and Wales (and provides information on the characteristics of those properties);
- The Inter Departmental Business Register (IDBR), which provides information on the names, addresses and size of UK businesses;
- The Persons of Significant Control (PSC) dataset from Companies House, which provides information on the owners of UK registered businesses; and

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- HM Land Registry, which provides information on the ownership of properties in England and Wales.

Most data were available free of charge. The exception was Land Registry data, which provides free data on properties owned by corporate landlords but charges for data on properties owned by individuals. Due to limitations on the number of individual landlord records that could be purchased within the project's budget, the research team purchased 1,650 Land Registry records for 'individual' landlords. Of these records, 1,000 were selected at random to form a representative sample landlord population while the remaining 650 were selected to cover a spread of different types of properties and different EPC ratings and were intended to inform sampling for future research activities<sup>1</sup>.

**Data from the four sources were merged by matching either the address of the property or the company reference number (where available).** This exercise generated two datasets:

- A large, partially merged dataset of 8,341,720 address observations, in which data was merged across some but not all of the four data sources; and
- A smaller dataset of 75,405 observations that were fully merged across all four data sources.

An indicator was also generated to identify properties assumed to be in the private rented sector, based on a comparison of owner details for the property and the tenant business. Properties are assumed to be rented in cases where the property owner(s) was different to the owner of the business.

The smaller dataset has been analysed to help improve understanding of compliance with the PRS MEES and the characteristics of landlords and tenants who are affected by the regulations. However, there are limitations with the dataset, including:

- The coverage of a relatively small sample of properties, landlords and tenant businesses in the private rented sector within the fully-matched dataset. The size of the fully-matched dataset is restricted by the limited number of non-domestic EPCs lodged since 2008. It is also restricted by budget limits only allowing the study team to purchase a limited number of Land Registry records for properties owned by individuals;
- The indicator for identifying rented properties is a proxy indicator and risks falsely identifying owner-occupied properties as rented properties where the matching process fails to identify matches in owner details. The high proportion of rental properties identified in this analysis compared with other datasets would suggest this needs further exploration before proceeding with

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<sup>1</sup> The selection characteristics for the 650 records included EPC rating, property type, region, floor space, turnover and whether improvements had been made to the property. The sample of 650 records was excluded from the descriptive analysis.

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future research (see discussion in Annex 1). Similarly, the fuzzy matching of address information may not be completely accurate in matching properties, landlords and tenants across the different data sources.

- The data sources provide names and addresses for individuals and businesses, but not email addresses and telephone numbers, which means further work would be needed if the dataset were to be used for sampling in future research activities.

As a result of these limitations it is recognised that the methodology would need to be reviewed again before the dataset could be used to support future sampling frames for non-domestic landlords and properties.

## Analysis of the non-domestic private rented sector

The average EPC rating of properties in the fully-matched dataset was grade D, which is consistent with the average rating across the whole EPC Register. This was true of both rented and owner-occupied properties. However, rented properties had a lower average energy performance asset rating<sup>2</sup> (due to having higher CO<sub>2</sub> emissions) and a larger proportion of properties with F and G graded EPCs<sup>3</sup>. This suggests that **rented non-domestic properties are, on average, slightly less energy efficient than owner-occupied properties.**

The research also **identified some key factors associated with rented non-domestic properties that have low EPC grades of F or G and are therefore likely to be affected by the PRS MEES:**

- **The use of the property** – offices, workshops and retail premises are significantly more likely to have low EPC grades than all other types of property (such as industrial, storage, restaurants, cafes, bars, hotels, education establishments, hospitals and primary care buildings).
- **Landlord type and portfolio size** – individual owners and/or landlords with smaller portfolios are significantly more likely to own properties with low EPC grades (compared to corporate landlords and those with portfolios of ten or more properties).
- **The type and size of tenant business** – SMEs, businesses with an annual turnover of less than £500,000, and stand-alone businesses<sup>4</sup>, were all significantly more likely to operate from properties with low EPC grades

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<sup>2</sup> The energy performance asset rating is a numerical indicator of the estimated amount of energy required to meet the different needs associated with a standardised use of the building.

<sup>3</sup> Analysis of the fully matched dataset suggests that 12.5% of rented non-domestic properties have an F or G graded EPC, compared to 9.7% of owner-occupied properties.

<sup>4</sup> A stand-alone business is a business that manages its own activities and does not depend on a larger organisation for money or approval. This research study differentiates between stand-alone businesses and franchises, which are defined as being part of a larger organisation.

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(compared to large businesses, businesses with an annual turnover in excess of £500,000 and franchises<sup>5</sup>, respectively).

There is no significant difference between the EPC grades of properties owned by either domestic or foreign corporate landlords. There were some differences in average EPC ratings for different sizes of properties and locations (in terms of region or comparing urban and rural areas) but these were less significant than the factors listed in the above bullets. Properties in rural areas were found to have slightly better energy performance than those in urban areas.

These findings suggest that **the burden of the PRS MEES is most likely to fall on smaller landlords and potentially, therefore, those with fewer resources.** Similarly, **it is smaller and stand-alone tenant businesses that are most likely to operate from properties affected by the PRS MEES.** These businesses therefore have the most to gain from the benefits of improvements to the energy performance of their property. However, their smaller size may also make them more vulnerable if landlords choose to pass on the costs of energy performance measures through increases in rent.

## Awareness and understanding of the regulations

Research with organisations representing landlords and tenants suggests that **awareness and understanding of the PRS MEES is highly variable amongst landlords and is typically much lower amongst most tenants.** Local authorities also suggested that awareness and understanding of the PRS MEES is likely to be mixed, although most admitted that they did not have enough evidence or experience of engaging with non-domestic landlords and tenants on this issue to be able to comment.

The local authorities and landlord organisations agreed that **awareness and understanding are likely to be higher amongst landlords and tenants who engage with external advisers** such as trade bodies, letting agents, surveyors, lawyers, etc. The landlord organisations also suggested that awareness is likely to be highest amongst landlords with larger property portfolios, who are more likely to be aware of policies and regulations in general, and more likely to consider potential risks, develop mitigation strategies and long-term plans.

Some particular issues were reported with landlord and tenant understanding of the more complex aspects of the regulations relating to EPCs, exemptions, and sharing responsibilities for improvements between landlords and tenants.

The landlord and tenant organisations also felt that there has been **a lack of local authority engagement with landlords and tenants to help raise awareness of the non-domestic PRS MEES.** This view was shared by most local authorities, who reported that Trading Standards activities in this area have been restricted by some common issues including: competing priorities; a lack of resources; and difficulties

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<sup>5</sup> Franchises were identified using the IDBR dataset and are defined as companies that share a Company Reference Number (CRN) with one or more other companies listed in the IDBR.



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identifying non-domestic landlords. Some suggested a need for greater coordination from central government to help raise awareness of the PRS MEES. Some local authorities had engaged in awareness raising activities, most of which spanned the domestic and non-domestic PRS MEES. Examples included: attending seminars, meetings and working with letting agents to identify and disseminate information to non-domestic landlords.

Research with landlords and landlord representatives also suggests that **awareness and understanding of the PRS MEES are likely to be lower in the non-domestic sector than in the domestic sector**. The interim report from the evaluation of the domestic PRS MEES regulations<sup>6</sup> reports high levels of awareness and understanding amongst domestic landlords. The focus group with landlord organisations that was carried out for this study also suggested that awareness of the PRS MEES is significantly higher amongst domestic landlords than non-domestic landlords, due to:

- greater publicity and public interest in the domestic regulations;
- the longer timescales for rolling out the PRS MEES to all non-domestic properties, as well as longer leases and a slower turnover of tenants;
- a more complex market for non-domestic properties, including a greater breadth of property types and sizes; and
- the potential for energy bills to not be available for individual non-domestic properties/units or combined with service charges, which reduces the visibility of energy costs for some businesses.

However, a comparison of the two studies suggests some similarities between the domestic and non-domestic PRS MEES including: lower awareness and understanding amongst smaller landlords (i.e. individual landlords and those with smaller portfolios); some confusion and lack of understanding around exemptions; and the role of letting agents, business advisors and trade bodies in raising awareness of the PRS MEES.

## Responses to the non-domestic PRS MEES

**Responses to the non-domestic PRS MEES varied across different groups of landlords and tenants:**

- Landlord organisations and some local authorities reported that **larger landlords were more likely than smaller landlords to comply with the non-domestic PRS MEES and were more likely to have already acted**. It was suggested that larger landlords were also more likely to be proactive and go above and beyond the current requirements, while smaller landlords tend to be more reactive and wait until required to make changes. The analysis of secondary data suggests that smaller landlords are more likely to have low

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<sup>6</sup> BEIS (2019) Evaluation of the domestic private rented sector minimum energy efficiency standard regulations: 2019 interim report

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grade EPCs and are therefore more likely to need to take action to comply with the PRS MEES.

- Most local authorities reported limited knowledge and evidence of levels of compliance and the extent to which action was being taken in response to the non-domestic PRS MEES.

Focus group research with landlord organisations suggested that their **members had installed a range of different energy efficiency measures to ensure compliance with the PRS MEES**. A commonly cited example is LED lighting, which can provide a relatively low-cost measure for improving EPC ratings, particularly in the retail sector. Another low-cost approach involves the use of air pressure tests<sup>7</sup>, since the default assumptions for air pressure in non-domestic properties can be overly negative, and often a property-specific air pressure test can help deliver an EPC grade E or above, even without installing any other measures.

Research with landlord organisations suggested that motivations for larger landlords going beyond the minimum requirements were likely to include: wanting to avoid the risk of properties being classed as 'substandard' and/or targeting higher value tenants who expect their premises and activities to meet strict energy and environmental sustainability standards and targets; and 'future-proofing' against potential regulatory changes in the future.

**The take-up of exemptions amongst members of landlord organisations was reported to be relatively low** and was due, in part, to the negative stigma attached to properties with exemptions that could potentially affect future sale values. In fact, the landlord organisations also reported that some of their members had already acted to dispose of properties that were likely to be difficult or expensive to adapt to meet the non-domestic PRS MEES.

More broadly, some of the issues and barriers to responses to the non-domestic PRS MEES included:

- Limited enforcement of the PRS MEES by local authorities, which means there is little deterrent to discourage non-compliance.
- Confusion regarding shared landlord and tenant responsibilities in some cases, such as the fit out of retail premises, which fall on tenants, while the fabric of the building is the responsibility of the landlord.
- The costs of installing measures, which can be a barrier to compliance, particularly for smaller landlords and those in rural areas where rents are relatively low and it may not be financially viable to invest in the measures and/or gain access to necessary finance. While the analysis of secondary data suggested there was no difference in the likelihood that non-domestic properties in urban and rural areas would be affected by the PRS MEES, this suggests that there could be a difference in the responses of affected properties.

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<sup>7</sup> Air pressure testing calculates the air tightness of a building, known as its 'leakage' rate. Excessive air leakage can affect the building's energy efficiency, making the building less energy efficient and more expensive to run.

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Research with landlords and landlord representatives also suggests that **compliance with the non-domestic PRS MEES is likely to be lower than for the domestic PRS MEES**. Evidence from surveys of domestic landlords suggests very high levels of compliance amongst domestic landlords. However, there are also similarities between the expected responses of domestic and non-domestic landlords:

- Larger landlords are considered more likely to comply and take proactive action than smaller landlords.
- Common reasons for non-compliance include a lack of awareness and understanding for some landlords and limited enforcement activities.
- A minority of domestic and non-domestic landlords may choose to sell their properties if the costs of complying with the PRS MEES are likely to be significant.

## Local authority enforcement activities

As stated above, **local authority enforcement of the non-domestic PRS MEES has been limited to date**. This is mainly due to a lack of capacity and competing priorities for Trading Standards departments but is also reported to have been restricted by a lack of information and tools to help local authorities to identify non-compliance and enforce the regulations. Issues with the difficulty of accurately identifying properties, landlords and non-compliance in the private rented sector, were also faced by the research team and are described in this report. Other issues raised by local authorities included: landlords not obtaining and lodging EPCs to avoid identifying non-compliant ratings; other gaps in EPC information and delays in updating the EPC Register; confusion around exemptions; and the limited time period within which local authorities can identify non-compliance and enforce the PRS MEES before properties are re-let.

**Most local authorities have therefore been taking a reactive approach to enforcement** but very few complaints had been received to date due to low levels of awareness of the PRS MEES amongst tenant businesses. Local authorities also reported a general lack of awareness of local levels of compliance. Most felt there would be non-compliant properties due to a lack of awareness and understanding of the PRS MEES, while others felt landlords are likely to wait until the regulations are actively enforced before taking action.

Those local authorities taking a more proactive approach had focused on **desk-based research and engagement with letting agents to identify examples of non-compliance**. In a couple of cases, local authorities had also engaged with landlords to confirm non-compliance, explain the issue, ensure they are aware of their obligations, and offer advice regarding the achievement of the minimum standard. If landlords still failed to act, these local authorities suggested that they would issue penalty charge notices, but this had not yet been required.

The research has also found that **local authorities appear to be more actively involved in engaging domestic landlords and enforcing the domestic PRS MEES than the non-domestic PRS MEES**. This was again reported to be due to limited resources and competing priorities, combined with the earlier roll-out and

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greater publicity for the domestic PRS MEES. The research also suggested that the local authorities that were most active in enforcing the non-domestic PRS MEES tended to be those that were working closely with colleagues in 'domestic' enforcement teams. However, this approach is not always possible when Environmental Health Officers, who are most likely to deal with the domestic PRS MEES, are not part of the same team as the Trading Standards Officers, who are most likely to deal with the non-domestic PRS MEES. It is therefore likely that more widespread and visible local authority enforcement activities would help to enhance compliance with both the domestic and non-domestic PRS MEES.

## Impacts of the non-domestic PRS MEES

Local authorities were unable to comment on impacts of the non-domestic PRS MEES because of the lack of information about levels of compliance, investments, measures installed, and the resulting changes in EPC ratings and the energy efficiency of non-domestic buildings.

However, the landlord and tenant organisations reported that **the non-domestic PRS MEES are likely to have raised awareness of energy efficiency and improved the energy performance of non-domestic properties**, by influencing the behaviours and activities of some non-domestic landlords. It was also reported that the non-domestic PRS MEES is likely to have delivered **economic benefits by reducing energy bills for tenant businesses and increasing spend on installation measures**, thereby delivering economic benefits for manufacturers and installers. It was not possible to quantify any of these impacts, although these were again expected to have focused on larger landlords and their tenant businesses and were expected to be concentrated in urban areas.

There is also **a lack of evidence of the extent to which landlords are passing on the costs of investing in energy efficiency measures to their tenants via increases in rent**. Landlord organisations suggested that existing leases may not permit this, so it is more likely to occur when tenants enter a new lease. However, rents are affected by many other factors and have ceiling values, so it may not be possible for landlords to increase rents and it would be very difficult to identify whether any rental increase had occurred as a direct result of compliance with the PRS MEES.

Landlord and tenant organisations also reported some potentially negative and unintended impacts of the non-domestic PRS MEES, including:

- **Missed opportunities for the PRS MEES to have a greater impact on carbon emissions**, as it was reported that EPCs do not encourage landlords and tenants to minimise the overall carbon emissions associated with both the business and the property (i.e. EPCs could have a greater impact if they also covered the energy use associated with all activities and processes undertaken by tenant businesses within the property). It was also reported that the current MEES (i.e. E rated EPCs) can risk encouraging the installation of

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cheaper measures in the short term that may be a barrier to future improvements.

- Longer-term risks that many **buildings could fall into disrepair and/or require demolition if the investment required to comply with the PRS MEES is not financially viable**. This was felt to be a particular risk in rural areas, where rents and landlord incomes tend to be lower and have a ceiling value but could also affect properties in urban areas.
- The **need for landlords to obtain three quotes from installers was reported to be overly burdensome and, in some cases, difficult to achieve**. This was particularly true in rural areas where there are fewer installers, and when quotes for exemptions will not result in any additional work for the installer, reducing the incentive for them to quote.

## Potential changes to the non-domestic PRS MEES

The landlord and tenant organisations had already provided responses to BEIS's 2019 consultation on the future trajectory of the non-domestic PRS MEES (i.e. by 2030 all non-domestic privately rented properties should achieve an EPC rating of either B or C, rather than the current E rating). The organisations suggested that they and their members were **generally in favour of increasing the PRS MEES to require B rated EPCs by 2030**, as landlords would benefit from longer-term targets and increased certainty around the regulatory requirements. The landlord organisations also suggested **that the current minimum standard was unlikely to have a significant impact on future reductions in carbon emissions of buildings** and would not be sufficient to deliver long-term objectives such as carbon neutrality or net zero carbon buildings. They also suggested that the PRS MEES could be further improved by:

- **Ensuring the PRS MEES (and EPCs) are more aligned to actual energy use and associated carbon emissions in buildings** rather than modelled performance, which would help to encourage landlords and tenants to minimise the overall carbon emissions of the business; and
- **Ensuring that any changes to the PRS MEES and/or other energy efficiency regulations are joined-up** to create a long-term plan rather than introducing piecemeal changes over time.

However, these views were in contrast to the **more cautious views expressed by the local authorities** that were interviewed during the study. While the local authorities agreed that it was sensible and desirable to aspire to greater MEES for non-domestic buildings, they also questioned:

- How achievable and viable the increased targets were likely to be, particularly for smaller landlords and landlords of older properties and properties in rural areas;
- Whether exemptions would need to be extended to be able to deliver the higher EPC grades of B or C across all properties, and whether it would be desirable to do so; and

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- The resource implications and additional funding that would be required for local authorities to enforce the higher standards effectively, given the large increase in the number of properties that would be affected and need to comply with the higher standards.

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# 1 Introduction

*This report has been prepared by ICF Consulting Services (ICF) in collaboration with The Behaviouralist. It presents the findings of research commissioned by the Department for Business, Energy and Industrial Strategy (BEIS) into non-domestic properties affected by the private rented sector minimum energy efficiency standards (PRS MEES).*

## 1.1 Background and context

The PRS MEES Regulations came into force on 1 April 2018. They require private landlords in England and Wales to ensure their non-domestic properties have a minimum EPC band E rating. All new, renewed, or extended tenancies granted after 1 April 2018 must meet this requirement, while there is a backstop deadline of 1 April 2023, after which all non-domestic properties will need to have achieved a minimum EPC band E rating.

The aim of the non-domestic PRS MEES is to help drive improvements in the energy efficiency of non-domestic buildings in the private rented sector by targeting the worst performing buildings with EPC grades of F or G. Rented buildings are constrained by 'split incentives', where landlords are expected to meet the costs of energy efficiency upgrades, while the benefits are perceived to be focused on the tenant businesses. The PRS MEES aims to address these issues as well as supporting the policy objectives set out in the 2017 Clean Growth Strategy (CGS), which aim to reduce business energy use by at least 20% by 2030 and deliver: lower energy bills and costs for businesses; reduced greenhouse gas emissions; reduced energy demand, improved air quality and greater energy security and resilience for the UK.

The PRS MEES Regulations require energy efficiency improvements to be installed where the recommended measure(s) achieves an energy efficiency payback of seven years or less. There are several exemptions to these requirements, including:

- Where consent for the improvements is refused by the tenant, superior landlord<sup>8</sup> or planning authority;
- Where independent surveyors determine that the improvements are likely to reduce the market value of the property by more than 5%;
- Where landlords can show that all relevant improvements have been made, or cannot be made, despite not achieving the required EPC rating; and
- Certain temporary exemptions (e.g. for temporary buildings).

There is a lack of information on the size and characteristics of the non-domestic private rented sector and it is difficult to identify and track the EPC ratings for properties in this sector. BEIS estimates there to be 1.1 million privately rented non-

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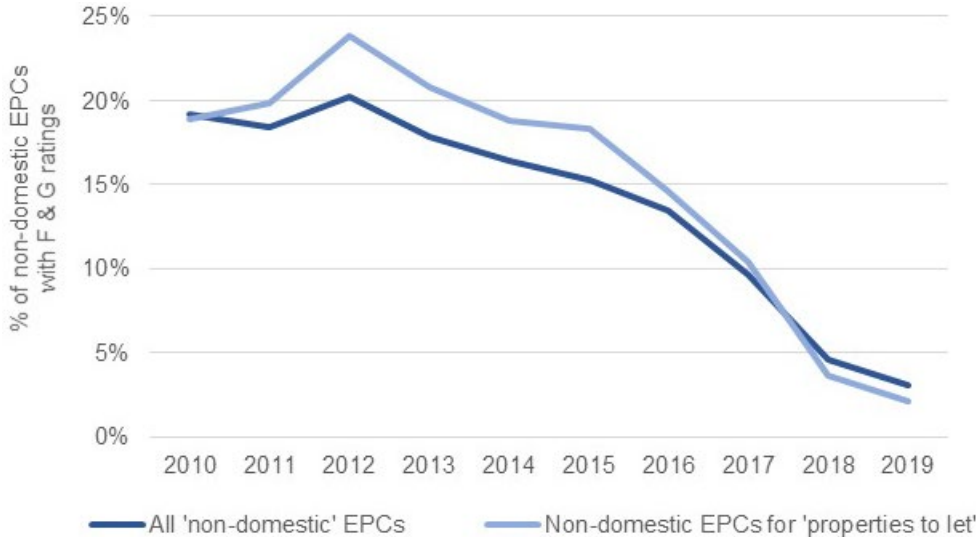
<sup>8</sup> A superior landlord is a person whose interest in a property is superior to the interest of the competent or intermediate landlord (e.g. cases where the competent landlord leases the property from a superior landlord and then leases that property to a tenant business).

domestic premises in England and Wales, accounting for 60% of all non-domestic premises. While privately rented premises are relatively small, representing 38% of all non-domestic floorspace, they are estimated to account for around 35% of energy consumption in the UK (excluding industrial process)<sup>9</sup>.

Data from the Ministry of Housing, Communities & Local Government (MHCLG) show that 935,361 Energy Performance Certificates (EPCs) were lodged for all non-domestic properties in England and Wales between 2008 and 2019<sup>10</sup>. While the data did not show which properties are privately rented, they do show that at least 32% of non-domestic EPCs (300,000) were lodged for properties to be let<sup>11</sup>. Furthermore, the percentage of EPCs being lodged for 'properties to be let' has been increasing consistently over the last five years from 32% in 2015 to 47% in 2019<sup>12</sup>.

The EPC data also suggest that the energy performance of non-domestic properties has been improving over time. Figure 1 shows that the proportion of non-domestic EPCs receiving an F or G rating has been declining steadily over time (from 20% in 2012 to 3% in 2019)<sup>13</sup>. This downward trend is even more significant for the subset of EPCs lodged for 'property to be let' (declining from 24% in 2012 to 2.1% in 2019). This equates to fewer than 600 non-domestic 'properties to be let' in England and Wales that lodged an F or G rated EPC in 2019 and would have been required to make improvements to meet the minimum band E rating.

**Figure 1: Percentage of non-domestic EPCs with F and G ratings**



Source: MHCLG (2020), Live tables on Energy Performance of Buildings Certificates (and ICF analysis of detailed EPC data).

<sup>9</sup> BEIS (2019), Consultation Stage Impact Assessment for amending the Private Rented Sector Regulations (based on data from BEIS (2016) Building Energy Efficiency Survey (BEES), 2014-15: Overarching Report)

<sup>10</sup> MHCLG (2020), Live tables on Energy Performance of Buildings Certificates.

<sup>11</sup> Other reasons for lodging non-domestic EPCs include properties for sale (46%) or under construction (4%), but the reason is unknown for the other 17% of EPCs.

<sup>12</sup> ICF analysis of detailed EPC data (2008 to 2019). Values are 32% in 2015, 34% in 2016, 37% in 2017, 43% in 2018 and 47% in 2019.

<sup>13</sup> MHCLG (2020), Live tables on Energy Performance of Buildings Certificates.



## 1.2 Study objectives and methodology

ICF and The Behaviouralist were commissioned by BEIS to undertake a two-part research study into the PRS MEES Regulations for non-domestic properties. This report focuses on the first part of the study (Phase 1), which combined analysis of secondary data and qualitative research with key stakeholders to improve understanding of the sector. The Phase 1 work also included an assessment of the feasibility of undertaking interviews with landlords and tenants in the second part of the study (Phase 2) and some emerging findings on the implications for a wider evaluation of the PRS MEES in the future (provided in a separate document).

### 1.2.1 Objectives of the study

The objectives of this study were as follows:

- To provide evidence of the early outcomes of the non-domestic PRS MEES Regulations to inform a regulatory review, which is due to be published in 2021;
- To generate data to support this and future research on non-domestic landlords; and
- To provide insight to inform future policy development to improve the energy efficiency of non-domestic properties.

Table 1 sets out the high-level research questions and sub-questions to be addressed by the study. It includes those that were intended to be addressed by the Phase 1 research described in this report and others that were intended to be addressed through the Phase 2 research with landlords and tenant businesses.

**Table 1: Research questions**

High-level research questions	Phase	Sub-questions
How have Local Authorities (LAs) responded to the policy?	Phase 1	How well do LAs understand MEES?
		How have LAs communicated MEES to those affected by it?
		What structures have been put in place so far to enforce MEES with non-domestic properties?
What can we learn now about the non-domestic private rented sector and landlords?	Phase 1	What does available data tell us about the characteristics of the non-domestic landlord population, tenancies and properties? (e.g. landlord type, EPC rating, size of landlord, type of property, duration of property ownership/tenancies)
What can we learn to help us with a future impact evaluation?	Phases 1 & 2	What data are needed to assess the impact of the policy?
		How can we identify and engage landlords and tenants in a future evaluation?
		How can we measure the extent of improvements?

High-level research questions	Phase	Sub-questions
		What learning is there from this research project to help us attribute additionality of the policy?
From the data collected as part of this project, what can we learn to further develop the policy?	Phases 1 & 2	How do landlords and tenants think they would respond to raising the MEES in future, including to what extent would landlords plan to pass on costs/benefits to their tenants, e.g. by increasing rents?
		How would local authorities respond to enforcement on a larger scale?
		How would landlords approach further improvements to their properties?
		Is non-domestic MEES compatible with other existing policies and how do they interact at a local level?
What are landlord and tenant early responses to the policy?	Phase 2	What level of awareness do landlords have of non-domestic MEES? Are there any indications of differences between SMEs and larger businesses?
		To what extent (and if so, how) did the policy encourage landlords to make changes?
		How did landlords address the required improvements?
		To what extent have landlords already passed or plan to pass on costs/benefits from non-domestic MEES to their tenants e.g. through higher/lower rents and over what time period?
		Has the non-domestic MEES resulted in lower energy bills for landlords i.e. during void periods? Did MEES help address any previous barriers to energy improvements?
		How has MEES affected tenants?
		What are tenants' attitudes to the energy efficiency of the property they are renting?
		How are the exemptions to the policy being used, including 7-year payback restrictions?
		Are there any barriers to compliance?
		Have there been any co-benefits or unintended outcomes from the policy (e.g. changes to void periods)?

High-level research questions	Phase	Sub-questions
		What are landlords' views about enforcement and whether concerns about enforcement would affect their behaviour?

## 1.2.2 Methodology

The methodology for this research was focused on three core activities:

- **Analysis of secondary data:** a quantitative analysis of secondary data on non-domestic properties, EPCs, landlords, and tenant businesses to provide an overview of the landscape of non-domestic properties in the private rented sector, and to generate evidence and analysis of the characteristics of commercial landlords and tenant businesses who are affected by the regulations.
- **Qualitative interviews with local authorities:** 14 interviews that aimed to provide evidence of what, if anything, local authorities have done to engage with landlords and enforce the PRS MEES.
- **Focus group with organisations representing landlords and tenants:** a focus group with key organisations representing non-domestic landlords and tenants, that aimed to capture the views of trade bodies and other organisations representing commercial landlords and tenant businesses and understand how their members (i.e. non-domestic landlords and tenants) have reacted to the PRS MEES.

Further details of the methodologies used for each of these activities are provided in Annex 1.

## 1.2.3 Limitations to the research and analysis

There are some limitations of the research and analysis that should be considered alongside the findings. These are listed in full in Annex 1. The key limitations were:

Limitations with the secondary analysis of landlord data

- The data matching exercise built a dataset ultimately comprised of data from non-domestic EPCs, Land Registry, Companies House, and the Inter-Departmental Business Register (IDBR). The indicator for identifying private rented properties is a proxy indicator and risks falsely identifying owner-occupied properties as rented properties where the matching process failed to identify matches in owner details. Therefore, population estimates should be treated with caution. The high proportion of rental properties identified in this analysis compared with other datasets would suggest this needs further exploration before proceeding with future research (see discussion in Annex 1).
- The fully merged dataset only included a small sub-sample of properties owned by individuals. This was because only a limited number of Land

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Registry records were available for purchase due to budget constraints. This means the analyses presented are not based on the entirety of the non-domestic rented sector or all non-domestic rented properties with low EPC ratings.

- The dataset only contains EPC records lodged from 2008 onwards. The properties represented in this analysis are therefore only properties that have been built, sold, or have entered new leases since 2008 and have had their EPCs lodged accordingly.

#### Limitations with the qualitative interviews and focus groups

- Local authorities were selected from areas with a high proportion of F and G rated EPCs. Therefore the findings cannot be considered representative of all local authorities, landlords or tenants.
- There is also a risk with qualitative interviews and focus groups that participants may be reluctant to admit a lack of action towards regulatory conformity or enforcement. This was mitigated by offering anonymity to participants, however it should still be taken into account, particularly for the focus group where high levels of compliance were reported, but participants also suggested compliance would likely be lower for smaller landlords who were not members of their organisation.
- Investigations were undertaken to see if the Valuation Office Agency (VOA) would be able to provide information on tenancies, tenant businesses and property characteristics. However, there was insufficient time to gain access to the data for this research. Further discussions would need to be had between BEIS and VOA to establish whether said data could be shared in the future.

There were also issues related to Covid-19:

- Government guidance to work from home and the furlough scheme made it difficult to complete qualitative research with local authorities. Even with extended deadlines, one of the interviews could not take place, meaning 14 out of 15 were completed.
- Alterations had to be made to how research was conducted to observe new government guidance. For the focus groups, participants were given the choice of attending the ICF office or dialling in.
- There were also delays with accessing and processing data due to the research team having to work from home. Similarly, delays were experienced when attempting to seek permission from the ONS to approve the remote processing of data from the IDBR.

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## 1.3 Structure of this report

The remainder of this report is structured as follows:

- Section 2 provides an analysis of secondary data to provide insights into the characteristics of properties, landlords and tenants affected by the PRS MEES; and
- Section 3 presents the results of qualitative interviews with local authorities and a focus group with organisations representing landlords and tenants.

There are also three annexes:

- Annex 1 provides details on the methodology used in this study including the qualitative sampling and methodology, the preparation of the merged dataset and the statistical model used in the secondary data analysis,
- Annex 2 includes the topic guide used for qualitative interviews with local authorities and the facilitation guide used for the focus group with organisations representing landlords and tenants; and
- Annex 3 contains detailed results from the secondary data analysis.

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## 2 Secondary data analysis

*This section provides an overview of the feasibility of accessing and merging datasets to provide insights into the characteristics of the properties, landlords and tenants affected by the non-domestic PRS MEES.*

### 2.1 Introduction and key messages

This section of the report presents the results of a quantitative analysis of energy standards in the non-domestic rented sector.

#### **Key messages**

Data from four different sources were used to build a master dataset consisting of information about tenant businesses, the properties they operate in and the owners of the properties. This dataset allows a descriptive analysis of the non-domestic private rented sector and EPC ratings to help improve our understanding of compliance with the PRS MEES and the characteristics of landlords and tenants who are affected by the regulations.

The data suggest that the most influential factor that determines whether a non-domestic rented property has a low EPC rating is the use of the property as well as the type of landlord (whether it is a corporate or individual owner). On the other hand, the location of the property (the region in England and Wales) appears to only marginally impact on the EPC rating of the property.

Additionally, the dataset can be used to identify non-domestic rented properties that do not currently meet the minimum standard. This in turn can be used to create sampling frames for research with non-domestic landlords and tenants in the future. Finally, this dataset is likely to be useful for informing future evaluations of the non-domestic PRS MEES and the upcoming post-implementation review (PIR).

### 2.2 Approach to data analysis

A 'master' dataset of non-domestic properties and their landlords and tenant businesses was created using data from four sources: (1) the EPC Register; (2) the Inter Departmental Business Register (IDBR); (3) Companies House; and (4) HM Land Registry.

The four datasets were merged by matching either the address of the property or the company reference number. In total, 75,405 observations were fully merged, with data that were matched across all four data sources. More detail about the

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methodology, limitations and resulting datasets are summarised in Chapter 1 and detailed in Annex 1.

## 2.3 Analysis of the non-domestic private rented sector

The fully merged dataset of 75,405 observations included all non-domestic properties with EPCs owned by corporate owners that could be matched with information about the landlord and tenant of the building. It also included a representative sample of 1,000 non-domestic properties owned by individuals as well as a constructed (i.e. non-representative) sample of 650 additional non-domestic properties owned by individuals<sup>14</sup>. After removing the constructed sample of 650 properties owned by individuals and the properties for which there were insufficient data to indicate whether or not they were rented<sup>15</sup>, the resulting dataset included a total of 70,643 properties. This comprised 66,839 properties that were assumed to be rented and 3,804 that were assumed to be non-rented and instead owned by the tenant business (or the individual(s) owning that company).

This section presents a descriptive analysis using the fully merged dataset to provide an overview of the landscape of non-domestic properties. This analysis provides insights into the characteristics of properties, landlords, and tenants in the non-domestic private rented sector and how they compare to those in the non-rented (or owner-occupied) sector. Supporting tables are included in Annex 3.

### 2.3.1 EPCs and EPC ratings

The analysis of EPC data suggests that rented properties in the non-domestic private rented sector are generally less energy efficient than owner-occupied non-domestic properties. The average energy performance asset rating (i.e. the CO<sub>2</sub> emissions from the property compared to a benchmark emission rate, represented in terms of kgCO<sub>2</sub>/m<sup>2</sup>) of a property in the private rented sector is 90.8, compared to an average of 85.2 for non-domestic properties that are not rented (the lower the rating, the higher the energy efficiency of the building). Both average ratings would be equivalent to an EPC grade 'D'.<sup>16</sup>

As can be seen in Figure 2 (also see Table A2 in Annex 3), a greater share of properties in the private rented sector have lower EPC grades (F and G grades) compared to those in the non-rented sector. Similarly, a greater share of non-rented properties have high EPC grades (A+/A, B, C) compared to rented properties. Of the

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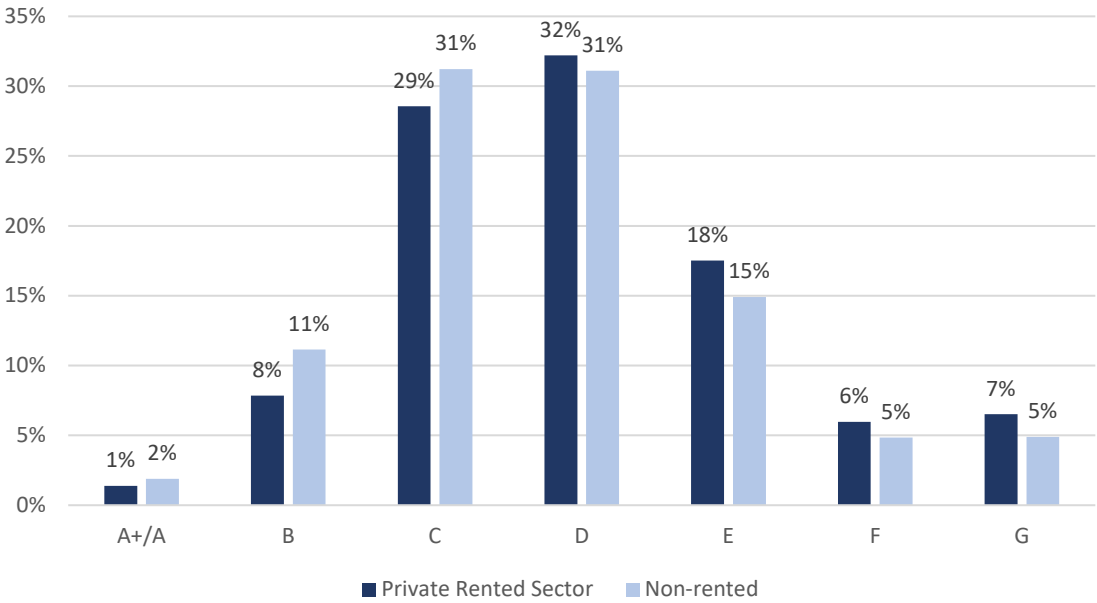
<sup>14</sup> The constructed sample of buildings owned by individuals covered a range of property types and EPC ratings that could be used as the basis of a sampling frame for future research. The sampling characteristics included EPC ratings, property type, region, floor space, turnover and whether improvements had been made to properties. However, as this sub-sample was not representative of the population of non-domestic buildings, these cases have been excluded from the descriptive analysis.

<sup>15</sup> These are properties for which PSC (People with Significant Control) information on the business owner was unavailable.

<sup>16</sup> The energy performance asset rating is converted into an energy band/grade that is displayed in a linear 'A+' to 'G' scale (where A+ is the most energy efficient and G is the least energy efficient band).

properties in the private rented sector, 12.5% have an EPC grade of F or G and 37.8% have a grade of C or higher. In comparison, only 9.7% of non-rented properties have an EPC grade of F or G, and 44.3% have a grade of C or higher.

**Figure 2. Distribution of EPC grades by rented and non-rented non-domestic properties**



Source: EPC variables are found in the non-domestic EPC dataset.

Base: 70,643 non-domestic properties, comprising 66,839 in the rented sector and 3,804 non-rented sector.

**2.3.2 Characteristics of properties, landlords and tenants**

**Location of properties**

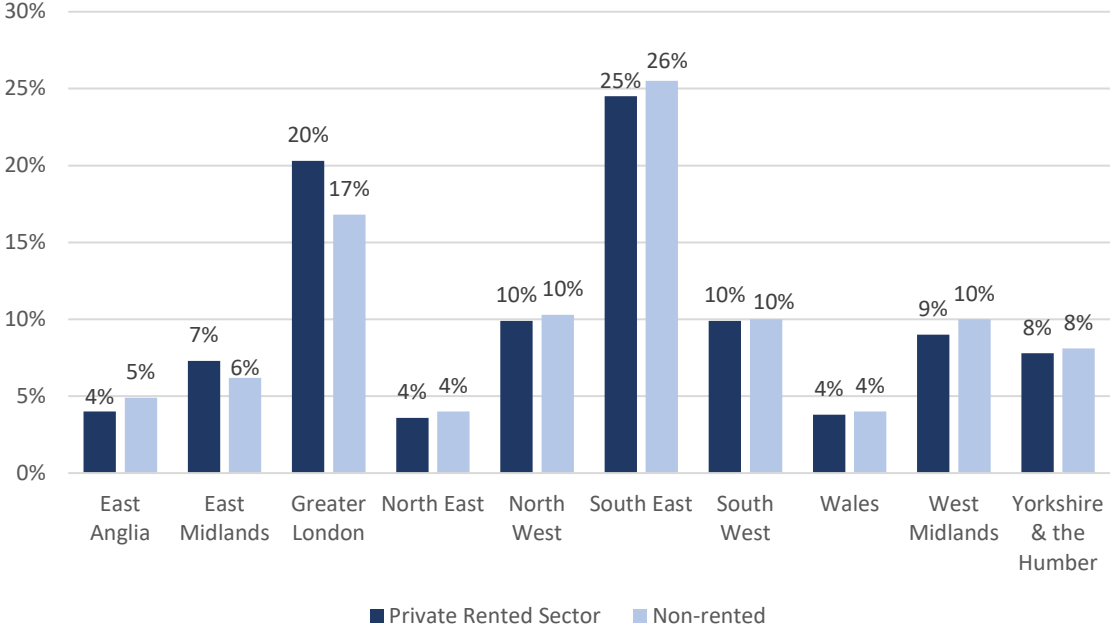
Figure 3 (see also Table A3 in Annex 3) shows the distribution of rented and non-rented non-domestic properties across regions in England and Wales. For rented properties, Table A3 also shows a breakdown by region for properties that are likely to be affected by the PRS MEES (i.e. those with EPC grades of F or G) and those above the EPC grade threshold (i.e. grade E and above). Greater shares of rented properties are located in the metropolitan areas (i.e. the Greater London and East Midlands regions) compared to non-rented properties. For example, Greater London accounts for 20.3% of all rented non-domestic properties in England and Wales, compared to 16.6% of non-rented properties. Conversely, a relatively large share of owner-occupied non-domestic properties are located in the East Anglia and West Midland regions.

Within the private rented sector, the South East region represents a relatively high proportion of properties with EPC grades of E and above (24.9%) and a relatively low proportion (21.7%) of properties with EPC grades of F or G. Conversely, Greater London has a relatively high share of properties with EPC grades of F or G (21.5%),



relative to those with EPC grades of E and above (19.9%). Additionally, Table A3 in Annex 3 shows that the share of rented properties located in rural areas (49.9%) is slightly lower than for non-rented properties (51.2%), although the difference is not statistically significant.

**Figure 3. Share of Rented and Non-Rented Sectors by Region**



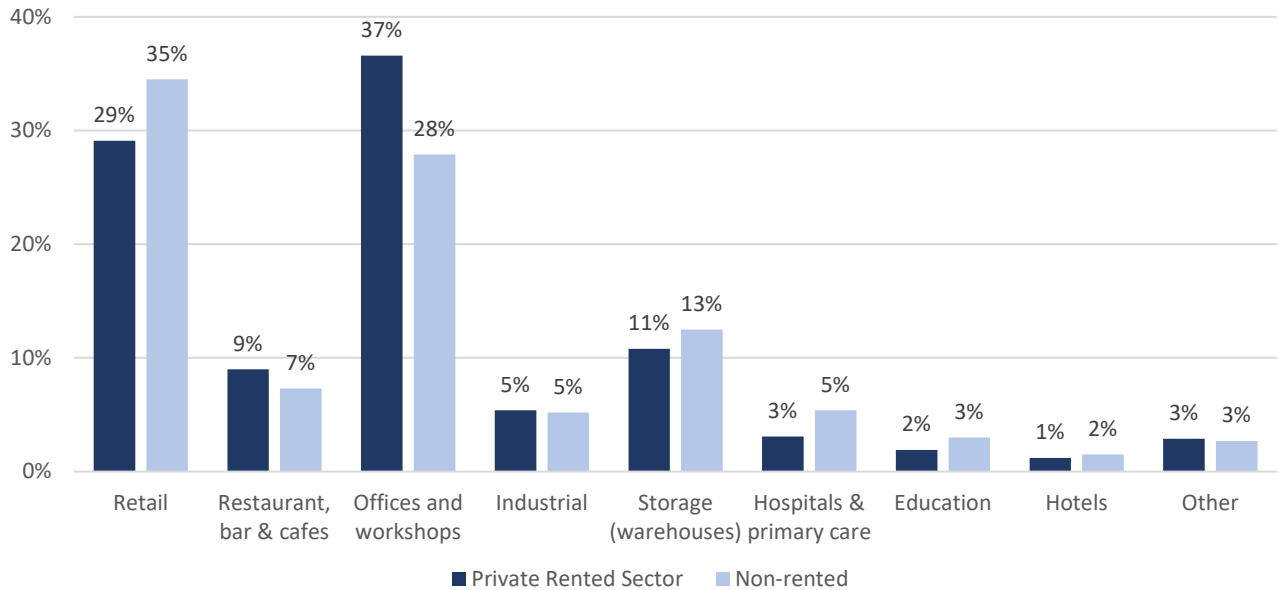
Source: Region variable is found in the non-domestic EPC dataset.

Base: 70,643 non-domestic properties, comprising 66,839 in the rented sector and 3,804 non-rented sector.

**Types of properties (planning use class)**

Figure 4 (see also Table A4 in Annex 3) shows the distribution of rented and non-rented properties across different types of property (defined by the planning use class in the EPC data). It suggests that offices and workshops represent a relatively high proportion of rented properties (36.6%), compared to its share of owner-occupied properties (27.9%). Conversely, the retail sector accounts for a greater share of owner-occupied properties (34.5%) compared to rented properties (29.1%).

**Figure 4. Share of Rented and Non-Rented Sectors by type of Property**



Source: Property type variable is found in the non-domestic EPC dataset.

Base: 70,643 non-domestic properties, comprising 66,839 in the rented sector and 3,804 non-rented sector.

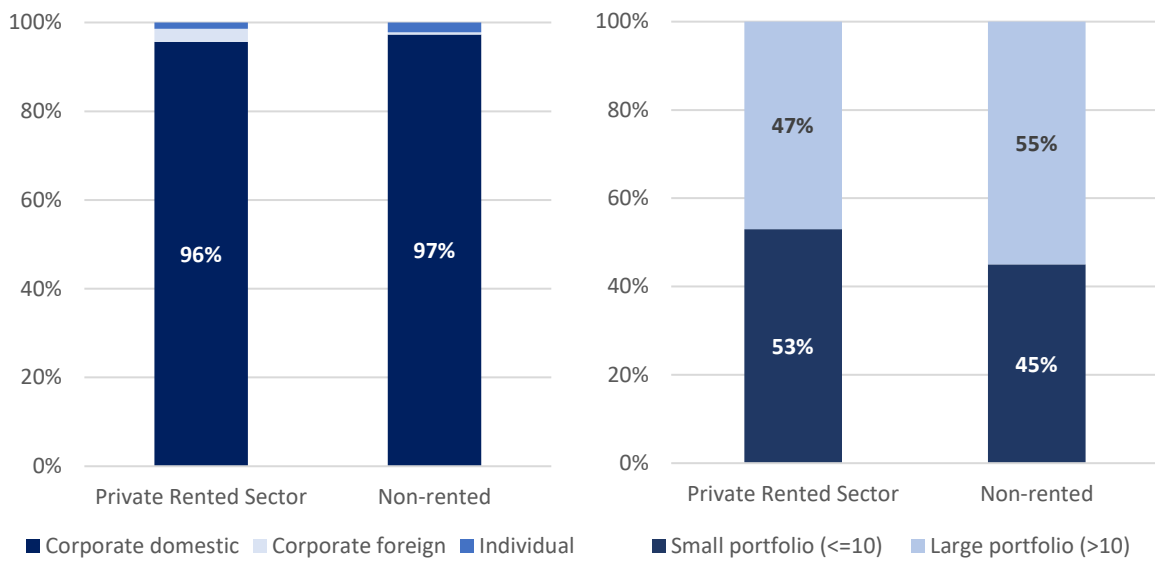
Among rented properties, a relatively high proportion of those with EPC grades of F or G are offices and workshops (42.9%) and retail buildings (31.9%). All other property types are relatively less likely to have EPC grades of F or G.

### Types of landlords

Figure 5 (see also Table A5 in Annex 3) shows the breakdown of property ownership within the rented and non-rented sectors. As mentioned above, the dataset of non-domestic properties includes all properties owned by corporate owners (both domestic and foreign, for which a valid EPC has been lodged) in addition to a representative sample of 1,000 properties owned by individuals. The data suggest that 3% of rented properties are owned by foreign corporations. This is significantly larger than in the non-rented sector, where only 0.5% of properties are owned by foreign corporations.

Among the representative sample of non-domestic properties owned by individuals, there is evidence that properties owned by individuals represent a larger share of the non-rented sector than the rented sector. For instance, 1.4% of properties in the private rented sector are estimated to be owned by individuals, compared to 2.2% in the non-rented sector. Furthermore, properties owned by individuals appear to account for a larger share of rented properties with EPC grades of F or G (2.9%) than they do of rented properties with EPC grades of E and above (1.2%).

**Figure 5. Share of Rented and Non-Rented Sectors by Landlord Type and Portfolio Size**



Source: Property ownership variables are found in the HM Land Registry.

Base: 70,643 non-domestic properties, comprising 66,839 in the rented sector and 3,804 non-rented sector.

Figure 5 also shows the distribution of properties according to the size of the owner's portfolio.<sup>17</sup> Properties owned by corporate landlords with small portfolios (i.e. those with portfolios of 10 or fewer properties) represent a larger share of the private rented sector (52.6%) than the non-rented sector (44.8%). This suggests that properties owned by corporate landlords with small portfolios are more likely to be in the private rented sector, whereas properties owned by those with large portfolios (i.e. greater than 10 properties) are more likely to be owner-occupied. Properties owned by corporate owners with small portfolios also represent a larger share of rented properties with EPC grades of F or G (57.6%; see table A5) than rented properties with EPC grades of E and above (51.5%).

### Characteristics of tenant businesses

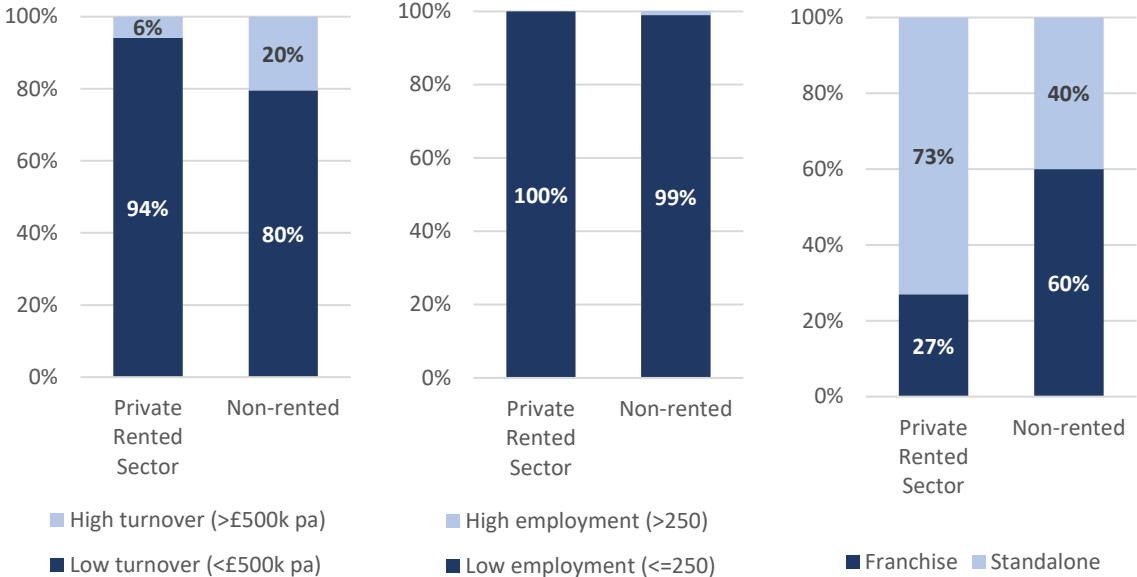
Figure 6 (see also Table A6 in Annex 3) shows some key characteristics of businesses operating from rented and non-rented properties. It includes businesses with low and high turnover (i.e. below or above £500,000 pa), those with low and high employment (i.e. SMEs with up to 250 employees or large businesses with over 250 employees), and those that are part of a franchise or are standalone businesses.

The data suggest that only 5.9% of rented properties are used by tenant businesses with high turnover compared to 20.4% in the non-rented sector. Furthermore, the

<sup>17</sup> This is presented only for properties owned by corporations as the variable for portfolio size cannot be inferred for properties owned by individuals. The data on properties owned by individuals corresponds to a sample and not the population of properties owned by individuals, thus a count of the number of properties owned by the same owner cannot be completed.

average turnover of the businesses in rented properties is estimated to be £345,000 compared to £727,000 in the non-rented sector. Similarly, a smaller share of rented properties is occupied by large businesses with more than 250 employees (0.5% of all rented properties) compared to non-rented properties (1.5%). On average, businesses in rented properties employ approximately 15 employees, while businesses in non-rented properties employ 28 employees on average.

**Figure 6. Share of Rented and Non-Rented Sectors by Tenant Characteristics**



Source: Business characteristics are found in the IDBR.

Base: 70,643 non-domestic properties, comprising 66,839 in the rented sector and 3,804 non-rented sector.

Companies with low annual turnover also account for a larger share of rented properties with EPC grades of F or G (96.0%) than for rented properties with EPC grades of E and above (93.0%). The average annual turnover of businesses operating from rented properties with EPC grades of F or G is about £252,000, which is considerably lower than the average of £382,000 for businesses in rented properties with EPC grades of E and above.

Moreover, businesses that are part of a franchise are much more likely to own the property in which they operate. Of all non-rented properties, 60.3% are occupied by franchises, compared to just 26.9% of all rented properties. Table A6 also shows that properties occupied by standalone businesses account for 77.6% of rented properties with EPC grades of F or G while they account for 70.4% of rented properties with EPC grades of E and above.

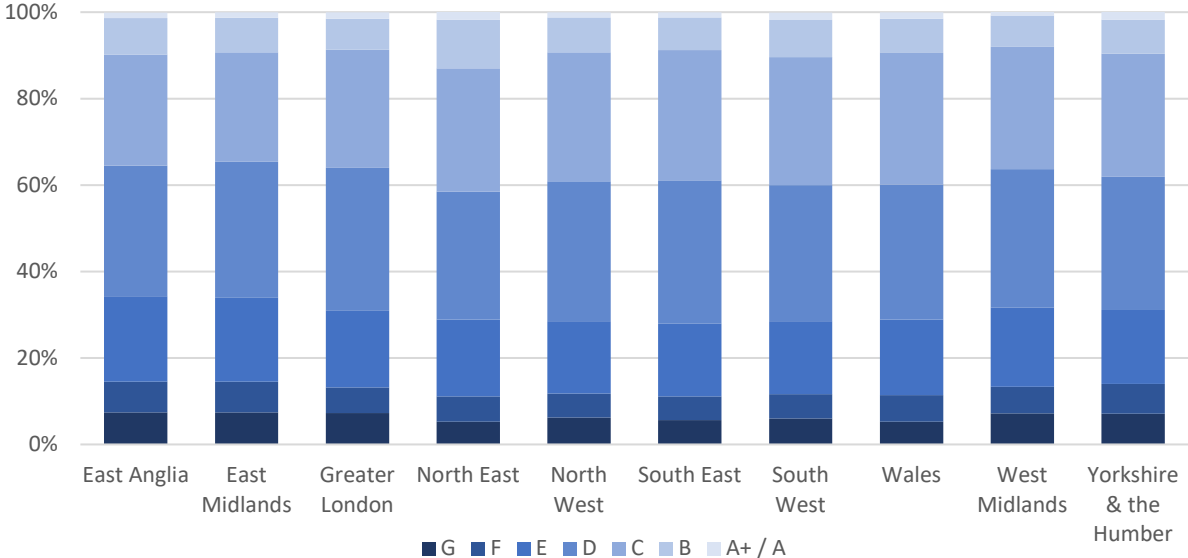
## 2.4 Characteristics of properties with low EPC grades

This section focuses on the sample of non-domestic properties in the rented sector. It investigates how the characteristics of properties, landlords, and tenant businesses are related to the properties' EPC grades. First, it shows how EPCs are distributed across different characteristics of properties, landlords, and tenant businesses. It then shows results of multivariate regression models that control for characteristics of properties, landlords, and tenant businesses to draw insights into the factors that are linked with poor building energy efficiency standards (i.e. EPC grades of F and G). These results provide key information about the segments of the non-domestic private rented sector that are most likely to be affected by the PRS MEES.

### Distribution of EPC grades by property location (region)

Figure 7 (see also Table A7 in Annex 3) shows the distribution of EPC grades of non-domestic properties in the private rented sector for each region in England and Wales.

**Figure 7. EPC grades by Region**



Source: EPC and region variables are found in the non-domestic EPC dataset.

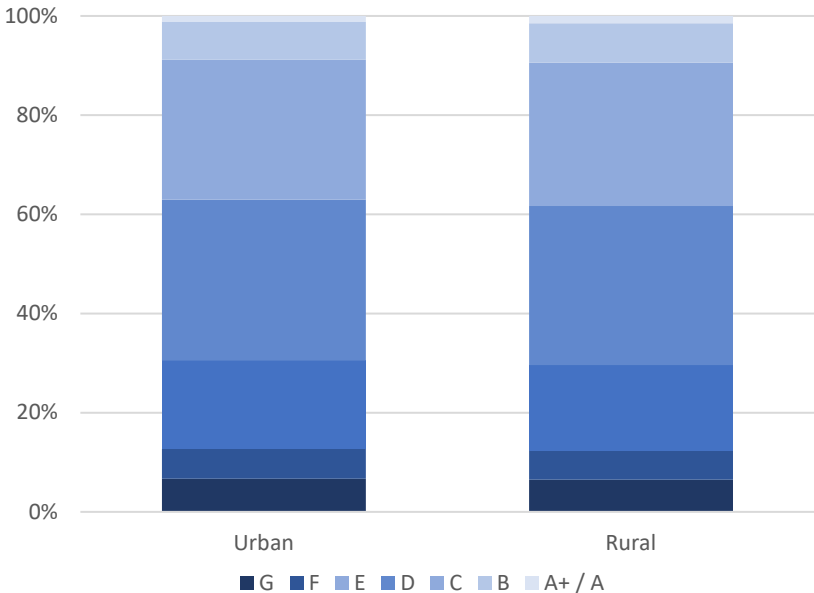
Base: 66,767 non-domestic properties in the private rented sector with data on region.

The regions with the highest share of properties with low EPC grades (F and G grades) are the East Midlands and East Anglia, both with approximately 14.5%. This suggests that a greater share of non-domestic private rented sector property owners in East Midlands and East Anglia are likely to need to take action to comply with the PRS MEES than in other regions in England and Wales. In contrast, regions with the smallest share of properties with low EPC grades are found in the North East and the South East (both with approximately 11%) and the South West (11.6%). This means that fewer owners in these regions are likely to be required to take action to comply with the PRS MEES.

## Distribution of EPC grades by property location (rural & urban areas)

Figure 8 (see also Table A8 in Annex 3) provides another perspective of the distribution of EPC grades by property location, showing differences between properties located in rural and urban local authority areas<sup>18</sup>. It shows that the distribution of properties with low EPC grades is not significantly different between rural and urban areas. The share of properties with low EPC grades in rural areas is 12.3% compared to 12.7% in urban areas. As this difference is not statistically significant, it suggests that a similar proportion of properties in rural and urban areas will be affected by the PRS MEES. There is, however, a small but statistically significant difference in average energy performance ratings between rural and urban areas. Properties in rural areas have a slightly better rating (90.1) than properties in urban areas (91.6), which suggests that, on average, properties in rural areas have received slightly better energy performance scores in EPCs that have been lodged since 2008.

**Figure 8. EPC grade by Urban/Rural**



Source: Rural/urban classification variables are found in ONS data. EPC variables are found in the non-domestic EPC dataset.

Base: 60,903 non-domestic properties in the private rented sector with data on rural/urban classification.

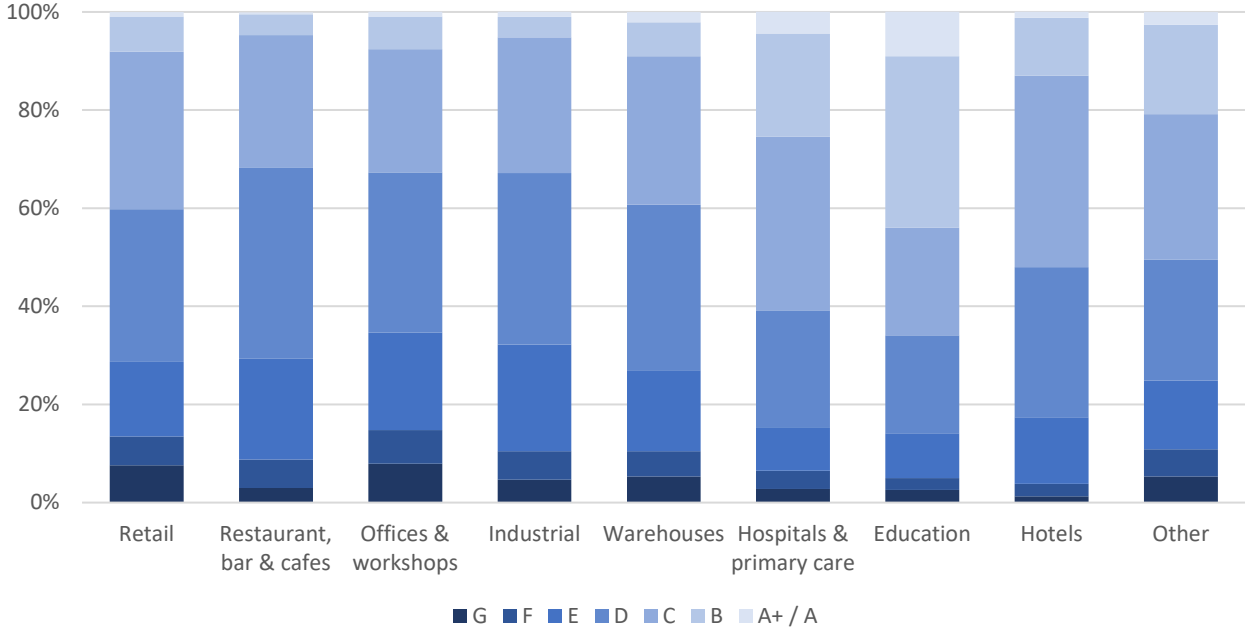
## Distribution of EPC grades by property type (planning use class)

Figure 9 (see also Table A9 in Annex 3) shows the distribution of EPC grades across the main property types in the private rented sector (as defined by planning use class). The data suggest that the distribution of properties with low EPC grades is significantly different across property types. The types of properties most likely to have a low EPC grade are offices and workshops (14.7%) and retail premises

<sup>18</sup> Properties located in Wales are excluded because the ONS rural/urban classifications do not cover local authorities in Wales.

(13.5%). This indicates that owners of properties used as offices and workshops and those used for retail are most likely to need to take action to comply with the PRS MEES. In contrast, hotels, properties used for education, and hospitals and primary care buildings appear to have the smallest share of low EPC grades (3.8%, 5.0% and 6.4% respectively) and are relatively less likely to be affected by the PRS MEES.

**Figure 9. EPC grade by Property Type**



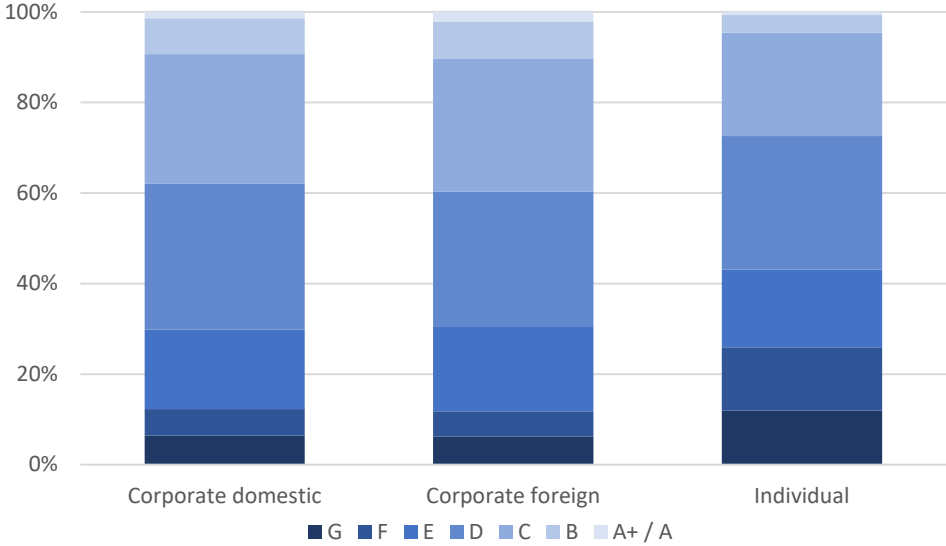
Source: EPC and property type variables are found in the non-domestic EPC dataset.

Base: 66,839 non-domestic properties in the private rented sector.

**Distribution of EPC grades by landlord type (type of entity)**

Figure 10 below (see also Table A10 in Annex 3) shows the spread of EPC grades according to the type of property owner (i.e. corporate domestic, corporate foreign, or individual owner). The data reveals a small difference in the EPC grades of non-domestic properties owned by foreign and domestic corporations. The share of properties with low EPC grades is 12.3% for those owned by domestic corporations and 11.5% for foreign corporations. In contrast, the share of low EPC grades among properties owned by individuals is 25.9%. This suggests that properties owned by individuals are significantly more likely to be affected by the PRS MEES than those owned by corporations. An important caveat is that this result is derived from a sample, rather than the total population of properties owned by individuals.

**Figure 10. EPC Grade by Landlord Type (Entity)**



Source: Property ownership variables are found in the HM Land Registry. EPC variable is found in the non-domestic EPC dataset.

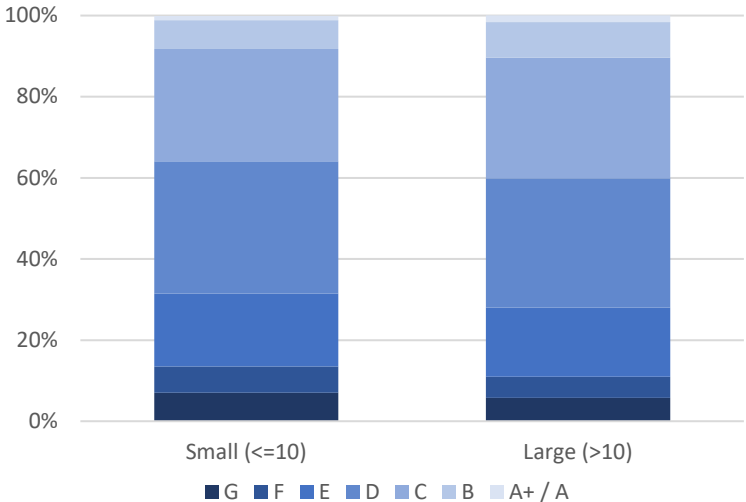
Base: 66,839 non-domestic properties in the private rented sector.



## Distribution of EPC grades by landlord type (portfolio size)

Figure 11 (see also Table A11 in Annex 3) shows the spread of EPC grades according to the size of property owners' portfolios, split between smaller landlords (with portfolios of 10 or fewer properties) and larger landlords (with portfolios of more than 10 properties).

**Figure 11. EPC grade by Landlord Type (Portfolio Size)**



Notes: Includes only properties owned by corporate entities (domestic and foreign).

Source: Property ownership variables are found in the HM Land Registry. EPC variable is found in the non-domestic EPC dataset.

Base: 65,936 non-domestic properties in the private rented sector, excluding properties owned by individuals as the sample data do not allow for the creation of a variable for portfolio size.

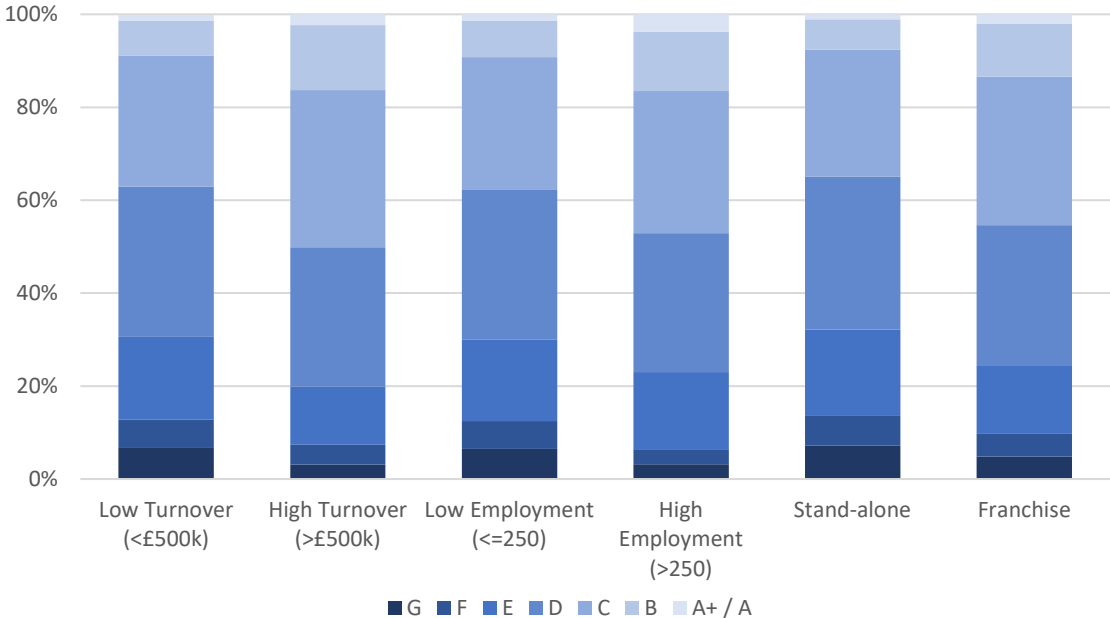
The data show that 13.5% of properties owned by smaller landlords have low EPC grades, compared to 10.9% for properties owned by larger landlords. Along with the evidence on the type of landlord entity (i.e. properties owned by individuals are more likely to have a low EPC grade than properties owned by corporations), these findings suggest that there is a relatively close association between the type of owner and the EPC grade of properties. Moreover, this suggests that the burden of the PRS MEES is most likely to fall on 'smaller' property owners with fewer resources.

## Distribution of EPC grades by type of tenant business

Figure 12 (see also Table A12 in Annex 3) presents the distribution of EPC grades for properties according to the characteristics of the tenant businesses that occupy them (i.e. employment, annual turnover, and whether the tenant business is part of a franchise or is a stand-alone business). The data suggest significant differences in the distribution of EPC grades across these different characteristics. For example, SMEs appear to be more likely than large businesses to operate in properties with low EPC grades; the data suggest that 12.5% of SMEs are renting properties with

low EPC grades, compared to only 6.4% of large businesses. There are similar differences when using turnover to define the size of the business; the data suggest that 12.8% of businesses with low annual turnover (i.e. less than £500,000) rent properties with low EPC grades, compared to 7.4% of businesses with high annual turnover (i.e. £500,000 or more).

**Figure 12. EPC grade by type of tenant business**



Source: Business characteristics are found in the IDBR. EPC variable is found in the non-domestic EPC dataset.

Base: 66,839 non-domestic properties in the private rented sector.

Furthermore, among businesses that are part of a franchise, 9.6% operate from rented properties with low EPC ratings, compared to 13.3% of stand-alone businesses. These results suggest that properties occupied by smaller, stand-alone businesses are most likely to be affected by the PRS MEES. This means that these businesses potentially have the most to gain from improvements to the energy performance of their properties but are also more vulnerable to rent increases if landlords pass on the costs of measures to their tenants through increases in rent.

**Associations between low EPC grades and building, landlord and tenant characteristics**

This section explores associations between different building, landlord and tenant characteristics and non-domestic properties with low EPC grades of F or G that are likely to be affected by the non-domestic PRS MEES. This has been achieved by fitting a linear regression model to control for different characteristics of properties, landlords, and tenant businesses (details on the models used for this analysis are included in Annex 1). The results of this regression analysis should not be interpreted

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as causal effects as it was not possible to account for all potential factors that affect landlords' decisions (as would be the case in a controlled experiment). Instead, the estimates should be interpreted as associations, which nevertheless aid our understanding about how regulations affect different segments of the non-domestic private rented sector.

Figure 13 below<sup>19</sup> and Table A13 in Annex 3 show the point estimates of the associations between property, landlord, and tenant characteristics and low EPC ratings (when controlling for all available characteristics). Some of the key results are described below. In addition, the results of two further sets of models are presented in Annex 3 (Tables A14 and A15).<sup>20</sup> These look at the effect of changing the definition of location to rural or urban areas and the size of landlords' portfolios, respectively.

After controlling for the characteristics of properties, landlords, and tenants, the analysis suggests that the type of landlord (i.e. domestic corporation, foreign corporation or individual owner) is most closely associated with the EPC grade of a property, when holding all else equal. The results suggest that while there is no difference between domestic and foreign corporations, properties owned by individuals are 12.8% more likely than properties owned by corporations (foreign or domestic) to have a low EPC grade, when holding all else equal (this effect only decreases by 0.1 percentage points when controlling for property size<sup>21</sup>). Moreover, Table A14 in Annex 3 shows that (for properties owned by corporations), those owned by larger landlords (with portfolios of more than 10 properties) are 2.2% less likely than properties owned by smaller landlords (with portfolios of up to 10 properties) to have a low EPC grade. These two results suggest that smaller and individual landlords are more likely to own properties with low EPC ratings and are therefore more likely to need to comply with the PRS MEES.

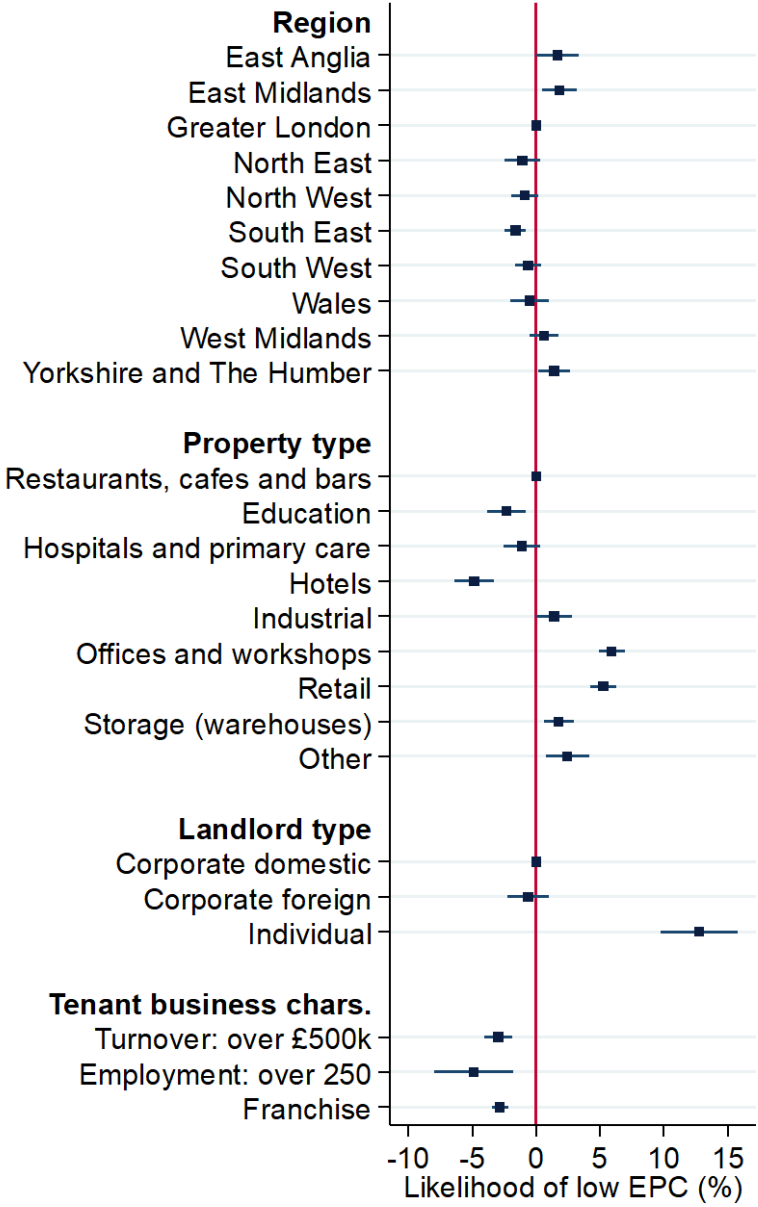
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<sup>19</sup> Figure 13 shows point estimates (dark blue squares) and 95% intervals (dark blue horizontal lines) for each variable in the model. Non-overlapping lines across estimates should be interpreted as statistically significant.

<sup>20</sup> In Annex 3, two additional sets of models are presented: Table A14 replicates the main specification models presented in Table A13 with the exception that location is represented as a classification of rural or urban areas rather than as a region of England and Wales (properties in Wales are not included in this analysis as the ONS classification data does not cover Wales); Table A15 also replicates the main specification models but also includes the size of the landlord's portfolio (this analysis is limited to properties owned by corporations).

<sup>21</sup> This result refers to Model 2, which includes floor space as a control variable.

**Figure 13. Associations between low EPC grades and building, landlord and tenant characteristics**



Notes: Figure shows the results of an OLS regression where the dependent variable is 100 if the property has an EPC grade of F or G and 0 if the property has an EPC grade of A+, A, B, C, D, or E. Standard errors are clustered at the landlord level. Omitted values (baseline values) are: 'Greater London' for region, 'restaurants, cafes and bars' for property type, 'corporate domestic' for ownership type, 'turnover low' for turnover, 'employment low' for employment, and 'stand-alone' for franchise/stand-alone. Horizontal lines on the blue dots denote 95% confidence intervals.

Source: Business characteristics are from the IDBR. EPC, property type, floor space, and region variables are from the non-domestic EPC Register. Ownership variables are from the Land Registry.

Base: 66,839 non-domestic properties in the private rented sector.

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The analysis also suggests that the type of property, as defined by planning use class, is among the factors most closely associated with non-domestic rented properties with low EPC grades. When holding all other characteristics equal, the findings suggest that offices and workshops are 5.8% more likely to have a low EPC grade than restaurants, bars, and cafes. This effect increases by 0.4 percentage points when controlling for property size (i.e. when floor space is included in the regression, offices and workshops are 6.2% more likely to have a low EPC grade than restaurants, bars and cafes). Furthermore, retail properties appear to be 5.1% more likely to have a low EPC grade than restaurants, bars, and cafes (this effect remains constant when controlling for property size). Hotels, on the other hand, appear to be 5.5% less likely than restaurants, bars, and cafes to have a low EPC grade (or -4.4% when controlling for property size). These results suggest that offices, workshops and retail premises are relatively likely to have low EPC grades and need to comply with the PRS MEES, while hotels are less likely to be affected.

The analysis also reaffirms that the characteristics of tenant businesses appear to be associated with the EPC grades of the properties they occupy. Holding all other factors equal, properties occupied by large businesses with more than 250 employees are 4.7% less likely than properties occupied by SMEs to have a low EPC grade (this effect drops to 3.2% but remains statistically significant when controlling for property size). Similarly, businesses with high turnover (i.e. greater than £500,000 pa) are estimated to be 2.5% less likely than businesses with low turnover (i.e. less than £500,000 pa) to operate in a property with a low EPC grade, when holding all other factors equal (this effect drops to -2.3% when controlling for the size of the property). Likewise, franchises are 2.5% less likely than standalone businesses to operate from a rented property with a low EPC grade, when holding all else equal (this effect drops to -2.2% after controlling for the size of the property). These results suggest that smaller and stand-alone tenant businesses are most likely to operate from rented buildings with poor EPC grades and are relatively likely to be affected by the PRS MEES. As stated above, this means that the potential benefits of improvements to the energy performance of their property are greatest for these businesses, although they are also more vulnerable to increases in rent to cover the costs of landlords installing measures.

Finally, the results of the analysis suggest that the location (region) of a property is less likely to influence the likelihood of a property having a low EPC grade compared to the other factors. Holding all else equal, the findings suggest that properties in East Anglia, East Midlands, and Yorkshire and the Humber are 1.9%, 1.9% and 1.7%, respectively, more likely to have a low EPC grade than properties located in Greater London. These effects only decrease marginally after controlling for the size of the property. In contrast, properties in the South East appear to be 1.5% less likely to have a low EPC grade than properties in Greater London, when holding all else equal. This effect increases by 0.1 percentage points when controlling for property size. Similarly, the rural or urban location of properties (based on local authority areas) does not seem to impact the likelihood of properties having a low EPC grade, when holding all else equal (see Table A14 in Annex 3).

While the effects change when controlling for property size (i.e. floor space), Model 2 (shown in the third and fourth columns in Table A13) suggest that these differences are only marginal for most variables. Thus, it is safe to conclude that while property

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size appears to have an association with non-domestic rented properties with low EPC grades, the association is less significant than for other variables such as property type and region and does not appear to cause omitted variable bias when excluded from the model.

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## 3 Findings from qualitative research

*This section presents findings from primary research with local authorities and organisations representing non-domestic landlords and tenant businesses.*

### 3.1 Introduction and key messages

The qualitative research tasks consisted of interviews with local authorities and a focus group with organisations representing landlords and tenants. The research was undertaken between February and April 2020 and aimed to gather information on enforcement activities undertaken by local authorities and actions taken by landlords and tenants to comply with the non-domestic PRS MEES.

#### **Key messages**

Research with local authorities and organisations representing landlords and tenants suggests that awareness and understanding of the non-domestic PRS MEES is varied amongst landlords, much lower amongst tenants, and highest amongst larger organisations and those who engage with external advisers.

Levels of compliance are also highest amongst the larger landlords, according to local authorities and landlord organisations, with many being proactive and going above and beyond the current requirements, while smaller landlords are more reactive and wait until required to make changes.

There have been minimal activities from local authorities to raise awareness and enforce the non-domestic PRS MEES, due to capacity issues and a lack of information and tools to identify non-compliance and enforce the regulations. Most local authorities are taking a reactive approach to enforcement but very few complaints have been received to date. Those taking a more proactive approach have focused on data analysis and engaged with agents to identify non-compliance, while some have engaged landlords to enforce the regulations.

Organisations representing landlords and tenants were unable to confirm the extent to which landlords have passed costs to tenants via increases in rent, if at all. Existing leases may not permit this, so it is more likely when entering a new lease, although rents are affected by many factors and have ceiling values.

The PRS MEES are likely to have raised awareness of energy efficiency in non-domestic properties, improved energy performance and delivered economic benefits by reducing energy bills and increasing spend on installation measures.

The landlord and tenant bodies reported that the PRS MEES and EPCs fail to encourage landlords and tenants to minimise the overall carbon emissions of the business and also risk encouraging the installation of suboptimal measures that can be a barrier to future improvements.

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## 3.2 Key findings: qualitative research with local authorities

This section presents findings from qualitative interviews with Trading Standards Officers (TSOs) from 14 different local authorities. Interviews were undertaken between February and April 2020 and used the topic guide provided in Annex 2. The interviews aimed to explore the views and experiences of local authorities in relation to the non-domestic PRS MEES and particularly: levels of awareness, understanding and compliance within their local area; their experiences and issues faced in enforcing the regulations; emerging impacts; and views on potential future changes to the PRS MEES. The findings of these interviews are described in detail below.

### 3.2.1 Sample characteristics

A total of 14 interviews were undertaken with representatives of local authorities. The final achieved sample included:

- Coverage of eight of the ten regions in England and Wales;
- Nine predominantly rural areas and five urban areas; and
- Local authorities with a relatively high proportion of F and G rated EPCs (all 14 local authorities had a higher proportion of F or G rated EPCs than the national average).

The process of engaging with the sample of local authorities highlighted that it is common for Trading Standards operations to be shared across multiple local authorities. For example, it is common for Trading Standards organisations to operate across all districts within a county, and in some cases across multiple counties. Interviews were undertaken with TSOs working within individual districts (four interviews), at a county level (eight interviews) and for cross-county operations (two interviews).

### 3.2.2 Awareness and understanding amongst landlords and tenants

The interviews discussed activities undertaken by local authorities to engage with commercial landlords and raise awareness of the non-domestic PRS MEES and their perceived levels of awareness and understanding amongst local landlords and tenants.

#### **Awareness raising activities**

Most local authorities in the sample had not engaged with commercial landlords or tenants in relation to the non-domestic PRS MEES. This was reported to be primarily due to a lack of resources and competing priorities for Trading Standards departments. There was also a greater current focus on engaging with domestic landlords and tenants in relation to the domestic PRS MEES.

*"We're not in a position, with all our other conflicting priorities, to directly liaise, on a regular basis, with commercial landlords. It's wholly unfeasible to do that... We enforce tens of different areas of legislation and we simply have to apply some*



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*criteria which gives us direction as to where best to direct our resource... because eventually, quite simply, you run out of people."*

*(Rural local authority in the South West)*

*"The sheer range and scope of our responsibilities means we can't do everything as much as we want to... you have to pick and choose; it is just inevitable. So, we do try to do as much as we can of every subject and that's why we're now getting to the point of focusing our gaze for a while on EPC work. But we've had to prioritise it below other things until now."*

*(Urban local authority in the North East)*

Other reported issues and barriers to engaging with commercial landlords included:

- Difficulties identifying commercial landlords and then gathering and linking information on the landlords, their properties, EPCs and leases. This was reported to be particularly challenging where there are lots of properties within one site (e.g. a business park or office block), sharing a similar address.
- Difficulties engaging with landlords who are themselves unwilling to engage and/or do not see the PRS MEES as a priority.
- Some local authorities in the sample questioned whether awareness raising activities were within their remit. It was suggested that these types of activities would be more effective if implemented at a national level.
- Some local authorities wanted to ensure their own commercial properties were compliant with the PRS MEES before engaging with other commercial landlords:

*"Everybody is keen to get their own house in order before they do too much with external people because, obviously, you look like a hypocrite if you haven't, if the council buildings aren't complying."*

*(Rural local authority in the South East)*

However, five of the 14 local authorities in the sample had undertaken some awareness raising activities, although some of these covered the domestic as well as non-domestic PRS MEES:

- Two local authorities had directly engaged with landlords via seminars and meetings. One local authority had spoken to commercial and domestic landlords about the PRS MEES at a local Landlord's Forum, while the other had organised a seminar specifically for local commercial landlords and letting agents.

*"It was a really good training session so it's just making them all aware of the legislation and it was really, really well attended... with some examples of changes they've made to their properties to bring them into the higher brackets."*

*(Rural local authority in the South East)*

- One local authority reported working with other local authorities and a housing group to produce a 'zed card' to provide domestic and commercial landlords with advice and guidance on the PRS MEES. The local authorities are now distributing the cards when they have any contact with landlords and letting agents to raise awareness of both the domestic and non-domestic PRS MEES.

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- Two local authorities stated that they had decided to engage with letting agents rather than directly with commercial landlords. This was considered an effective way of accessing commercial landlords and tenants since the large majority of non-domestic properties are let through letting agents (compared to domestic properties, which tend to be let through a larger range of different channels, including social media). It was also reported to be cost-effective as it is easier to identify, engage and inform the relatively small number of local agents and use them to disseminate information to the landlords as part of the leasing process. Activities included delivering presentations and attending meetings to explain the regulations, as well as offering advice and guidance.

*"[Landlords have a] massive reliance on agents, and I would say, if you can get communication out to those channels, it is far and away one of the most effective methods [of raising awareness amongst landlords]."*

*(Rural local authority in the South West)*

The interviews also captured suggestions for other ways of increasing awareness of the PRS MEES amongst commercial landlords. These were all focused on increased activity and support from central government, and included:

- Increased activities from central government to raise awareness of the regulations at a national level and publicise the guidance for landlords:

*"If we had greater support and guidance [from central government] and a raising of the profile of [the non-domestic PRS MEES] then, as a service, we could increase the profile of the issue."*

*(Urban local authority in the South East)*

- Introducing measures to provide financial support to landlords to encourage them to make improvements to their properties:

*"There is obviously a lack of funding available at the minute, so many of our smaller landlords they're going to be finding it difficult to make those improvements without any access to government grants etc."*

*(Rural local authority in the South West)*

*"It would be nice, with the tightening of the standards to come, for this to be launched again alongside a package of measures that were available to assist landlords in making those improvements, but I realise that's going to be difficult in the economic environment... but that's the first question you normally get asked when you're saying you need to make these improvements, 'well what money is there available?'"*

*(Rural local authority in the South West)*

## **Landlord awareness**

The interviews found mixed views about local authority perceptions of levels of awareness and understanding of the PRS MEES amongst commercial landlords. Most of those in the sample were unable to comment on levels of awareness and understanding amongst landlords as they had not had any engagement or interaction

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on this issue, although they generally felt that awareness and understanding was likely to be low.

Some of the local authorities that had engaged with landlords shared a similar view that levels of awareness and understanding of the non-domestic PRS MEES were low in their local area:

*"The landlords themselves are very, very confused. The guidance currently out there has got information, for example, that the landlord is the one that determines whether or not his property is requiring these particular measures. And the landlords are saying, we know we're not experts, how can we, how can we determine and make decisions because we're not experts."*

*(Rural local authority in Wales)*

*"I think some of those isolated landlords just won't have a clue and we certainly found that with some of the issues with the domestic landlords."*

*(Urban local authority in the North East)*

However, others who had engaged with landlords suggested they were likely to have reasonable levels of awareness, particularly amongst those who are members of professional organisations and receive information and guidance through those channels.

*"They probably have a reasonable awareness given trade associations and general forums and publications that they will receive."*

*(Urban local authority in the North West)*

The local authority that had delivered a seminar on the non-domestic PRS MEES reported that awareness and understanding were fairly high amongst attendees. However, it was believed that rural landlords were concerned about the cost and financial viability of installing the required measures given the relatively low rents in the local (rural) area:

*"The [landlords] that were there clearly seemed to know [about the PRS MEES] but they seemed to be quite worried by it... There were examples of some rural landlords that were there that were worried that the cost of all of it would then have an impact because they have cheap rents to get people to come out of the city and to use properties in the rural locations."*

*(Rural local authority in the South East)*

Similarly, those who had engaged with letting agents also provided mixed views, with some suggesting that agents had good awareness and understanding, while others suggested it was more varied.

*"The letting agents on both sides... the commercial and the domestic, they are fully aware and they know what's coming and everything else."*

*(Urban local authority in the North East)*

*"We can only say what we've really discovered as a result of dealing with the agents that are involved, and I think it's fair to say that it's a mix. And whilst most of them perhaps understood that there was a requirement coming in... not a lot*

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*was happening. And actually, what we found [from engaging with agents], all it did was raise a lot of queries about the energy performance certificates, [more] than it did about the requirements for MEES."*

*(Rural local authority in the South West)*

The local authorities that had engaged with landlords also found some areas of uncertainty and a lack of clarity or misunderstanding of the regulations. For example:

- Some landlords had questioned why they were unable to accept a new tenancy for properties that were below the required minimum standard, but where the new tenant was going to make changes to the property that would improve the EPC rating above the minimum standard:

*"There were some issues [raised by] landlords that were taking on new tenants to existing retail properties, where there was going to be a complete refit of the internals [after the new tenant had moved in]. So that refit can obviously drastically affect the potential EPC assessment... and I think there was a bit of a chicken and egg situation there with a few of our retail landlords where they were struggling to see why there wasn't some exemption that allowed them to get the tenant in place, with an agreement that those improvements would be made and the EPC would be correct once the tenant had had an opportunity to refit it. Lighting makes quite a big difference, if they've got lots of fancy halogen lights... it can impact the rating quite considerably."*

*(Rural local authority in the South West)*

- A common area of uncertainty seemed to relate to exemptions and the kinds of property they apply to (for example, whether listed properties have a blanket exemption under the PRS MEES), how the exemption process works, and how landlords find out whether their exemption request has been accepted.
- Local authorities also described issues relating to landlords' understanding of EPCs and energy assessments. One local authority reported engaging with EPC assessors to improve their own understanding of EPCs:

*"One of our weaknesses is that we have no technical expertise as a profession on understanding how these assessments are made when EPCs are carried out. So, understanding some of the practical difficulties that those assessors find and then working it through with them, so solutions and how the regulations might apply in certain circumstances was quite useful."*

*(Rural local authority in the South West)*

## **Tenant awareness**

It was even more difficult for local authorities to comment on awareness and understanding of the PRS MEES amongst tenant businesses as only a few of the local authorities had engaged with tenants:

*"I wouldn't know [about tenant awareness and understanding] because we haven't taken any action on non-domestic side yet. I really don't know. It's an unknown quantity."*

*(Urban local authority in the North East)*

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*"I think there probably are gaps there. I've got no real empirical evidence to answer the question with because we haven't done any work in this area."*  
(Rural local authority in the South West)

Furthermore, those who had engaged with tenant businesses reported mixed perceptions of their levels of awareness and understanding of the PRS MEES:

- Only one local authority reported awareness and understanding to be good amongst tenant businesses:

*"I think there's quite a high response and understanding [amongst tenant businesses], which is good, [although] it may need a reminder before 2023 that, look this is going to happen."*

(Urban local authority in the North East)

- Two other local authorities reported low levels of awareness and understanding amongst the tenant businesses they had spoken to. It was suggested this was likely to act as a barrier to tenants reporting non-compliance. They felt that tenants were unlikely to complain about these issues anyway, particularly when they lack confidence in their own knowledge and understanding:

*"I think there's very, very little understanding of it at all... We tried a couple of routes to get into local business groups and explain to tenants that this might be a route for them to get improvements made on their properties. But... there wasn't a great deal of interest, I don't think it featured highly on tenants' list of priorities at the moment."*

(Rural local authority in the South West)

*"A lot of the time tenants don't like complaining... because they feel a bit insecure and they're concerned that if they do complain, what repercussions that might have."*

(Rural local authority in Wales)

### 3.2.3 Current activities undertaken by local authorities

The interviews also explored the extent to which local authorities were undertaking activities to identify non-compliance and enforce the non-domestic PRS MEES.

#### **Identifying and monitoring compliance**

Only one local authority in the sample reported undertaking proactive action to identify and monitor compliance with the non-domestic PRS MEES within their local area. Within this urban local authority area, the Trading Standards team is responsible for enforcing the non-domestic PRS MEES and works closely with the Environmental Health team, which deals with the domestic PRS MEES. They have also previously worked on a project relating to EPCs and the climate emergency, during which they worked closely with local commercial letting agents. The knowledge and relationships developed through this project are now helping the local authority to identify non-compliance.

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The activities they have used have focused on desk-based research using online tools and databases to identify potential 'non-compliant' properties. This has included looking up the EPC ratings for properties advertised on letting agent websites and online property databases like Zoopla, as well as checking the EPC register and the exemptions register for the PRS MEES:

*"We haven't got the staff to go round the streets and look at the signboards and everything else... But you can monitor and use the web material and that was the easiest thing to do... there was no need to necessarily go and tell any of the commercial agents, it was done by monitoring online and then phoning people up or emailing them... but the majority of them were compliant when we actually had a look."*

*(Urban local authority in North East)*

This approach had been used to identify 19 properties that they thought might not be complying with the PRS MEES in their area, including some cases where the EPC had not been lodged. They have served compliance notices to the relevant landlords, although some have since responded to confirm these are long-term lets and/or improvements do not need to be made until the backstop date in 2023.

None of the other local authorities in the sample had undertaken activities to monitor compliance, although three did report planning to introduce approaches in the near future. One of these local authorities reported working to develop a tool that local authorities could use to help identify non-compliant properties.

However, the interviews suggest that only a limited number of activities are currently being undertaken by local authorities to identify and monitor non-compliance. This was again reported to be mainly due to a lack of resources, as several local authorities suggested data sources and tools that they would use to monitor compliance if they had more resources. These sources included:

- The EPC register (<http://www.epcregister.com/>);
- The exemptions register for the non-domestic PRS MEES;
- Commercial property portals, where available at a local level<sup>22</sup>;
- Working with local property agents and using their information and guidance to identify relevant commercial landlords and properties;
- Websites of commercial property agents and property search engines; and
- Land Registry data (although the cost in obtaining information was mentioned as a barrier to use).

Some interviewees suggested they were instead taking a more reactive approach to identifying non-compliance. These local authorities were enforcing the regulations by

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<sup>22</sup> An interviewee from a local authority in Wales noted the distinction between domestic and non-domestic property. For domestic properties they can use the Rent Smart Wales database of registered landlords to access information on rented properties in their local area, but there is no equivalent database for non-domestic properties.

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investigating specific properties or landlords in response to complaints or queries received by the Trading Standards team. However, very few local authorities had actually received any complaints relating to the non-domestic PRS MEES.

*"To be honest with you, with energy efficiency and energy performance issues generally... it's mainly reactive to be quite honest, we tend not to do projects or proactive work on it, it does tend to be dealing with complaints that we get."*

*(Urban local authority in the South East)*

*"We have a triaging service for our complaints and enquires that come in and, largely, when I last looked, the limit of most recent enquiries tended to be along the lines of freedom of information. So other people or bodies asking about our energy performance enforcement rather than anyone highlighting non-conformance to us."*

*(Rural local authority in the South East)*

*"Since the requirement was enacted in the legislation we haven't, through our service, received a single complaint from anybody about commercial property being let under the minimum energy efficiency standards so I haven't got any data to refer to [in relation to levels of compliance]."*

*(Rural local authority in the South West)*

However, one local authority admitted that the lack of complaints is not assumed to be a good indicator of compliance and is more likely to relate to a lack of awareness and understanding:

*"I think it's probably an area where people wouldn't even know where to go to complain... if a shop is selling out of date food or selling alcohol to kids, then they will pick up the phone and complain to us. This is probably an area where, if they came across a property that was not up to standard, they probably wouldn't even know to pick up the phone and call Trading Standards, so we just haven't got that intelligence."*

*(Urban local authority in the East of England)*

Interviewees were also asked about perceived levels of compliance within their respective areas. The interviewees were split evenly between those who said they could not say anything about the levels of compliance because they had no information to go on, and those who felt there would certainly be some non-compliant properties in their local area. There were two main reasons provided for non-compliance:

- A lack of awareness and understanding of the regulations and the associated obligations for landlords:

*"My suspicion would be that [compliance] wouldn't be overly high because it's a relatively new requirement and hasn't been massively publicised, plus our experience in dealing with letting agents and landlords in other areas is, compliance is generally quite sketchy. So, my suspicion is if we run a project, we will see non-compliance out there."*

*(Urban local authority in the East of England)*

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*"You'll find that a lot of these landlords, particularly if their key business isn't being a landlord, you'll find that they won't be compliant."*

*(Rural local authority in the South West)*

- Landlords waiting until someone notices they are not complying before installing the required measures to meet the minimum standards:

*"There will probably be one or two that'll look at it and think, well I'll worry about that when someone comes knocking."*

*(Rural local authority in the South West)*

*"[Some landlords] just think, until somebody challenges it, I'm not going to spend the money."*

*(Rural local authority in Yorkshire and the Humber)*

Some of the local authorities also provided suggestions of the types of properties that they expected were most likely to be non-compliant. The suggestions focused on older buildings and those in more deprived areas:

*"Non-conformance is going to be more on older buildings, used for non-domestic purposes rather than modern, recently built business units which obviously will be built to more current standards of insulation and energy efficiency."*

*(Rural local authority in the South East)*

The interviews also discussed the main challenges and barriers to identifying non-compliance, which included:

- A lack of resources within local authorities to enforce the regulations:

*"If enforcement comes with support in terms of funding, then we can always recruit to undertake some work. But otherwise, unfortunately, it tends to get swamped by greater priorities."*

*(Rural local authority in the South East)*

- A lack of tools and information to support local authorities to identify non-compliance, rented properties, lease information and/or landlord details:

*"How you would start to identify the potential non-compliance, I don't know where you would start really. You can't randomly say, right let's just pick a small area and start searching for an EPC on every address. It would just be a monumental task."*

*(Rural local authority in Yorkshire and the Humber)*

*"Some [properties] are really difficult to find ownership and freehold [information] for and there's quite a complication in terms of the actual ownership and operation of those buildings."*

*(Urban local authority in the North East)*

- The limited time period in which to identify non-compliance before a property is let:



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*"Properties will change their lets, or change their tenancies, will change hands in terms of sale and we'll never know that it happens at Trading Standards level... So, there is an inherent problem, I think, in knowing at what point can it be enforced, because that window is actually incredibly small. If the legislation states that a property cannot be let below the minimum energy efficiency standard, the window for that happening is invariably quite finite and if you miss it, then you miss it."*

*(Rural local authority in the South West)*

- Difficulties in matching EPCs to specific properties:

*"Sometimes the register can be a bit confusing and there may be four or five different EPC certificates for that one building"*

*(Urban local authority in the North East)*

*"Some of the issues [relate] to the UPRN<sup>23</sup>... so a property might have an EPC, but that EPC [can be] difficult to attribute to a specific premises. Sometimes they're subdivided and there isn't a need for the EPC certificate to be linked to the UPRN... I understand from MCHLG that they are now addressing that and the UPRN will become one integral part of the EPC certificate system... So that will help in attributing a certificate to a particular property."*

*(Rural local authority in the South West)*

- Landlords not getting an EPC rating to avoid the expected costs and risks of not achieving the minimum standard:

*"There's a loophole with the EPC regs themselves because you can fine them £200 for a domestic property or £500 for a commercial property if they haven't got an EPC but in the grand scheme of things, it's far easier and cheaper for them to keep having a penalty charge notice for failing to have an EPC than to have an EPC commissioned and then they have all the headaches of trying to work out... [there] is nothing in the legislation which forces somebody to get an EPC."*

*(Rural local authority in Wales)*

## **Enforcing the non-domestic PRS MEES**

The interviews found a general lack of enforcement activity taking place across the local authorities in the sample. As mentioned previously, most of the interviewees were working for Trading Standards operations across multiple local authorities, at either a county or cross-county level. One of these interviewees confirmed that the enforcement of the regulations would be the responsibility of the relevant district councils and confirmed cases of non-compliance would be passed on to them to enforce any action. However, this had not happened due to a lack of cases of identified non-compliance.

Six of the 14 local authorities interviewed confirmed that they had not undertaken any form of enforcement activities since the non-domestic PRS MEES had been introduced. However, four of these described having set up, or planning to introduce,

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<sup>23</sup> Unique Property Reference Number

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internal processes and approaches to enforcement of the non-domestic PRS MEES. These processes used information captured from some of the activities described above (i.e. raising awareness of the PRS MEES via media, trade bodies, letting agents and directly with landlords; and then proactively or reactively identifying non-compliance) as a basis for:

- engaging with the 'non-compliant' landlords to explain the issue, ensuring they are aware of the regulations, and offering advice regarding the achievement of the minimum standard; and
- issuing penalty charge notices if landlords fail to act on the advice provided.

As stated above, several other local authorities had reported already using a reactive process for enforcing the non-domestic PRS MEES, by investigating and acting upon complaints received about non-compliance:

- Only one local authority reported receiving any complaints relating to the non-domestic PRS MEES. They had received one complaint, which had been resolved by providing advice and assistance to the landlord on how to achieve the minimum standard, and the measures were implemented to bring the EPC rating up to an E rating, which meant that enforcement procedures were able to be avoided.

*"It was a little bit protracted in terms of [the regulations being] challenged at first, but then eventually [the landlord] accepted and got some contractors in, made some additional changes and then brought it up just to an E."*

*(Rural local authority in Yorkshire and the Humber)*

- Four other local authorities had not received any complaints in relation to the non-domestic PRS MEES, although one had found that EPCs were not always being lodged and included in the EPC register. The local Trading Standards team has since been providing advice to encourage all EPCs to be lodged so the EPC register can be a more effective tool for identifying non-compliance.

*"We've not actually done any enforcement at all and we've not received any complaints about non-compliance, we've not done any work."*

*(Urban local authority in the South East)*

*"We received 20,000 complaints here about [local] businesses, [but] we don't receive any complaints about this issue so without that intelligence we don't necessarily know where the issues are."*

*(Urban local authority in the East of England)*

Two of the local authorities in the sample had reported undertaking proactive enforcement action:

- One was the example provided above where the local authority had used desk-based research to identify suspected non-compliance, before engaging with letting agents and landlords to confirm whether properties were complying. As stated above, the local authority had sent 19 compliance notices to the non-compliant properties and had offered advice and guidance on updating EPCs where the issue was a case of information not being

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updated. In the other cases the local authority is working with landlords to implement the required measures.

- The other local authority had reported undertaking inspections with letting agents since the end of 2019. These inspections cover a range of regulations (including the domestic and non-domestic PRS MEES) and involve working with letting agents to gather information and examples of suspected non-compliance that they can use to enforce the regulations. However, this process has only recently been introduced and examples of non-compliance have so far been focused on domestic landlords, although they expect the approach to help identify non-compliance in commercial properties:

*"[It covers] a full range of legislation... So, it's just checking for compliance and then, initially, providing business advice on how they can comply. But it's more to do with the agent rather than [the landlord], but we are encouraging them to let us know of any issues that they find. But, to be honest that does tend to be with domestic rather than non-domestic."*

*(Rural local authority in the West Midlands)*

In a final case, the local authority had been focusing on activities to raise awareness of the PRS MEES amongst commercial landlords and letting agents but, in doing so, had identified examples of non-compliance. The local authority was in the process of considering enforcement action, and potentially issuing penalties, but this has now been put on hold due to the Covid-19 pandemic:

*"Yeah so effectively the approach we took was primarily about advice and education... As a result of the checks that we did... we did identify five units that were incorrect and we did get to a stage of looking at whether or not we could take enforcement action, and I think at that stage, it was decided that [we would delay things], because the timing literally was just as this virus started."*

*(Rural local authority in the South West)*

## **Collaboration and information sharing**

The interviewees described some limited engagement with other local authorities in relation to the non-domestic PRS MEES. For example:

- Four of the interviewees described engaging in regional meetings with other Trading Standards operations to share best practice on a variety of issues. In most cases, the non-domestic PRS MEES has yet to be discussed at these meetings. However, one interviewee said one of their regional meetings had discussed the non-domestic PRS MEES, while another has been asked to deliver a presentation on the non-domestic PRS MEES at their next regional meeting.
- Several interviewees from county or cross-county level Trading Standards operations described having close relationships across the individual local authority areas and have been sharing experiences and knowledge in relation to commercial landlords and the non-domestic PRS MEES.

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- Three interviewees described using the Knowledge Hub (an online forum for asking questions and liaising with other Trading Standards teams). However, discussion of the non-domestic PRS MEES was reported to have been minimal, and one interviewee had posted a question relating to EPC expiry dates but was still waiting to receive any responses.

The interviewees suggested that sharing best practice would be useful and helpful in addressing particular challenges and ensuring consistency across different areas (whilst also acknowledging that some issues, such as those relating to specific types of property, may vary between different areas). Some local authorities also advised caution, stating that this would still not address the main barrier to enforcement, which is the current lack of resources, so increased collaboration around the non-domestic PRS MEES was unlikely to deliver any significant changes in levels of enforcement in the short term.

In addition to the lack of resources within Trading Standards teams, the interviewees also described several other potential barriers to enforcement:

- Confusion around exemptions for non-domestic properties, which can cause difficulties for the local authority in identifying non-compliance and enforcing the regulations, due to having gaps in their understanding.
- The extent to which EPC assessments provide an accurate rating of the energy performance of a property:

*"Some of it tends to be very generic...they're using generic dropdown menus that they enter and then attribute scores to. A bit arbitrary really in some of the way they assign the rating."*

*(Rural local authority in Yorkshire and the Humber)*

- Gaps in information and delays in updating information on the EPC register:

*"If you rely on [the EPC register] and you go and do an awful lot of work behind it and that's not up-to-date, then potentially you've wasted your time and effort... So, if that was up-to-date that might make the job a little easier."*

*(Rural local authority in Yorkshire and the Humber)*

- Difficulties in identifying the landlord responsible for a particular property:

*"The large majority of one case [on the domestic PRS MEES] was taken up with just simply trying to find out who on earth was in charge of the building, because you might have had a landlord but then you had a management company and then there were tiers, so I'd envisage that as possibly an issue with [the non-domestic PRS MEES]. When it comes down to it, if they don't take your advice who do you actually take action against."*

*(Rural local authority in Wales)*

- A lack of understanding of the approach, and need to establish new processes, for serving penalty notices to non-compliant landlords:

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*"The civil routes have been a bit of an issue for us because we are used to dealing with just the magistrates courts but something like the first tier tribunal and penalty charge notices are new to us, but we just have to work round that as best we can."*  
(Urban local authority in the North East)

*"It's easier for us to use the criminal sanctions really but I know that this is the way a lot of legislation is going and a lot of our more recent legislation, particularly around landlord and tenant legislation is more about the penalty charge notices with perhaps ultimately criminal action. But to start with going down the civil route and we always find that a little bit more complicated."*  
(Urban local authority in the North West)

*"I'm not even sure what penalties or what enforcement provisions or tools there are... with the non-domestic, I'm not even sure what the enforcement tools are to be quite honest."*  
(Urban local authority in the South East)

*"Another thing is with the penalty notices, if they're identifying more than one breach for a property, do they list all the breaches in that one penalty charge notice, or do they issue a separate notice per breach?"*  
(Rural local authority in Wales)

### 3.2.4 Impacts of the non-domestic PRS MEES and interactions with other policies

The interviewees were unable to comment on impacts of the non-domestic PRS MEES because of the lack of information about levels of compliance, investments, measures installed, changes in EPC ratings and the energy efficiency of non-domestic buildings.

Most interviewees were unaware of other policies that are relevant to the installation of energy efficiency measures in non-domestic properties, although some local authorities mentioned contradictions between:

- The PRS MEES and the EPC legislation, which had caused confusion amongst landlords and letting agents:

*"In all of our discussions and debates with agents and people involved in EPCs, that was the thing that was coming up time and time again, some of the inconsistencies or lack of clarity over the interpretation of the guidance available for EPCs... it was almost impossible to just deal with MEES in isolation, we were very much having to go back to the EPC interpretation if you like and ensuring that that was dealt with appropriately."*

(Rural local authority in the South West)

- The PRS MEES and the Energy Performance of Buildings regulations:

*"There's a lot of confusion with the Energy Performance of Buildings Regs 2012, and the exemptions within that piece of legislation, and with the PRS MEES legislation. So sometimes [local authorities] struggle [to work out] if it does require*

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*an EPC and... is a listed building required to have an EPC... It doesn't seem to be that Peter spoke to Paul when looking at these pieces of legislation because the guidance seems to contradict each other."*

*(Rural local authority in Wales)*

Some local authorities also described areas of overlap with the domestic PRS MEES, which in most cases was the responsibility of other teams within their organisation. Several interviewees said they intended to work more closely across the domestic and non-domestic teams to learn from their combined experiences and work more efficiently. However, this is not always straightforward as the Environmental Health Officers (dealing with the domestic PRS MEES) are not always part of the same organisation as the Trading Standards Officers (dealing with the non-domestic PRS MEES).

### 3.2.5 Potential changes to the non-domestic PRS MEES

The interviews also discussed the potential changes to the non-domestic PRS MEES that BEIS has been consulting on (i.e. by 2030 all non-domestic privately rented properties should achieve an EPC rating of B or C, rather than the current E rating).

The consensus amongst interviewees was that it was sensible and desirable to aspire to greater minimum energy efficiency standards for non-domestic buildings to help deliver energy efficiency goals and support the drive towards reducing carbon emissions and increasing environmental sustainability. However, most local authorities questioned how achievable the increased targets were likely to be, particularly for smaller landlords and landlords of older properties and properties in rural areas, and whether the required measures would be viable for landlords to implement.

*"I don't think it's going to be a difficult thing for the newer stock, but the older stock definitely will have a real, real problem trying to even reach the C or B. I don't think that that is going to be achievable for the old buildings."*

*(Rural local authority in Wales)*

*"The bigger companies will be able to cope easier, but it'll be the individual landlords... the individual landlord I think is going to struggle."*

*(Urban local authority in the North East)*

*"Obviously I think it's a good idea for the environment. But I think it might be hard for some businesses to achieve. From the landlord's forum that I went to, [landlords] especially in rural areas, they're struggling... because they'll have to put rents up and then people won't want to come and rent those buildings."*

*(Rural local authority in the South East)*

*"I think [the proposed increases in standards] are commendable in terms of energy efficiency... I suppose the challenge is identifying the ability for non-domestic property to achieve that energy efficiency rating. And whether in fact older buildings can realistically do that with a retrofit or whether you're looking at, in a way, forcing landlords to demolish and rebuild."*

*(Rural local authority in the South East)*

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One local authority questioned whether, given these points, exemptions would need to be extended to deliver the revised standards. If a significant increase and expansion of exemptions was deemed necessary, the local authority was not convinced that such a significant increase in standards would be desirable.

Several local authorities also raised concerns that increasing EPC ratings from a minimum E rating to a B rating would represent a significant leap for landlords to achieve in only seven years (from the current backstop of 2023 to the increased minimum standard by 2030):

*"They're basically only giving businesses seven years to comply... There's an awful lot of work involved in that. And I think if that's what they're aiming for then [we need to give businesses] a very much longer lead in period... there's a huge jump from an E to a, potentially a B, some properties may well not be able to achieve that because of the very nature of them."*

*(Rural local authority in the South East)*

The interviews also identified implications of changes for local authorities, including:

- A significant increase in workload for local authorities due to the increase in the number of affected properties that would require monitoring and investigation to check compliance and the subsequent increase in enforcement actions for dealing with non-compliance;
- An increase in demand from landlords for advice from the local authority on how to improve EPC ratings, apply for exemptions, etc; and
- A lot of work for local authorities to ensure their own stocks of commercial property are compliant with the higher standards.

It was generally felt that the potential changes to the non-domestic MEES and the resulting implications for local authorities could be delivered but would require additional funding for both local authorities to enforce the standards effectively. For example, it was suggested that additional funding would be required for local authorities to increase their capacity, purchase data and establish tracking systems that would enable them to identify non-compliant properties more effectively and efficiently. Furthermore, it was also suggested that additional funding would be required to support landlords in making the required changes to their properties

*"I think it could be potentially challenging and without a package of grants or other financial measures, then we may find it's more difficult to push."*

*(Rural local authority in the South West)*

Finally, the local authorities offered other suggestions for potential improvements to the non-domestic PRS MEES, which included:

- Providing training for local authorities to increase understanding and knowledge of the regulations amongst those enforcing the regulations.

*"There's probably a lack of training in terms of MEES and the commercial side, about knowing what you can and what you can't do... I would think there's*

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*probably a lack of awareness across the board about what powers we do have with this."*

*(Rural local authority in the North East)*

- Amending the guidance relating to the non-domestic PRS MEES to make it shorter, clearer and aid understanding.

*"Given that the guidance for landlords is 72 pages, there is probably an argument for making it simpler for landlords to comprehend, understand and comply with."*

*(Rural local authority in the South East)*

### 3.3 Key findings: focus group with organisations representing landlords and tenants

The focus group was delivered on 12 March 2020, using the facilitation guide provided in Annex 2. It aimed to explore landlord and tenant views and experiences of the non-domestic PRS MEES and particularly: levels of awareness and understanding; responses and levels of compliance; experiences of local authority enforcement; impacts; and views of future changes to the PRS MEES. The key findings are described in the following sections.

#### 3.3.1 Participant characteristics

The focus group was attended by nine organisations representing commercial landlords and tenants:

- British Property Federation (BPF);
- Better Buildings Partnership (BBP);
- Investment Property Forum (IPF);
- UK Green Building Council (UKGBC);
- Royal Institution of Chartered Surveyors (RICS);
- Confederation of British Industry (CBI);
- Country Land and Business Association (CLBA);
- Charities' Property Association (CPA); and
- National Trust (NT).

The sample provided coverage of a range of sectors, geographies and types of property including organisations with a broad membership and others with a more specialist focus on rural areas, charities, and historic buildings for example. The number of members represented by each organisation ranged from 30 to more than 100,000.

#### 3.3.2 Awareness and understanding amongst landlords and tenants

Focus group participants suggested that awareness and understanding of the PRS MEES was highly variable amongst landlords and was typically much lower amongst tenants. Some large tenant businesses have good awareness and understanding of the PRS MEES, particularly if they have their own real estate teams, but they only represent a small minority of tenants. In most cases, it was suggested that tenant



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businesses only tend to have awareness and understanding of the PRS MEES if they have been informed by their landlords or external advisers (e.g. chartered surveyors, property consultants, lawyers, etc.) and this only usually happens at the time of lease renewals:

*"If we are doing a renewal or a new lease then obviously [the PRS MEES] is part of that conversation with the tenant but... [other] tenants are probably not aware of these regulations at the moment... We haven't actively gone out to our tenants to tell them about this as yet."*

*(Landlord and tenant organisation)*

For landlords, it was suggested that awareness and understanding tends to vary according to the size of the landlord. Larger landlords (i.e. those with ten or more properties) usually have good awareness and understanding of the PRS MEES. These landlords are generally more aware of policies and regulations that relate to their activities, and are more likely to consider potential risks, develop mitigation strategies and long-term plans:

*"Amongst the larger landlord group, I think there's almost universal understanding of MEES in terms of dates, lettability of assets."*

*(Landlord organisation)*

*"Larger landlords certainly are aware of this because we have to be... you have to be planning for the future and therefore this is on our horizon a lot more and I've heard that echoed from other larger landlords."*

*(Landlord organisation)*

In contrast, focus group participants suggested that awareness of the non-domestic PRS MEES is typically much lower amongst smaller landlords, who tend to be highly dependent upon advisers to keep them informed of their obligations:

*"As regards smaller landlords, I think the picture is very, very different, they're either not aware of it or they're not sufficiently worried at this stage about the consequences of not complying with it."*

*(Landlord organisation)*

*"I think it's fairly patchy amongst the smaller group but their advisers, in my experience, are pretty well informed of what the implications might be regarding the lettability of assets."*

*(Landlord organisation)*

In most cases, focus group participants felt that awareness and understanding of the non-domestic PRS MEES is fairly consistent across different sectors and types of property. However, one exception is listed buildings, for which there were reported to be inherent issues relating to the relevance of EPCs and the application of the PRS MEES. This means that landlords and tenants of listed buildings are more likely to have looked at the issues and guidance in greater depth, thereby providing them with more comprehensive awareness and understanding of the PRS MEES and the associated issues for their properties.

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Focus group participants also suggested that awareness of the non-domestic PRS MEES is considerably lower than the domestic PRS MEES amongst landlords and tenants.

*"A lot of our members are aware of the domestic regulations and are complying with the domestic regulations but are a lot less aware of their commercial responsibilities."*

*(Landlord and tenant organisation)*

The lower levels of awareness and understanding for the non-domestic PRS MEES were reported to be due to several factors, including:

- Wider public interest in the domestic regulations, which generate greater publicity and coverage from politicians and the press.
- Longer leases for non-domestic properties and lower turnover of tenants. This suggests a lower number of new, renewed, or extended tenancies for non-domestic properties (relative to domestic), which means that commercial landlords are less likely to have been required to make changes to comply with the PRS MEES at this stage (i.e. prior to the introduction of the 'backstop' in April 2023 when the minimum standard will apply to all non-domestic properties).
- Greater variation in the sizes, uses and types of non-domestic properties, which tends to increase the complexity of the regulations due to the increased breadth of different requirements, potential measures and exemptions for commercial properties (relative to the stock of domestic properties that are typically more similar in terms of their characteristics and therefore the requirements and potential measures that can be installed).
- A lack of transparency and clarity of energy bills for many non-domestic properties, where energy bills can be included as part of a service charge (in a multi-tenanted building for example). This can make it more difficult to separate and understand the energy use for an individual property/unit, and to prescribe the most appropriate measures for increasing the EPC rating.
- The longer timescales associated with the backstop for rolling out of the PRS MEES across all non-domestic properties.

*"As a mixed landlord our focus has been very much on our domestic portfolio, which has a backstop date of this April [2020], as opposed to the non-domestic which has a backstop date of 2023."*

*(Landlord organisation)*

Particular issues were reported with landlord and tenant understanding of some of the more complex aspects of the regulations (such as exemptions). It was suggested that many landlords and tenants are highly reliant on advisers to provide information and guidance on these aspects and awareness and understanding can be significantly lower for those who do not access external advice. The focus group participants also suggested that smaller landlords are particularly dependent on their advisers to provide information and support on the PRS MEES.

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*"For those smaller landlords, the family trusts, etc... they're purely reliant on their advisors to inform them as such and effectively do the management and compliance side of things."*

*(Landlord and tenant organisation)*

While advisers were reported to be a key source of information, the organisations representing landlords and tenants also reported undertaking awareness raising activities, such as disseminating news and guidance about the PRS MEES, and running education campaigns to inform, update and support their members.

*"We see ourselves as playing quite a large role in effectively making sure that, across the breadth of our membership, people are not only aware of what the regulations are, as they exist, but are also feeding into any changes that may happen in the future."*

*(Landlord and tenant organisation)*

The focus group participants also highlighted the considerable breadth of online information and advice, although varying levels of quality mean that this can sometimes create additional confusion for readers. Participants also highlighted the lack of awareness raising activities from local authorities. This is in contrast to the domestic PRS MEES, where focus group participants perceived that local authorities have been more active in raising awareness (e.g. sending letters to landlords).

### 3.3.3 Landlord and tenant responses to the non-domestic PRS MEES

Focus group participants reported that their members were generally supportive and accepting of the non-domestic PRS MEES, which has contrasted with perceived greater opposition to the PRS MEES from domestic landlords.

However, there were again perceived differences between larger and smaller landlords, with larger landlords considered much more likely to have already acted in response to the non-domestic PRS MEES:

*"Landlords with larger portfolios are starting, kind of proactively, to improve the energy performance of their assets to make sure that they're not ending up with stranded assets in the future."*

*(Landlord organisation)*

*"Major commercial property owners [have] effectively got on with it and implemented compliance risk management processes, so essentially... reviewing EPCs across their property portfolio to identify at-risk properties or gaps, ... undertaking cost appraisals to understand risks and cost implications to bring it up to compliance standard, requiring their funds asset managers to feed compliance requirements into capital costs strategies and upgrades for particular properties or portfolios, setting EPC targets for major refurbishment works, implementing clauses in new leases as part of a fit-out, requirements, alterations, requests, thinking about this as part of their acquisitions and due diligence process and disposal strategies. So... they've just integrated it as part of their real estate investment strategy."*

*(Landlord organisation)*

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Again, the focus group participants reported that smaller landlords were less likely to have acted to date, and were considered more likely to take a reactive response and wait until they must act:

*"The smaller operations will be waiting to see what happens as well. They're less likely to be acting on this now, they may well be looking to make changes nearer to the deadline."*

*(Landlord organisation)*

In many cases, larger landlords were reported to have made improvements that go above and beyond the current requirements of the non-domestic PRS MEES:

*"A number of [landlords] are taking the opportunity to improve their properties well beyond the boundary level at which the MEES is currently set."*

*(Landlord organisation)*

While there is a reported lack of evidence on the extent to which different landlords are going beyond the minimum E rating, focus group participants suggested that actions were likely to be mixed across the commercial property sector. It was suggested that motivations for going beyond the minimum requirements were likely to include:

- Wanting to avoid properties becoming classed as 'substandard' (the term used to describe buildings that do not achieve the minimum requirement of the PRS MEES). This has created a significant reputational risk for landlords, and their ability to let their properties in the future, that is likely to encourage many to go beyond the minimum requirements. This was reported as an issue for some larger landlords, and particularly for properties that charge higher rents and are targeted at 'higher value' tenants, for whom the energy / environmental performance of a building is likely to influence their decision-making regarding premises.
- 'Future-proofing' against potential regulatory changes in the future, which was described as a key motivation for many landlords to go beyond the minimum E rating, particularly given trends for increasing targets for energy efficiency and environmental sustainability at national and international levels.

*"There was an expectation, very clearly, right from the word go, that there would be a trajectory to ratchet the MEES up successively over time. So, I think that's, certainly among the larger landlords, that expectation has been embedded in their thinking and their anticipation of what might come next."*

*(Landlord organisation)*

- Increasing aspirations amongst landlords and tenants to improve the efficiency of their energy use and contribute to the achievement of their own internal environmental sustainability targets.

Focus group participants suggested that their members had been installing a broad range of different energy efficiency measures. The installation of LED lighting was provided as an example of a common measure installed by landlords, particularly in

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the retail sector, because it provided a relatively low-cost measure for improving EPC ratings.

*"Switching to LEDs is biggest trend we've seen across the board which significantly improves your EPC rating and largely I think, if you do that, you pretty much meet the requirements."*

*(Landlord and tenant organisation)*

There were also suggestions that the PRS MEES had resulted in greater focus and attention on the default assumptions used within energy assessments. For example, it was reported that the default assumptions for air pressure within non-domestic properties tend to be overly negative, which had led to greater use of air pressure tests as a potential low-cost means of improving EPCs to an E rating, in some cases without needing to install any other measures.

The take-up of exemptions was also reported to have been fairly limited amongst the members of the participating organisations. To some extent, this was felt to have been due to the negative stigma attached to properties with exemptions. It was suggested that landlords needed to weigh up the financial costs of making improvements, compared to the potential future issues of selling properties with exemptions, which could affect sale values.

*"There's still a perception within the market that exemptions could have an impact on value and if you're disposing of a property that has an exemption, the vendor may view that as a potential future risk, so if you're selling a property, it's much easier just to make sure it's compliant."*

*(Landlord organisation)*

Furthermore, it was reported that some members had even acted early to dispose of properties that were likely to be difficult or expensive to adapt to meet the non-domestic PRS MEES:

*"For some organisations, actually a lot of activity was prior to the introduction of MEES of just getting rid of properties which were too problematic so that the rest of the market, who were less well informed, I'm afraid to say, would then have to deal with that further down the road."*

*(Landlord organisation)*

The focus group also discussed barriers that could be preventing landlords from responding to the non-domestic PRS MEES. Some examples are described below:

- The cost of installing the recommended measures can be a barrier to compliance with the PRS MEES, particularly for smaller landlords and those in rural areas where rents are relatively low, as it may not be financially viable to invest in the recommended improvements and landlords may not have access to necessary finance.

*"In a rural setting, properties have a maximum amount of rent they can achieve and that's whether they are energy band E or energy band C, for example, and that's because of their remote location. Our rural landlords don't have the capital to be able to go above and beyond at this point"*

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*because they cannot get the money they're investing back through an increase in rent."*

*(Landlord organisation)*

- A lack of enforcement from local authorities means that there is currently no deterrent to discourage non-compliance (as described in more detail in Section 3.3.4 below). A lack of enforcement action by local authorities was also felt to be contributing to low and varied levels of awareness and understanding of the non-domestic PRS MEES amongst some landlords.
- Some confusion and blurring of lines between landlord and tenant responsibilities in the EPC and the non-domestic PRS MEES. There can be issues in some sectors, such as the fit out of premises in the retail sector, which fall on tenants, while the fabric of the building is the responsibility of the landlord. It was reported that this confusion can be a barrier to taking action and represents an area that would benefit from further clarification and guidance.

Another issue affecting landlord responses to the non-domestic PRS MEES was a reported variance in the quality of energy assessments and assessors. It was suggested that in many cases, EPCs can automatically recommend particular measures to deliver the required increase in EPC ratings without giving sufficient thought to the specific needs of the individual property. The focus group participants suggested that there is a risk that these recommendations will deliver the required increase to an EPC E rating but may also act as a barrier to future improvements:

*"You don't want to be investing in measures that actually either are going to have unintended consequences or are in fact going to need to be pulled out, if the band goes up to...B, so it's a waste of everybody's time and money, so there is definitely something around methodology and assessors [of energy assessments] and their recommendations [that needs to be improved]."*

*(Landlord organisation)*

*"[Such measures can have] unintended consequences which will be potentially very problematic when it comes to a more rapid decarbonisation of the built environment [in the future]."*

*(Landlord organisation)*

### 3.3.4 Experiences of local authority enforcement

None of the focus group participants were aware of any examples of local authority enforcement of the non-domestic PRS MEES. This was reported to be consistent across all local authorities.

*"As far as non-domestic MEES is concerned, local authorities just haven't really been at the races in terms of raising awareness and frankly more in terms of enforcement either."*

*(Landlord organisation)*

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*"The threat of enforcement proceedings is just not real for [non-domestic] landlords yet."*

*(Landlord and tenant organisation)*

However, the participants also expressed empathy for the local authorities and understood some of the challenges and barriers they face in enforcing the non-domestic PRS MEES. The lack of enforcement activity was reported to be mainly due to a lack of capacity and competing priorities within local Trading Standards offices, combined with a lack of guidance and information from central government that local authorities would require to be able to enforce the non-domestic PRS MEES:

*"Local Trading Standards departments are already completely overwhelmed by all the other statutory duties that they have to undertake in relation to things like product safety and fair trading and weights and measures and all of that kind of thing."*

*(Landlord organisation)*

*"The reality is that there's no way a local authority can actually enforce because the information isn't there, they aren't able to check the EPC Register because it's all done by specific address and there's no way for them to ever know a lease is signed so it's just crazy to think that enforcement can happen without providing local authorities with the information to allow them to even undertake any enforcement action."*

*(Landlord and tenant organisation)*

Furthermore, this study has itself highlighted the inherent difficulties in accessing and analysing relevant data to provide a means of accurately identifying non-domestic properties in the private rented sector with low EPC grades. It is likely that these issues will continue to represent a significant barrier to the enforcement activities of individual local authorities and their ability to identify properties and landlords that are likely to be affected by, and need to comply with, the PRS MEES.

While there was some support for the incentivisation of local authority enforcement by allowing local authorities to generate revenue from enforcement activities, it was suggested that this would still not be feasible without the information that local authorities need to be able to access to enforce the PRS MEES effectively. One participant suggested that effective enforcement would require all EPCs to be recorded and registered as part of the leasing process. This would provide a 'trackable' system through which new leases could be identified and linked to a specific EPC.

### 3.3.5 Current and future impacts of the non-domestic PRS MEES

The focus group participants suggested that the non-domestic PRS MEES have delivered several impacts since they were introduced, including:

- A significant impact on raising awareness and understanding of energy efficiency and energy performance of non-domestic properties, particularly amongst larger landlords;

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*"It [the non-domestic PRS MEES] was really very, very significant in terms of raising energy efficiency up the agenda."*

*(Landlord organisation)*

*"I'd argue it's been one of the most transformative pieces of legislation in raising awareness of the importance of energy efficiency and energy performance in the commercial real estate sector."*

*(Landlord organisation)*

- Delivering improved energy performance of buildings where measures have been implemented, including many cases where landlords have gone beyond the minimum levels of compliance. However, the participants also reported a lack of evidence about: the extent to which energy efficiency of buildings had actually improved; whether the PRS MEES had caused behaviours to change; and the extent to which it had supported a transition to a low carbon economy.
- Increased expenditures on energy efficiency measures, thereby generating economic benefits for manufacturers and installers. While participants were not aware of any evidence relating to the nature and scale of these impacts it was felt that manufacturers and installers of the more common measures, such as LED lighting, were likely to have benefited most from the non-domestic PRS MEES.

As stated above, the most significant impacts of the non-domestic PRS MEES are expected to be concentrated on the behaviour and activities of larger landlords. Impacts for smaller landlords and those in rural areas were reported to be less significant. Participants also highlighted the potential longer-term risks that many buildings could fall into disrepair and/or require demolition if the required investment is not financially viable. This was felt to be a particular risk in rural areas, where rents and landlord incomes tend to be lower and have a ceiling value but could also affect properties in urban areas.

*"As much as they might want to be low carbon, they might want to do the right thing, but that still does come back down to the profit and loss sheet at the end of the day and the fact that the investment may not stack up. So, there are issues around some areas, particularly the rural sector and smaller landlords."*

*(Landlord organisation)*

The non-domestic PRS MEES was also reported to have given rise to some other unintended consequences, including:

- The installation of suboptimal improvements, installed due to their having a lower cost, which may act as a barrier to achieving a lower carbon economy in the future. This was felt to be a particular issue for non-domestic buildings due to the relatively long leases and lower turnover of commercial tenants, which provide fewer opportunities for landlords to make changes to energy efficiency measures between leases.
- While participants understood the need for landlords to obtain three quotes from installers to minimise risks of gaming of the system for obtaining



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exemptions, they also raised concerns that this process was overly burdensome and, in some cases, difficult to achieve and could therefore become a barrier to implementation. This requirement increases the administrative burden of the regulations and can be a particular issue in rural areas, where there are fewer installers, and when the quotes are required for exemptions as installers are less likely to provide quotes if they know there is a risk they will not be delivering the work.

*"Very often [the installation of measures is] done on the basis of minimum cost which has had the implication, unfortunately, of locking in some very poor improvements to buildings, and behaviours, in terms of reducing energy consumption and carbon emissions."*

*(Landlord organisation)*

*"In rural areas it's also a challenge just from... having to obtain three quotes for the seven year payback test that's even more of a challenge because there either may not be three technicians in the area to get a quote from or there won't be three technicians who are willing to give a quote when they know it's for an exemption rather than because they can get the work."*

*(Landlord organisation)*

It was also suggested that EPCs are very poor indicators of actual energy use in the non-domestic sector because there are many other factors that influence the energy demands of businesses that are not considered as part of the EPC. One participant suggested that EPCs should be adapted to show the actual energy use of a particular property and how that compares to appropriate benchmarks. It was felt that this would help to ensure the non-domestic PRS MEES can maximise its future impacts on the reduction of carbon emissions.

The focus group also discussed whether the costs of investing in energy efficiency measures as a result of the PRS MEES were likely to have to have been passed on to tenant businesses through increases in rents. Participants suggested that there is no evidence of this and that it would be very difficult to identify whether any rental increase had occurred as a result of compliance with the PRS MEES, due to the many other factors that influence rents. The participants suggested that there are likely to be some cases where landlords have been able to pass on these costs to tenants but they generally felt that it would be unlikely and too simplistic to expect landlords to have increased rents to cover the costs of installing measures. This is particularly the case for existing tenants, where leases and service charge agreements include legal restrictions relating to the specific costs that landlords are able to pass on to their tenants. Participants felt it was more likely for the costs of measures to be covered through an increase in rents for new tenants. However, the energy efficiency measures are likely to be one factor for any increase, alongside other refurbishment activities, that might contribute to bringing the building up to a certain standard that is able to achieve the higher rent.

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### 3.3.6 Potential changes to the non-domestic PRS MEES

All the focus group participants had already provided responses to BEIS's recent consultation on the future trajectory of the non-domestic PRS MEES. The focus group discussion suggested that participants, and their members, were generally in favour of increasing the requirements of the PRS MEES to require a B rated EPC by 2030 (interestingly, this was in contrast to the more cautious views expressed by the local authorities that were interviewed during the study).

*"[Our members] thought that it was quite easy to meet [the current PRS MEES] so they definitely welcomed the increase to EPC B by 2030 and some of them even thought that it could have gone further but they're currently content with that increase at the moment."*

*(Landlord organisation)*

The participants also suggested that landlords and tenants are likely to think about the PRS MEES in the context of other environmental and sustainability regulations. For those who aspire to achieve carbon neutrality, or net zero carbon buildings, it was felt that the current PRS MEES Regulations are unlikely to have any impact. Participants also made a broader point that by failing to encourage landlords and tenants to minimise the overall carbon emissions of the business, the PRS MEES had missed an opportunity to deliver greater progress towards a low carbon economy and the achievement of carbon reduction targets. It was also suggested that future policy would benefit from being more aligned to actual energy use and associated carbon emissions in buildings rather than modelled performance.

*"If they [landlords] want to achieve anything really meaningful, in terms of energy efficiency, they won't consider MEES to be really relevant."*

*(Landlord organisation)*

*"MEES aren't really going to help, in their current form anyway, significantly the move towards a low carbon economy... That's because they don't really help building owners, for example, to understand the actual carbon emissions associated with their properties and certainly don't think about it across the whole life of a building... In order for us to transition to a low carbon economy, and for the built environment, significant as it is in this regard, to play its part in helping that transition we will need to address whole life carbon. MEES, and the EPCs upon which they're based, really in that regard I would suggest are not fit for purpose"*

*(Landlord organisation)*

As stated above, another benefit of increasing the requirements under the PRS MEES is that some measures that have been installed at minimum cost to raise the EPC rating to E, can act as a barrier to achieving greater energy efficiency and higher EPC ratings in the future. This was reported to be much less likely to occur if the minimum standard was set at a higher level.

Finally, it was recommended that, if and when any changes are introduced to the PRS MEES and other energy efficiency regulations in the future, these should be joined-up to create a long-term plan rather than introducing piecemeal changes over

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time. It was suggested that landlords would benefit from longer-term targets and increased certainty around the regulatory requirements.

*"What's really important is that we can actually get this right and then stick to something long-term, so it enables all to make a plan and get to the targets rather than ongoing changes. It's nervous for us to make plans when in fact we don't know if things might change in two years or four years' time. So, I think there's a need to get this right but then there's a need to commit to it and allow landlords time to look at the costs and investment needed in the right technology."*

*(Landlord organisation)*

### 3.4 Comparisons with the domestic sector

This section presents some broad comparisons between the domestic and non-domestic PRS MEES. This is based on the findings of the research with local authorities, landlord and tenant organisations (undertaken as part of this study), as well as comparisons with the emerging findings from a separate research study that is currently evaluating the domestic PRS MEES regulations. The findings suggest that:

- **Awareness and understanding of the PRS MEES is likely to be lower amongst landlords and tenants of non-domestic properties than for domestic properties.** BEIS's interim report of the evaluation of the domestic PRS MEES regulations<sup>24</sup> reports that the majority of domestic landlords are aware of the PRS MEES regulations and at least half also fully understand the details<sup>25</sup>. These perceptions were shared by the landlord and tenant organisations that engaged in this study, which were also able to draw comparisons between their 'domestic' and 'non-domestic' members and reported that awareness was significantly higher for domestic landlords than for non-domestic landlords. They suggested this was due to: greater publicity and public interest in the domestic regulations; the longer timescales for rolling out the PRS MEES to all non-domestic properties, combined with longer leases and a slower turnover of tenants; and a more complex market for non-domestic properties (including a greater breadth of property types and sizes, and less transparency around energy bills and usage for some businesses).

However, the research also identified similarities between the domestic and non-domestic PRS MEES in terms of awareness and understanding. For example, in both the domestic and non-domestic sectors:

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<sup>24</sup> BEIS (2019) Evaluation of the domestic private rented sector minimum energy efficiency standard regulations: 2019 interim report

<sup>25</sup> Evidence from several different surveys (the 2018 English Private Landlord Survey; the 2018 Q3 Landlord Panel Survey; the 2018 Q3 Small Landlord Panel Survey; and the 2018/19 Welsh Landlord Survey) suggests that between 65% and 96% of domestic landlords are aware of the domestic PRS MEES, with between 47% and 82% saying they fully understand the regulations.

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- Awareness and understanding are reported to be lower amongst smaller landlords (i.e. those with smaller portfolios of properties and for individuals rather than corporate landlords)<sup>26</sup>.
  - Awareness and understanding are more limited in terms of specific details relating to grounds for exemptions and how these apply to different properties.
  - The main sources of information about the domestic and non-domestic PRS MEES have been letting agents, business advisors and trade bodies (with the media also playing a key role in the domestic sector).
  - **Local authorities appear to be more actively involved in enforcing the domestic PRS MEES than the non-domestic PRS MEES.** The local authorities interviewed as part of this study reported a greater focus on engaging with domestic landlords and tenants and enforcing the domestic PRS MEES. This was typically due to limited resources and competing priorities for local authorities, which restricted their resources for enforcement activities, combined with the earlier roll-out, greater publicity and clarity of the domestic PRS MEES (since it applies to all domestic properties from April 2020, making it easier to determine which properties are compliant). The local authorities that reported being most active in raising awareness and enforcing the non-domestic PRS MEES tended to be those that were working closely with colleagues in 'domestic' enforcement teams. This included the delivery of shared activities across both domestic and non-domestic sectors. This is not always easy when Environmental Health Officers, who are most likely to deal with the domestic PRS MEES, are not part of the team as the Trading Standards Officers, who are most likely to deal with the non-domestic PRS MEES. However, it is also worth noting that interviews with domestic landlords (undertaken to inform BEIS's interim evaluation of the domestic PRS MEES) found very little awareness of local authority enforcement activities. Some of the barriers to comprehensive local authority enforcement are also likely to be shared across the domestic and non-domestic regulations including: limited resources available for enforcement and a lack of information to enable local authorities to identify non-compliance and identify/make contact with the relevant landlords.
  - **Compliance with the non-domestic PRS MEES is likely to be varied (but is unclear based on current evidence), while compliance is reported to be high amongst domestic landlords.** BEIS reports that almost all domestic landlords would make energy efficiency improvements or seek an exemption if they had a property affected by the regulations and provides survey evidence suggesting that less than 5% of domestic landlords say they would not

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<sup>26</sup> For example, BEIS (2019) interim report of the evaluation of the PRS MEES regulations states that the 2018 English Private Landlord Survey found that: 55% of individual landlords say they are aware and fully understand the details of the regulations compared to 80% of corporate landlords; while 46% of landlords with one property say they are aware and fully understand the details compared to 81% of those with five or more properties.

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comply<sup>27</sup>. Though based on qualitative research and not strictly comparable, this contrasts with views of landlord organisations from the focus group undertaken for this study. This suggested domestic landlords were more opposed to the PRS MEES than their non-domestic members, who were generally supportive and accepting of the regulations. The research undertaken for this study also suggests similarities between domestic and non-domestic landlords:

- **Larger landlords are more likely to comply and take proactive action than smaller landlords.** This was discussed in the focus group of landlord organisations, while the 2019 BEIS report includes survey evidence that suggests that non-compliance is likely to be slightly higher amongst smaller domestic landlords<sup>28</sup>.
- **Common reasons for non-compliance** include a lack of awareness, confusion or uncertainty concerning the regulations for some landlords (especially smaller landlords), combined with a current lack of local authority enforcement, particularly in relation to the non-domestic private rented sector.
- The research suggests that **only a minority of landlords would be expected to increase their rents to meet the costs of energy efficiency improvements.** While this was based on anecdotal evidence from the landlord and tenant organisations for the non-domestic sector, BEIS provides survey evidence suggesting that between 13% and 21% of domestic landlords would put up rents to fund the cost of the improvements<sup>29</sup>.
- The research suggests **the domestic and non-domestic PRS MEES may prompt a minority of landlords to sell properties.** The landlord organisations suggested that this was most likely to be the case for larger non-domestic landlords, who could foresee and were trying to avoid future costs by selling property before being required to install costly improvements. For the domestic sector, BEIS reports that between 6% and 20% of domestic landlords said they would either sell or not re-let their property (split fairly evenly between those who would choose to sell before or after making the required improvements)<sup>30</sup>.

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<sup>27</sup> [Domestic private rental sector minimum energy efficiency standards: interim evaluation](#) (BEIS 2019). This states that the 2018 Q3 Landlord Panel Survey and 2018/19 Welsh Landlord Survey both found that 1% of landlords would not comply with the Domestic PRS MEES Regulations, while the 2018 Q3 Small Landlord Panel Survey found that 4% of small landlords would not comply.

<sup>28</sup> *ibid*

<sup>29</sup> BEIS (2019) interim report of the evaluation of the PRS MEES regulations states that the proportion of landlords saying they would put up rents to pay for energy efficiency improvements was: 21% in the 2018 Q3 Landlord Panel Survey; 13% in the 2018 Q3 Small Landlord Panel Survey, and; 19% in the 2018/19 Welsh Landlord Survey.

<sup>30</sup> BEIS (2019) interim report of the evaluation of the PRS MEES regulations states that: 3%, 5% and 9% of domestic landlords say they would carry out works and then sell their property, while a further 3%, 2% and 11% of domestic landlords would not carry out any works and either sell or not re-let the property according to results of the 2018 Q3 Landlord Panel Survey, the 2018 Q3 Small Landlord Panel Survey and the 2018/19 Welsh Landlord Survey respectively.

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# Annex 1 Methodology

## A1.1 Secondary data analysis

The study included a quantitative analysis of secondary data on non-domestic properties, EPCs, landlords, and tenant businesses. The main objectives of this analysis were to provide an overview of the landscape of non-domestic properties in the private rented sector, and to generate evidence and analysis of the characteristics of commercial landlords and tenant businesses who are affected by the regulations. The dataset generated for this analysis could also be useful in informing sampling frames for future research with non-domestic landlords and tenants.

The following section provides details of the datasets that were used, including how access to the datasets was gained, their structure and key variables.

To perform this analysis, data from four different sources were collated and merged together. The datasets utilised for this analysis were:

- Non-domestic EPC Register – which contains information about non-domestic properties for which EPCs have been lodged, some of the characteristics of those properties, the reason for undertaking an EPC and the EPC rating itself.
- HM Land Registry data – which are stored in three separate databases depending on the type of ownership: a) domestic corporations; b) foreign corporations; and c) individuals. These data provide information on the ownership of properties, their value, and their purchase date.
- Inter-Departmental Business Register (IDBR) – which provides information on the tenant businesses including address, annual turnover, employment and whether the business is a franchise or a stand-alone business.
- People with Significant Control (PSC) dataset from Companies House – which contains information on the owners of businesses registered in the UK.

The data from these four different sources did not contain common identifying fields. Therefore, the data were merged using either a best approximation algorithm to match addresses across datasets or by matching company reference numbers in the case of IDBR and Companies House data. The methods used to merge the datasets are explained below alongside details of the resulting dataset.

The final dataset used for the analysis contained 75,405 observations, each with information about the property (including EPC rating), the landlord, and the tenant business.

The merged dataset helps to identify and analyse the characteristics of non-domestic rented properties for which EPCs have been lodged that do not currently meet the minimum standard (i.e. those with an F or G rated EPC). It is also intended that this information will be a useful resource for the post-implementation review (PIR) of the non-domestic PRS MEES.

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This annex also includes details on the statistical models used to estimate relative effects of characteristics of properties, landlords, and business tenants on the likelihood that a property has a low EPC grade of F or G and is therefore likely to be affected by the PRS MEES.

### A1.1.1 Data sources

#### **EPC Register**

The non-domestic EPC dataset was extracted from the EPC Register. This provides information on the EPCs and ratings that have been lodged for non-domestic properties in England and Wales since 2008. The EPC Register is maintained by the MHCLG and is updated every time a new EPC is lodged. For the purposes of this project, the dataset was downloaded in February 2020 and was last updated in August 2019. The dataset is publicly available and is free of charge.

This dataset was used in this research study to inform estimates of potential non-compliance with the non-domestic PRS MEES (i.e. numbers of properties with a low EPC rating of F or G). It also provided information on the characteristics of those properties (such as the type of property<sup>31</sup>, floor space, energy sources, and current and target CO2 emissions). Additionally, the dataset provided variables on the date and reason for the energy assessment (whether it was prompted by the construction of the building, change in ownership or change in lease). As stated in Section 1, the 'reason for the assessment' can be used to identify properties that undertook an assessment before being let to a tenant business.

The unit of analysis in this dataset is the individual EPC certificate (lodged between April 2008 and August 2019). The data were restructured so the unit of analysis is the individual property, resulting in the identification of 783,402 unique non-residential properties. All EPC(s) for each unique non-residential property were then linked and used to determine whether the property had lodged any previous EPCs and whether there had been any change in the EPC rating between assessments.

#### **Inter-Departmental Business Register (IDBR)**

The IDBR dataset provides information on every business in the UK and is maintained by the Office for National Statistics (ONS). The data are based on inputs from Value Added Tax (VAT) and Pay As You Earn (PAYE) records from HMRC. All data in the IDBR are treated as confidential and are only released to users who apply and sign confidentiality agreements. The research team was granted permission to access the IDBR for the purposes of this study and received the data extract in February 2020.

The IDBR covers around 2.7 million businesses across all sectors of the economy, although very small businesses operating below the VAT and PAYE filing thresholds will, in most cases, not be included. The unit of analysis in this dataset is the local

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<sup>31</sup> Property type categories were collapsed into 9 general categories (education; hospitals and primary care; hotels; industrial; offices and workshops; restaurants, cafes and bars; retail; storage; and other),

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unit of the business (i.e. the individual business located at a particular site). The data extract used for this analysis included a subset of variables for all available observations in the IDBR. This included information on the name, ownership, and address of the tenant business, as well as data on their turnover and employment<sup>32</sup>. It also included company reference numbers (CRNs), a unique numerical identifier used for businesses registered in the UK.

The IDBR dataset was useful for understanding the profile of tenant businesses. Similarly, it enabled analysis of whether business characteristics, such as employment or turnover, have any influence on EPC grades and the likelihood of being affected by the PRS MEES.

## **Companies House**

The People with Significant Control (PSC) dataset is maintained by Companies House and provides information on businesses and their owners for all businesses registered in the UK. The PSC data is updated daily, is publicly available and free of charge. The version of the PSC dataset used for this analysis was downloaded in March 2020<sup>33</sup>.

The individual unit of analysis is the business owner and the dataset contains records for 7,613,733 owners spanning 5,563,747 businesses<sup>34</sup>. The data have been restructured at a business level, retaining information on all business owners. In addition to the name and address of the business and the name of the business owner(s), the PSC dataset also includes information on the type of owner (individual or corporation), the owner's country of residence, and their share of control over the business. As with the IDBR, businesses in the PSC are also identified by their CRN.

This dataset has been useful for helping to determine whether a property is rented, based on an assessment of whether the owner of the tenant business is a different entity to the owner of the property.

## **HM Land Registry**

HM Land Registry provides information on the ownership of properties in England and Wales. There are three separate databases depending on the type of ownership: a) domestic corporations; b) foreign corporations; and c) individuals. All three databases are maintained by the HM Land Registry. The two databases containing properties owned by corporations are publicly available and free to download, whereas the data for properties owned by individuals are only available in individual PDF records that can be purchased for a fee<sup>35</sup>.

All three datasets contain information on the address and owner(s) of the property, the property purchase price, and the date of purchase. The database of properties

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<sup>32</sup> Turnover is only available at the enterprise level and not at the local unit level.

<sup>33</sup> The PSC database is stored in JSON format, but the data are translated into CSV format for processing and linking to data from other sources.

<sup>34</sup> Businesses can have multiple owners.

<sup>35</sup> As of April 2020, each property title was sold at £3 when individually purchased and between £3.50 and £4 when purchased in bulk (depending on whether title numbers or addresses are provided) in addition to a £50 service charge.



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owned by domestic corporations contains 3,739,108 unique properties, while the database of properties owned by foreign corporations contains 96,658 unique properties. A further 1,650 data records were purchased for properties owned by individuals<sup>36</sup>. Of these, 1,000 were randomly sampled to form a representative sample, while the remaining 650 were selected to cover a spread of different types of properties and different EPC ratings and are intended to inform sampling for future research activities.

The Land Registry datasets have been useful for identifying the name and type of owner of properties. This was used alongside the other three datasets to determine whether each property is likely to be rented or is being used by a business owned by the same individual or corporation. Additionally, it was used to construct a variable for portfolio size (based on the number of properties owned by each landlord<sup>37</sup>) that enabled an analysis of whether portfolio size has any impact on EPC grades and the likelihood of being affected by the PRS MEES.

The Land Registry data have been used in lieu of data from the Valuation Office Agency (VOA), which are not publicly available, and could not be used for this project. The VOA data covers all non-domestic rateable properties in England and Wales and could potentially provide valuable information on these properties, their landlords and tenants. Any future evaluation should explore VOA data as a source for the identification of rented properties.

### A1.1.2 Merging of datasets

The data from the four different data sources were merged into a single dataset. This was achieved through three distinct rounds of matching:

1. Data from the EPC Register were merged to data from the IDBR;
2. Data from the Land Registry (all three datasets) were added, and;
3. PSC data from Companies House were added.

The steps taken in each of the three rounds of merging are described below. There are two outputs from the merging process:

1. A comprehensive dataset that includes partial matches; and
2. A smaller dataset that focuses only on observations that have been fully matched across the four data sources.

In the **first round** of merging, the non-domestic EPC data (which contains EPC ratings and environmental information about properties) was merged with IDBR data (which contains information on tenant companies). The physical address of the property was the only overlapping variable and was therefore used to merge the two datasets. However, many of the addresses were listed in different formats, both

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<sup>36</sup> The number of records purchased for properties owned by individuals was restricted by the study budget of £5,000 for purchasing Land Registry data.

<sup>37</sup> This could only be created for properties owned by corporate owners as the available data for properties owned by individuals was only a sample.

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within and across the two sources. For example, some addresses used abbreviations in one dataset yet were written in full in the other, while others contained information on the property unit in one dataset but not in the other. This meant that the merge could not be completed by directly matching the address text. Instead, a *fuzzy* or *best-approximation* algorithm was applied and was devised as follows:

1. Sort the EPC and IDBR datasets by postcode;
2. Take all entries in the EPC dataset in a certain postcode;
3. Take all (if any) entries in the IDBR dataset in the same postcode;
4. For each entry in the EPC dataset within the given postcode, measure similarity between the address in the EPC dataset and the address of each entry in the IDBR dataset within the same postcode;
5. Match the EPC observation with the most similar entry in IDBR (subject to a minimum similarity rating of 75% between the two pieces of address text<sup>38</sup>) using the Jaro-Winkler string distance<sup>39</sup> - a string similarity algorithm developed for matching between inconsistent addresses; and
6. Repeat steps (2) to (5) for every postcode in the entire dataset<sup>40</sup>.

The result of this process was a merged dataset of information on EPCs and energy efficiency characteristics of properties (from the EPC dataset) and information about the tenant companies that operate from those properties (from the IDBR dataset). As there were far fewer observations in the EPC data (due to most non-domestic properties not having lodged any EPCs since 2008), the resulting dataset from this stage contained a large proportion of businesses without a match in the EPC data.

Furthermore, with *best-approximation* matching, there is a trade-off between matching addresses that are actually different (a false positive match) and failing to match addresses that refer to the same property (a false negative match). The algorithm resulted in more than 95% of observations from the EPC dataset matching to IDBR observations as the process linked every EPC observation with the best match in the IDBR within the same postcode area (with a minimum similarity of 75%). However, this figure included many false positive matches, where the closest address in the IDBR was not an actual match to the address in the EPC data.<sup>41</sup> In the final step in this round, false positives were identified by testing whether the numerical characters in one address were missing in the other (or *vice versa*). When errors were found, the merge was overturned and the EPC and IDBR observations were left unmatched. This post-merge cleaning step narrowed the successful

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<sup>38</sup> 75% similarity was chosen after testing the matching of addresses between datasets. It is common in fuzzy matching and machine learning methods that no exogenously defined value is appropriate, so a best performing parameter (such as this) is defined by validating subsamples of data.

<sup>39</sup> The Jaro-Winkler string distance metric is a string similarity algorithm developed for matching between addresses and is taken as the standard for fuzzy matching of address data. See related: Jaro, M. A. (1989). "Advances in record linkage methodology as applied to the 1985 census of Tampa Florida". *Journal of the American Statistical Association*. 84 (406): 414–20.

Yancey, William E. "Evaluating string comparator performance for record linkage." *Statistics* 5 (2005).

<sup>40</sup> This was completed using multiprocessing for computational feasibility.

<sup>41</sup> The exact number of false positives cannot be calculated unless each match is revised.

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matches between the EPC and IDBR data to 108,760 (representing 16% of the EPC observations), although the overturned matches remain included in the comprehensive dataset of partial matches (comprising 497,891 observations from the EPC dataset and 7,677,291 from the IDBR).

In the **second round** of merging, the dataset from the first round was matched to Land Registry data, which provided information on the owner of the building. As in the first round, the common variable across datasets was the property address, which was again recorded in multiple formats. Thus, the same algorithm and process of correcting for false positive matches (i.e. removing cases that contain mismatched street numbers) was applied. This resulted in 101,403 Land Registry observations being matched to observations in both the EPC and IDBR records (for inclusion in the fully matched dataset), and 155,814 unique Land Registry observations being matched to observations within either EPC or IDBR records (which were added to the dataset of partial matches).

The matched observations from this round provided additional information on the name and address of the property owner(s) and whether the property was owned by a corporation (domestic or foreign) or by an individual. As mentioned above, due to the budget constraints of this project, a sample of Land Registry data was purchased for properties owned by individuals (and included in the fully merged dataset), which represents only a small share of the total population of properties owned by individuals.<sup>42</sup>

In the **third round** of merging, the PSC dataset from Companies House was added. This merging step used direct matches of company reference numbers (CRNs) found in both the PSC and the IDBR data. This resulted in 75,405 records in the PSC dataset being matched to observations in the EPC, IDBR, and Land Registry data (for inclusion in the fully matched dataset) and 4,025,616 PSC records being matched to observations with IDBR records only (which were added to the dataset of partial matches).

As stated above, the three rounds of merging produced two datasets: one large, partially merged dataset containing 8,341,720 observations, in which the inclusion criteria was having a valid record from the EPC or IDBR datasets (i.e. observations from the Land Registry or PSC datasets that could not be matched to EPC or IDBR records were dropped from this dataset); and a smaller dataset of 75,405 observations that contained only 'fully merged' observations (i.e. those with data that could be matched across all four data sources). Table A1 shows the number of data points from each of the four data sources contained within both the fully and partially merged datasets.

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<sup>42</sup> It is not possible to know what the population of non-domestic properties owned by individuals is as this information is not disclosed by HM Land Registry.

**Table A1: Composition of merged datasets**

Data source	Fully merged dataset	Partially merged dataset
EPC	75,405	664,429
IDBR	75,405	7,843,829
Land Registry	75,405	155,814
PSC (Companies House)	75,405	4,025,616
<b>Total</b>	<b>75,405</b>	<b>8,341,720</b>

After completing the merging process (for the fully merged dataset), an indicator was developed to identify rented properties that were assumed to be in the private rented sector. This indicator variable showed whether each property was occupied by the property owner or if it was assumed to be rented (i.e. in cases where the property owner(s) was different to the owner of the tenant business). This was again inferred from string similarity between the names included in the IDBR, PSC and Land Registry datasets, as the format can differ across sources. This process identified corporations named after an owner's name as well as identifying matches between the names of owners of tenant businesses and owners of the properties from where they operate<sup>43</sup>. The process of generating this indicator used the following steps:

1. Firstly, the name of the owner(s) of the property (from the Land Registry data) was compared with the name of the owner(s) of the tenant business (from the Companies House data) using string similarity (i.e. allowing for small differences in punctuation and word abbreviations). If a match was made between the owner(s) of the property and the owner(s) of the tenant business then it was assumed that the property was owner-occupied and not rented and the variable indicating whether the property was 'rented' was set to 0. If no match was made, the property continued to the next step.
2. Next, the name of the owner(s) of the property and the name of the tenant business (from the IDBR dataset) were compared using string similarity in order to identify businesses that are named after the owner (as is common in many law firms and pharmacies). If a match was made then the property was assumed to be owner-occupied and not rented (and the indicator for 'rented' was set to 0). If no match was made, the property continued to the next step.
3. Finally, all other properties that are listed in the IDBR data but have not been identified as owner-occupied in steps (1) or (2) are assumed to be rented (and the variable whether the property was 'rented' is set to 1).

The fully merged dataset could then be used to conduct a descriptive analysis of properties in the non-domestic sector and to inform estimates of potential non-

<sup>43</sup> For example, if Mrs CompanyA incorporates a firm named CompanyA Ltd., but also personally owns the premises for CompanyA Ltd., then this is counted as the same owner and not rented.

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compliance with the PRS MEES. However, this dataset does have some limitations, which are set out below:

- The fully merged dataset contains information on non-domestic properties that are assumed to be rented and have low EPC ratings (and are therefore likely to be affected by the PRS MEES). This has been used to conduct a descriptive analysis of the non-domestic private rented sector but only covers a sample of properties and tenant businesses. This was largely due to complications with address matching and was not a systematic issue for specific types of property or business. It is not possible to determine the extent to which the sample is representative of the wider population but there is no reason to suspect that a specific type of property is excluded disproportionately from the dataset.
- The indicator for identifying rented properties is a proxy indicator (based on matching details of owners of properties and businesses) and therefore may not be completely accurate. There is also reason to suspect that this measure may falsely identify owner-occupied properties as rented since figures from a previous report suggest that 60% of non-domestic properties are rented and 40% are owner occupied<sup>44</sup>. The proxy indicator for rented properties found that, for the sample of properties used in this study, 95% were identified as rented and only 5% were owner-occupied. The large difference in the split of rented and owner-occupied properties may also be caused by an over-representation of rented properties in this dataset (which could have been due to the merging process)<sup>45</sup>.
- The datasets include only a small sub-sample of properties owned by individuals. This sub-sample included a randomly selected representative sample of 1,000 land registry records as well as a constructed (i.e. non-representative) sample of 650 additional non-domestic properties owned by individuals. However, because of the limited size of this sub-sample it was not possible to perform a comprehensive analysis of the whole non-domestic private rented sector or for all properties with low EPC ratings. This was due to the limited number of Land Registry records that could be purchased with the available budget<sup>46</sup>.
- The datasets may contain incorrectly merged observations (false positives), and it is not possible to determine the extent of these. Although the post-merge cleaning step aims to remove incorrectly matched observations, it is not possible to be completely certain that all matches are accurate when performing a fuzzy or best-approximation merge.
- EPC data are only available from 2008 onwards. The dataset therefore focuses on properties that have been built, sold, or entered new leases since

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<sup>44</sup> BEIS (2016) Building Energy Efficiency Survey (BEES), 2014-15: Overarching Report

<sup>45</sup> An alternative option for identifying rented properties was also investigated, using the transaction type variable in the Non-Domestic EPC dataset to identify 'property to let'. However, this approach was rejected for two reasons: a) the variable did not have full coverage across all observations (i.e. 16.1% of observations in the Non-Domestic EPC dataset had missing values for this variable); and b) the 'property to let' value did not identify all rented properties (i.e. some rented properties were included in different sub-groups if their EPCs were lodged when the property was constructed or sold).

<sup>46</sup> This could potentially be overcome in future, if it is possible to obtain access to VOA data.

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2008, and have received and lodged their respective EPCs. This means that a large share of properties, particularly older properties, will be excluded.

- The datasets do not contain contact information (i.e. email addresses, telephone numbers) other than names and postal addresses of business and property owners. This means that additional work will be required to source contact details to inform recruitment processes for future research activities.

### A1.1.3 Statistical modelling

To estimate the relative impact of characteristics of properties, landlords, and business tenants on the likelihood of being associated with low EPC grades, two main specifications have been modelled. In both models, the outcome is used to indicate the likelihood of having a low EPC grade and therefore the likelihood of being affected by the PRS MEES<sup>47</sup>:

- In the first model (model 1) a linear regression was used to control for region, property type, ownership type and business characteristics (i.e. turnover, employment, and whether the business was a franchise or a stand-alone business);
- The second model (model 2) emulated model 1, but also controlled for the floorspace of the property.

In both models, standard errors were clustered at the landlord level in order to account for intragroup correlation and relax independence requirements across observations. The results of both models were then compared to analyse the effects of a variable (property size) that is highly correlated with other control variables such as property type and business characteristics. These results are presented in Section 2 of the report.

## A1.2 Qualitative research methodology

### A1.2.1 Qualitative interviews with local authorities

Qualitative interviews were carried out with representatives from 14 local authorities. The interviews aimed to provide evidence of what, if anything, local authorities have done to engage with landlords and enforce the PRS MEES.

The interviews were not designed to provide a statistically representative sample of local authorities in England and Wales. Instead, a purposive sampling approach was used to identify and engage with local authorities that were expected to be most likely to have undertaken activities in relation to the enforcement of the non-domestic PRS MEES. The sample was selected based on the following characteristics:

- Local authorities with a high number and proportion of F and G rated EPCs for non-domestic properties; and

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<sup>47</sup> The value of this indicator variable is equal to 1 if the building's EPC is G or F and 0 if the building's EPC is A+, A, B, C, D, or E.

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- Coverage of different regions and a mix of urban and rural areas.

The sample also included two local authorities that had previously contributed to the Warm Arm of the Law research project<sup>48</sup> and another two local authorities that had been identified as having a high number of F and G rated EPCs and/or high levels of enforcement activity in relation to domestic properties in the private rented sector<sup>49</sup>. These local authorities were included to provide an opportunity to explore potential overlap in the enforcement of the domestic and non-domestic PRS MEES, including whether areas with high levels of enforcement of the domestic regulations are more likely to be actively enforcing the non-domestic regulations.

A total of 68 local authorities were included in the sample and 14 interviews were completed. The final achieved sample included:

- Coverage of eight of the ten regions in England and Wales;
- Nine predominantly rural areas and five urban areas; and
- Local authorities with a relatively high proportion of F and G rated EPCs (all 14 local authorities had a higher proportion of F and G rated EPCs than the national average).

For each local authority, desk research was undertaken by the research team to identify a senior member of their local Trading Standards team, having been identified as the people most likely to be responsible for enforcement of the non-domestic PRS MEES. The sample was then contacted using the introductory email text provided in Annex 2. Six of these emails were undeliverable. The response was relatively low due to the fieldwork overlapping with the start of the Covid-19 pandemic, as described below.

The interviews lasted for between 20 and 30 minutes and were undertaken using the semi-structured topic guide, also provided in Annex 2. The main topics covered in the topic guide included:

- Local authority roles and responsibilities in relation to the non-domestic PRS MEES;
- Perceptions of awareness and understanding of the PRS MEES amongst non-domestic landlords and tenants;
- If and how local authorities have approached enforcement of the non-domestic PRS MEES and undertaken any activities to raise awareness and track compliance;
- Perceptions of the extent of non-compliance and the impacts of the non-domestic PRS MEES;
- Interactions between the PRS MEES and other local policies (e.g. around energy efficiency); and

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<sup>48</sup> CAG Consultants and the Association for the Conservation of Energy (2018) The Warm Arm of the Law: Tackling fuel poverty in the private rented sector - Policy report

<sup>49</sup> RSM (2019) Enforcing the enhancement of energy efficiency regulations in the English private rented sector: Final report

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- Local authority views of potential changes to the non-domestic PRS MEES in the future.

Interviews were recorded and transcribed and the results were analysed using a coding frame (based around the key points listed above). The key findings are presented in Section 3 of this report.

### A1.2.2 Focus group with organisations representing landlords and tenants

The study also included a focus group with key organisations representing non-domestic landlords and tenants. This aimed to capture the views of trade bodies and other organisations representing commercial landlords and tenant businesses and understand how their members (i.e. non-domestic landlords and tenants) have reacted to the PRS MEES.

A sample of 18 organisations was selected to provide coverage of landlord and tenant members, and a range of membership sizes, sectors and types of property. These organisations were contacted by email. Of the 18 organisations contacted, 12 expressed interest in attending the focus group<sup>50</sup>. The focus group was arranged for the date that maximised attendance, and a total of nine participants attended. The focus group was held on 12 March 2020, with most participants attending remotely<sup>51</sup>. The focus group lasted for 90 minutes and was delivered by moderators from ICF using the facilitation guide provided in Annex 2. The facilitation guide was designed to encourage intra-group discussion and was successful in engaging all participants. It covered the following key areas of discussion:

- Awareness and understanding of the non-domestic PRS MEES amongst landlords and tenants;
- Landlord and tenant responses (planned and actual) to the non-domestic PRS MEES;
- Landlord and tenant experiences of local authority enforcement;
- Landlord and tenant views of the likely current and future impacts of the non-domestic PRS MEES; and
- Landlord and tenant views of potential changes to the non-domestic PRS MEES in the future.

The focus group was recorded and transcribed and the results of the analysis are presented in Section 3 of this report.

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<sup>50</sup> One organisation declined the invitation and five others did not respond to the invitation.

<sup>51</sup> The focus group was intended to be delivered at the ICF offices in London. However, 12 March 2020 was around the time that the UK Government started suggesting that people should work from home wherever possible. Invitees were therefore offered the opportunity to attend the focus group remotely, by dialling in, rather than attending in person. As a result, only two participants attended the focus group in person, while the other seven participants chose to dial-in.



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## A 1.3 Challenges and limitations

The project faced several challenges and limitations, which are described below:

- The sample sizes for the qualitative fieldwork were relatively small, comprising 14 qualitative interviews with local authorities and a focus group with nine organisations representing commercial landlords and tenant businesses. This means that the research results presented in Section 3 apply to only a very small sample and cannot therefore be considered to be representative of the total population of local authorities in England and Wales, or the stakeholder organisations who represent landlord and tenants. The sample of local authorities also focused on areas with high numbers and proportions of F and G rated EPCs and it is possible that their behaviour might not have been representative of other local authorities (e.g. others might be expected to have undertaken less enforcement activity and/or have had less engagement with non-domestic landlords and tenants).
- There is also a risk that participants in the qualitative interviews and focus group may have been reluctant to admit to a lack of responses or activities to enforce or comply with the PRS MEES respectively. The risk was minimised by offering anonymity to the participants, but should still be acknowledged, particularly amongst the focus group participants, who generally reported high levels of compliance amongst their own members, but suggested that compliance was likely to be lower amongst smaller landlords who were not members of these organisations.
- Accessing Land Registry data was delayed due to issues with the purchasing of records for properties owned by individuals, which were required for inclusion in the dataset. These records are not freely available to the public and are currently sold via the HM Land Registry website where they must be purchased one at a time. Data from the Land Registry can be purchased in bulk with a business subscription and for a higher price per record (in addition to an additional service charge), however, the research team did not have access to a business subscription that could be used for this study. Therefore, the research team was required to search, pay, and download all 1,650 records individually. While the purchase process was partially automated with the use of a python script, further delays were faced because the Land Registry system includes anti-fraud measures that place temporary blocks on credit cards after a given number of purchases within a specified period of time. This meant that purchasing had to be paused while waiting for the blocks to be removed. These issues extended the overall duration of the task by several weeks.
- The study investigated the potential to use data from the Valuation Office Agency (VOA) to inform the analysis of non-domestic properties in the private rented sector in England and Wales. It is believed that this dataset would provide valuable information on the tenancies of non-domestic properties that would provide a more accurate means of identifying the population of non-domestic properties in the private rented sector. It could also provide useful

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information on the tenant business and the characteristics of their properties. Unfortunately, there was insufficient time to gain access and use VOA data as part of this study and there would need to be discussions between BEIS and VOA to establish whether such data could be shared in the future.

- The Covid-19 pandemic caused several issues and delays with fieldwork and data analysis tasks, listed below. However, this did not materially affect the results of the qualitative research:
  - UK Government guidance and then later instructions for people to work from home, and take-up of the Government's Coronavirus Job Retention Scheme (CJRS) to furlough staff, all made it more difficult to complete the qualitative research with local authorities. The fieldwork period was extended to allow more time to complete interviews with individuals who had previously agreed to participate in the research. Despite the extension, it was only possible to complete 14 of the planned 15 interviews with local authorities, although this is unlikely to have affected the research results given the high levels of consistency in approaches and perceptions across the 14 interviewees.
  - The approach to the focus group was also changed due to UK Government guidance for people to work from home where possible. The potential risks and mitigation options were discussed between BEIS and the research team on the day before the focus group. It was decided that invitees should be provided with a choice of participating in person at the ICF office in London, or dialling in. This allowed the focus group to continue with all nine participants, all of whom actively engaged in the discussion.
  - There were also delays with data access and processing due to the research team also working from home. The data analysis task was extended to allow time for the research team to establish the relevant processes and systems to enable the data analysis to be undertaken remotely. There were also delays while permission was sought from the ONS to approve the remote processing of data from the IDBR.

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# Annex 2 Qualitative Materials

Annex 2 provides the research tools used for the qualitative research tasks. These comprise the topic guide used for qualitative interviews with local authorities and the facilitation guide used for the focus group with organisations representing landlords and tenants.

## A2.1 Topic Guide: Local authority interviews

### Introductory email

Subject line: Request for interview – research into non-domestic minimum energy efficiency standards

Dear [INDIVIDUAL NAME]

The Department for Business, Energy and Industrial Strategy (BEIS) has commissioned the consultancy firm [ICF](#) to carry out research to inform an initial review of the regulations that establish a minimum energy efficiency standard (MEES) for non-domestic properties in the private rented sector (PRS).

We are planning to talk to a selection of local authorities, as well as landlords and tenant businesses, to collect views and discuss experiences of those affected by the non-domestic PRS MEES. This research provides an opportunity for you to inform and influence policy decisions regarding the non-domestic PRS MEES.

We would like to invite you to participate in a telephone interview to discuss different aspects of the regulations including: levels of awareness, understanding and compliance within your area; any steps you have taken and issues faced in engaging with landlords, identifying non-compliance and enforcing the non-domestic PRS MEES; emerging impacts and potential changes and improvements to the policy in the future.

On behalf of the evaluation team, I would like to arrange a convenient date and time to speak with you and/or any colleagues you think would be beneficial to have on the call. We expect that the interview would take around 20 minutes. If you are willing to participate in this research, please can you get back to me and suggest some dates / times that would be convenient for you to undertake a telephone interview during the next three weeks (before 6th March).

We have agreed with BEIS that interview transcripts or notes may be shared with the department. These will be anonymised unless we have obtained your permission to share them in a non-anonymised format (further details below). Furthermore, nothing in our report will be attributable to you specifically or your organisation without your prior agreement.

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I look forward to hearing from you, and thanks in advance for your support with this research. If you have any questions, please do ask.

Kind regards

XXXXX, ICF evaluation team

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Our interview programme has been designed to be GDPR compliant. All data will be stored by ICF in compliance with the [ICF Privacy Statement](#). The interview will be conducted by a researcher from ICF. If you give your consent, the interview will be audio recorded; if not then we will take notes. The interview transcript or notes may be shared with BEIS so they can check the quality of our research. The transcripts will be anonymised, and it will not be possible for BEIS to identify any individual or organisation from the information we give them, unless we have obtained your permission to share them in a non-anonymised format. In our report we will not attribute any information to any individual or organisation without your prior agreement.

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## Introduction

Hello, my name is XXXXX. Thank you for agreeing to participate in this interview.

To recap, ICF has been commissioned by BEIS to carry out research to inform an initial review of the regulations that establish a minimum energy efficiency standard (MEES) for non-domestic properties in the private rented sector (PRS). I will refer to these standards as the 'PRS MEES' during this interview.

The aim of the interview is to discuss your views and experiences of the non-domestic PRS MEES and provide an opportunity for you to inform and influence future policy decisions regarding the PRS MEES. I would like to discuss: awareness, understanding and compliance within your area; your experiences and issues faced in enforcing the regulations; emerging impacts and the potential to make changes to improve the regulations in the future. I would like to reassure you that there are no right or wrong answers to any of these questions, and this is not an audit of current practices. Rather, the interviews are intended to collect information on activities currently being undertaken by local authorities, landlords and tenants, identify issues and barriers, and explore opportunities to make improvements to the PRS MEES.

Subject to your permission, I will record the interview, which will be professionally transcribed by a transcription agency. If not, then I will only take notes as we go through the questions.

The transcripts or notes may be made available to BEIS so they can carry out quality checks on our research; however, the transcripts will be kept fully anonymous, unless we have obtained your permission to share them in a non-anonymised format. In our report we will not attribute any information to you and/or your organisation without your prior agreement. This was explained in the introductory email we sent you, which also included a privacy statement that describes our privacy and data processing practices in more detail.

- Do we have your consent to record the interview?

To recap, the interview will take approximately 20 minutes.

Note to interviewer: check if any information can be extracted from the local authority's website regarding the local enforcement of MEES.

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## Context and background

1. Please can you start by providing some background information about your role within your organisation and how your work relates to the non-domestic PRS MEES?

*Probe:*

*Who has responsibility for enforcing the non-domestic PRS MEES within your organisation?*

*Is the same individual / team responsible for enforcing the PRS MEES for domestic and non-domestic properties?*

*Do you work with any partner organisations in relation to the non-domestic PRS MEES (e.g. for monitoring non-compliance, enforcing the PRS MEES)? If so, which partner organisations and what are their roles?*

*Who has responsibility for enforcing the non-domestic PRS MEES within your organisation?*

2. How did you first become aware of the non-domestic PRS MEES? Please describe.
3. What do you see as the most important responsibilities for your organisation to undertake in enforcing the non-domestic PRS MEES?
4. To what extent would you say there is good awareness and understanding of the non-domestic PRS MEES (and its associated responsibilities, obligations and exemptions) within your organisation? Why do you say that?

## Awareness of the non-domestic PRS MEES

I would now like to move on and discuss wider awareness of the non-domestic PRS MEES, particularly amongst commercial landlords and tenants.

5. To what extent, if any, would you say commercial landlords in your area are aware of the PRS MEES and the associated obligations relating to non-domestic properties?

*Probe:*

*Why do you think this is?*

*To what extent, if any, would you say tenant businesses are aware of the non-domestic PRS MEES? How does this compare to landlords?*

*[If awareness is perceived to be low] What do you think needs to be done to increase awareness amongst landlords and/or tenants?*

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6. Have you undertaken any activities to engage with commercial landlords and raise awareness of the non-domestic PRS MEES within your area?
    - a. [If yes] What activities did you undertake and how were they delivered?
    - b. [If not] Have you encountered any barriers to engaging with commercial landlords or raising awareness of the non-domestic PRS MEES in your area?

*Probe:*

*Is there a need to raise awareness of the non-domestic PRS MEES in your area?*

*What were the reasons for not undertaking these activities? E.g. lack of time, resources, competing priorities*

## Identifying and monitoring compliance

I would now like to ask you about compliance with the non-domestic PRS MEES within your area.

7. Has your organisation identified any potential non-compliance within your local commercial property market?
  - a. [If yes] How did you identify any examples of non-compliance?

*Probe:*

*Have you undertaken any specific activities to identify non-compliance? If so, please describe.*

*Have you used any data sources to identify non-compliance?  
If so:*

*Have you used EPC data to identify properties with F and G rated EPCs?*

*Have you used data relating to exemptions?*

*Have you used any other data sources for identifying or monitoring non-compliance?*

*Have you undertaken work to check data and link different datasets? If so, please describe.*

8. Do you have any evidence of non-compliance within your area?
  - a. [If yes] What does the evidence suggest about levels of non-compliance in your area?

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*Probe:*

*Is there any evidence of changes over time? If so, what do you think is driving these changes?*

*Based on your experience, do you think particular sectors, or types of property, landlord or tenant, are more likely to be non-compliant than others?*

- b. [If no] What are your perceptions of levels of non-compliance within your area?

*Probe:*

*Have you seen any changes since the introduction of the non-domestic PRS MEES in the levels of non-compliance within your area? If so, what do you think is driving these changes?*

*Do you think there are particular concentrations of non-compliant properties/landlords (i.e. particular sectors, types of property, landlord or tenant characteristics)?*

9. Do you face, or anticipate facing, any challenges/issues in identifying and/or monitoring non-compliance with the non-domestic PRS MEES? Please describe.

*Probe:*

*Can you think of anything that would help to address these issues? If so, please describe.*

## Enforcement activities

I would now like to discuss any activities undertaken by your organisation to enforce the non-domestic PRS MEES, and/or any barriers or issues you have faced.

10. Has your organisation undertaken any work to enforce the non-domestic PRS MEES amongst non-compliant properties in your area?

a. [If yes] Please describe what actions have been taken?

11. Have you encountered any barriers or issues that may have prevented your organisation from enforcing the non-domestic PRS MEES as effectively or efficiently as you expected? If so, what?

*Probe:*

*[If previously raised as an issue] A lack of awareness of the non-domestic PRS MEES*



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*[If previously raised as an issue] A lack of understanding of the non-domestic PRS MEES, the associated obligations and exemptions*

*A lack of data and information for use in identifying non-compliance*

*A lack of time and resources within your organisation for enforcement*

*Any other factors*

12. What could be done to help overcome any of these barriers or issues to enforcement?

*Probe for actions that could be undertaken by:*

*Your own organisation*

*BEIS*

*Anyone else*

13. Have you engaged with other local authorities to share experiences and best practice approaches relating to raising awareness, monitoring compliance and enforcing the non-domestic PRS MEES?

- a. [If yes] Please describe these activities and the extent to which they have helped your organisation to enforce the non-domestic PRS MEES in your area.
- b. [If no] Do you think this is something that would help to overcome any issues or barriers? Why / why not?

## Changes since the introduction of the non-domestic PRS MEES and interactions with other policies

I would now like to move on and ask you about any changes that may have arisen since the introduction of the non-domestic PRS MEES, and how they interact with any other relevant policies.

14. Have you seen any changes related to energy efficiency, or any other outcomes or impacts, following the introduction of the non-domestic PRS MEES?

*Probe on any points raised.*

15. Are you aware of any other policies that are relevant to the installation of energy efficiency measures in non-domestic properties? If so, please describe.

- a. [If yes] How, if at all, do the non-domestic PRS MEES interact with these other policies?

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*Probe for:*

*Any areas of overlap or contradiction*

*Overall effects on the enforcement of rules regarding EPCs/energy efficiency*

16. Is there anything about the non-domestic PRS MEES that could be changed to make them easier to comply with, and/or enforce? If so, please describe.

## Future changes to the PRS MEES

BEIS has recently been consulting on raising the targets for the non-domestic PRS MEES: by 2030 all non-domestic privately rented properties should achieve an EPC rating of at least B (the government's preferred option) or at least C (an alternative option), rather than the current target of at least an E rating.

17. Do you have any views on these possible future targets?

*Probe:*

*What impacts, if any, do you think these higher targets would have for energy efficiency and/or commercial property markets in your area?*

*What implications, if any, do you think these higher targets would have for local authorities in terms of monitoring and enforcing the non-domestic PRS MEES?*

*What changes and/or additional support would be required to support your organisation in monitoring and enforcing these higher targets?*

## Wrap up

18. Does your organisation act as a commercial landlord, or rent out commercial property?
- a. [If yes] Would it be possible to speak with the individual responsible for this portfolio in future research with landlords on the non-domestic PRS MEES? If so, please could you provide their contact details or pass on my details to them?
19. Is there anything else you would like to add that is relevant to our research of the non-domestic PRS MEES?

**Thanks again for your time.**

**If you have any further queries or questions regarding this research, please contact the ICF research manager, XXXX, on XXXX or via email at: XXXX@icf.com**

## A2.2 Facilitation Guide: Organisations representing landlords and tenants

**Focus group to inform research into non-domestic minimum energy efficiency standards (MEES) in the private rented sector (PRS)**

**ICF office, London, 12 March 2020**

### **FACILITATION PLAN**

**Venue:** ICF's London office, Riverscape, 10 Queen Street Place, London, EC4R 1BE. ('David Attenborough' meeting room: room 303A)

**Date / time:** 10:30am to 12pm on Thursday 12 March 2020

**ICF team attending:** Joe Sunderland (Project Director), Andy White (Project Manager) and Catherine Fenton (Consultant)

**Note for the facilitators:** The plan is only indicative, facilitators are allowed flexibility to organise the discussion, taking into account how the discussion evolves and the nature of the group.

<b>Time</b>	<b>Session</b>	<b>Description</b>	<b>Roles &amp; staff</b>
10.00	Room set-up	Room setup: provision of notepads, pens, copies of slides; IT preparations and testing (screen, presentation, audio recorder, etc); refreshments (tea, coffee, water and biscuits)	Andy and ICF admin
10.20	Participants arriving at ICF reception	Participants to sign in at reception. Meet and greet participants and escort to the meeting room while waiting for others to arrive. Invite participants to help themselves to refreshments.	Joe, Andy and Catherine
10.30	Welcome and introductions	Welcome and quick 'round table' introductions. <ul style="list-style-type: none"><li>Ask participants to very briefly introduce themselves, their organisation and their members.</li></ul> Introduce study: <ul style="list-style-type: none"><li>The Department for Business, Energy and Industrial Strategy (BEIS) has commissioned research to inform an initial review of the regulations that establish a minimum energy efficiency standard (MEES) for</li></ul>	Joe and Andy

		<p>non-domestic properties in the private rented sector (PRS). We will refer to these regulations as the “PRS MEES”.</p> <ul style="list-style-type: none"> <li>• Today's focus group is one of several research activities that we are undertaking as part of the study. We will also be undertaking interviews with local authorities, landlords and tenants.</li> <li>• The findings of the study will be presented in a report submitted to BEIS in August/September 2020. This will inform a regulatory review that is due to report in April 2021.</li> </ul> <p>Introduce key objectives, purpose, themes and timings for the focus group:</p> <ul style="list-style-type: none"> <li>• Objective: to share views and experiences of the non-domestic PRS MEES across different bodies representing landlords and tenants, to provide a better understanding of how landlords and tenants have reacted to the PRS MEES.</li> <li>• Purpose: to explore some core themes of the PRS MEES, with a particular focus on drawing out key messages for policy makers.</li> <li>• Core themes/areas of discussion comprise: <ul style="list-style-type: none"> <li>- Awareness and understanding of the non-domestic PRS MEES</li> <li>- Landlord (and tenant) responses to the PRS MEES</li> <li>- Experiences of local authority enforcement</li> <li>- Views on current and future impacts of the PRS MEES</li> <li>- Views on potential changes to the PRS MEES</li> </ul> </li> <li>• Timings: we only have 90 minutes in total (approx. 10-20 minutes for each topic area) so we may need to move the discussion on to ensure we have time to cover each theme.</li> </ul> <p>Explain that, subject to their permission, we would like to record the session, which will be transcribed by a transcription agency. If not, then we will rely solely on the notes we take throughout the discussion. The transcripts or notes may be made available to BEIS so they can carry out quality checks on our research; however, the transcripts will be made anonymous, unless we have obtained your permission to share them in a non-anonymised format. In our report we will not attribute any information to you and/or your organisation without your prior agreement. This was explained in the introductory email we sent you, which also included a privacy statement that describes our privacy and data processing practices in more detail.</p> <p>Check that everyone is happy to participate and for the session to be recorded.</p> <p>Ask if anyone has any questions at this stage before proceeding.</p>	
10.40	Discussion of landlord / tenant awareness and	We would like to start with a discussion of awareness and understanding of the non-domestic PRS MEES amongst landlords and tenants.	Group discussion facilitated by

	<p>understanding of the non-domestic PRS MEES</p>	<p><b>Question: To what extent do you think commercial landlords and tenant businesses are aware of the PRS MEES?</b></p> <p>Prompts for discussion:</p> <ul style="list-style-type: none"> <li>• To what extent do you think commercial landlords are aware of their obligations under the PRS MEES?</li> <li>• To what extent do you think commercial landlords are aware of the exemptions to the PRS MEES?</li> <li>• To what extent do you think landlords and tenants understand the non-domestic PRS MEES and their obligations?</li> <li>• How, if at all, do you think landlords and tenants have been made aware of the PRS MEES? From where do you think they have accessed information on the PRS MEES? <ul style="list-style-type: none"> <li>- Are you aware of any activities undertaken by local authorities to raise awareness of the non-domestic PRS MEES amongst landlords and/or tenants?</li> </ul> </li> <li>• How does awareness and understanding differ between: <ul style="list-style-type: none"> <li>- landlords / tenants?</li> <li>- different sectors (e.g. manufacturing, services) / locations (e.g. rural / urban, regions)?</li> </ul> </li> <li>• Do you see any major barriers to awareness and understanding of the PRS MEES for landlords and tenants? Please describe.</li> <li>• What activities, if any, have you undertaken to raise awareness and understanding of the PRS MEES amongst your members? <ul style="list-style-type: none"> <li>- Please describe any activities, target audiences, and effectiveness.</li> <li>- Do you plan to undertake any activities in the future to raise awareness and understanding of the PRS MEES amongst your members? If so, please describe.</li> </ul> </li> </ul>	<p>Joe and Andy Notes taken by Catherine</p>
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11.00	Discussion of landlord / tenant reactions to the non-domestic PRS MEES	<p>We would now like to discuss how, if at all, you think commercial landlords and tenants have reacted to the non-domestic PRS MEES.</p> <p><b>Question: How have commercial landlords and tenant businesses responded to the PRS MEES?</b></p> <p>Prompts for discussion:</p> <ul style="list-style-type: none"> <li>• To what extent, if any, do you think the introduction of the PRS MEES has caused commercial landlords to make improvements to the energy efficiency of their properties?</li> <li>• To what extent, if any, do you think the introduction of the PRS MEES has caused commercial landlords to plan improvements to the energy efficiency of their properties?</li> <li>• To what extent, if any, have commercial landlords made use of exemptions to the PRS MEES?</li> <li>• Are there other factors influencing landlords' decisions to make improvements to their properties? <ul style="list-style-type: none"> <li>- To what extent, if any, are the PRS MEES a driver in those decisions?</li> </ul> </li> <li>• Where landlords have made improvements, are there any more common measures that are being used to improve the energy efficiency of their properties? If so, why is this?</li> <li>• To what extent have those making improvements gone beyond the requirement to achieve an EPC 'E' rating and achieved an EPC rating of D or above? If so, why is this? Probe: <ul style="list-style-type: none"> <li>- To what extent do landlords choose to implement the measures that deliver the greatest energy savings?</li> <li>- Is it more cost efficient to make multiple changes at the same time?</li> <li>- To what extent do you think landlords' decisions are likely to be influenced by expectations of future changes to the PRS MEES?</li> <li>- To what extent do you think there is misunderstanding of the requirements of the PRS MEES (i.e. to achieve at least an EPC E rating)?</li> </ul> </li> <li>• What do you think are the main barriers to compliance / reasons for non-compliance with the non-domestic PRS MEES?</li> </ul>	<p>Group discussion facilitated by Joe and Andy</p> <p>Notes taken by Catherine</p>
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11.20	Discussion of landlord / tenant experiences of local authority enforcement	<p>We would now like to move on to discuss your views of local authority enforcement of the non-domestic PRS MEES and the experiences of landlords and tenants.</p> <p><b>Question: What has been your members' experience of enforcement of the non-domestic PRS MEES by local authorities?</b></p> <p>Prompts for discussion:</p> <ul style="list-style-type: none"> <li>• As far as you are aware, have any of your members had their compliance with the PRS MEES monitored or checked by local authorities? If so, please could you describe their experiences. <ul style="list-style-type: none"> <li>- Do you know what actions, if any, are being taken by local authorities to provide guidance and/or enforce the PRS MEES for non-compliant properties?</li> </ul> </li> <li>• What do you think could be done to increase levels of compliance with the non-domestic PRS MEES?</li> <li>• To what extent do you think enforcement of the non-domestic PRS MEES is consistent between local authorities?</li> </ul>	Group discussion facilitated by Joe and Andy Notes taken by Catherine
11.30	Discussion of current and future impacts of PRS MEES for commercial landlords / tenants	<p>We would now like to discuss the current and anticipated future impacts of the PRS MEES for both commercial landlords and tenant businesses.</p> <p><b>Question: Have the PRS MEES delivered any impacts since their introduction in April 2018?</b></p> <p>Prompts for discussion:</p> <ul style="list-style-type: none"> <li>• What impacts, if any, have the non-domestic PRS MEES delivered for landlords and tenants?</li> <li>• Do you think the PRS MEES is likely to have delivered any of the following impacts? If so, how and to what extent? <ul style="list-style-type: none"> <li>- Changes in the energy efficiency of non-domestic properties</li> <li>- Changes in the energy use / expenditures amongst tenant businesses</li> <li>- Changes in rental prices in the privately rented sector</li> <li>- Changes in the availability and stock of non-domestic buildings in the private rented sector</li> <li>- Economic impacts for local manufacturers/installers of energy efficiency measures</li> <li>- Any other impacts</li> </ul> </li> <li>• Is the nature and scale of these impacts changing over time? <ul style="list-style-type: none"> <li>- How might these impacts be expected to change in future?</li> </ul> </li> <li>• To what extent, if any, do you think landlords are passing the costs of improvements on to their tenants? <ul style="list-style-type: none"> <li>- Are you aware of any evidence showing that landlords are passing on to tenants any costs they incur as a result of the PRS MEES?</li> </ul> </li> </ul>	Group discussion facilitated by Joe and Andy Notes taken by Catherine

11.50	Discussion of future changes to the non-domestic PRS MEES	<p>Finally, we would like to have a brief discussion about potential future changes to the non-domestic PRS MEES.</p> <p>Introduce proposed changes:</p> <ul style="list-style-type: none"> <li>As you may be aware, BEIS has recently consulted on raising the targets for the non-domestic PRS MEES: by 2030 all non-domestic privately rented properties should achieve an EPC rating of at least B (the government's preferred option) or at least C (an alternative option), rather than the current target of at least an E rating.</li> </ul> <p>[As most participants have already responded to the consultation] Ask if they have any further comments they would like to make on the proposed future changes to the PRS MEES targets.</p>	Group discussion facilitated by Joe and Andy Notes taken by Catherine
11.55	Wrap-up and questions	<p>Concluding remarks from ICF facilitators.</p> <p>Invite participants to ask any questions about the research and next steps, or invite to speak one-to-one to the ICF team afterwards.</p> <p>Thank participants for attending and for their contributions.</p>	Group discussion facilitated by Joe and Andy Notes taken by Catherine
12.00	Close		



# Annex 3 Results tables from secondary data analysis

**Table A2: EPC grades by rented and non-rented non-domestic properties**

	Rented	Non-rented	All non-domestic	P-value
A+ / A	1.4%	1.9%	1.4%	<b>0.009</b>
B	7.9%	11.2%	8.0%	<b>&lt;0.001</b>
C	28.6%	31.2%	28.7%	<b>&lt;0.001</b>
D	32.2%	31.1%	32.1%	0.157
E	17.5%	14.9%	17.4%	<b>&lt;0.001</b>
F	6.0%	4.8%	5.9%	<b>0.004</b>
G	6.5%	4.9%	6.4%	<b>&lt;0.001</b>
Average energy performance rating	90.8	85.2	90.5	<b>&lt;0.001</b>
n (properties)	66,839	3,804	70,643	

Notes: The p-values relate to the difference between rented and non-rented properties. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: EPC variables are found in the non-domestic EPC dataset.

**Table A3: Location of properties (region) by rented and non-rented non-domestic properties**

	Private Rented Sector			Non-rented	All non-domestic	P-value
	Low EPC	High EPC	Total PRS			
East Anglia	4.7%	3.9%	4.0%	4.9%	4.0%	<b>0.003</b>
East Midlands	8.5%	7.0%	7.3%	6.2%	7.2%	<b>0.013</b>
Greater London	21.5%	19.9%	20.3%	16.8%	20.1%	<b>&lt;0.001</b>
North East	3.2%	3.7%	3.6%	4.0%	3.7%	0.279
North West	9.3%	10.0%	9.9%	10.3%	9.9%	0.462
South East	21.7%	24.9%	24.5%	25.5%	24.5%	0.133
South West	9.1%	10.0%	9.9%	10.0%	9.9%	0.729
Wales	3.5%	3.8%	3.8%	4.0%	3.8%	0.528
West Midlands	9.5%	8.9%	9.0%	10.0%	9.0%	<b>0.033</b>
Yorkshire & the Humber	8.7%	7.7%	7.8%	8.1%	7.8%	0.472
Rural areas	49.2%	50.1%	49.9%	51.2%	50.0%	0.124
n (properties)	8,709	61,934	66,839	3,804	70,643	

Notes: 'Low EPC' refers to EPC grades of F and G; 'High EPC' refers to EPC grades of A+, A, B, C, D, and E. The p-values relate to the difference between rented and non-rented properties. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: Rural/urban area is determined using ONS classifications for local authorities. EPC and region variables are found in the non-domestic EPC dataset.

**Table A4: Property type by rented and non-rented non-domestic properties**

	Private Rented Sector			Non-rented	All non-domestic	P-value
	Low EPC	High EPC	Total PRS			
Retail	31.9%	29.0%	29.1%	34.5%	29.4%	<b>&lt;0.001</b>
Restaurant, bar & cafes	6.4%	9.3%	9.0%	7.3%	8.9%	<b>&lt;0.001</b>
Offices and workshops	42.9%	35.2%	36.6%	27.9%	36.2%	<b>&lt;0.001</b>
Industrial	4.5%	5.5%	5.4%	5.2%	5.4%	0.514
Storage (warehouses)	9.1%	11.2%	10.8%	12.5%	10.9%	<b>0.001</b>
Hospitals & primary care	1.6%	3.4%	3.1%	5.4%	3.2%	<b>&lt;0.001</b>
Education	0.8%	2.2%	1.9%	3.0%	2.0%	<b>&lt;0.001</b>
Hotels	0.3%	1.3%	1.2%	1.5%	1.2%	0.077
Other	2.5%	3.0%	2.9%	2.7%	2.9%	0.460
n (properties)	8,709	61,934	66,839	3,804	70,643	

Notes: 'Low EPC' refers to EPC grades of F and G; 'High EPC' refers to EPC grades of A+, A, B, C, D, and E. The p-values relate to the difference between rented and non-rented properties. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: EPC and property type variables are found in the non-domestic EPC dataset.

**Table A5: Landlord type by rented and non-rented non-domestic properties**

	Private Rented Sector			Non-rented	All non-domestic	P-value
	Low EPC	High EPC	Total PRS			
Corporate domestic	94.4%	95.9%	95.6%	97.3%	95.7%	<b>&lt;0.001</b>
Corporate foreign	2.8%	2.9%	3.0%	0.5%	2.9%	<b>&lt;0.001</b>
Individual	2.9%	1.2%	1.4%	2.2%	1.4%	<b>&lt;0.001</b>
Small portfolio (<=10)	57.6%	51.5%	52.6%	44.8%	52.2%	<b>&lt;0.001</b>
Large portfolio (>10)	42.4%	48.5%	47.4%	55.2%	47.8%	<b>&lt;0.001</b>
n (properties)	8,709	61,934	66,839	3,804	70,643	

Notes: 'Low EPC' refers to EPC grades of F and G; 'High EPC' refers to EPC grades of A+, A, B, C, D, and E. The p-values relate to the difference between rented and non-rented properties. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: Landlord type variables are found in Land Registry dataset. EPC variables are found in the non-domestic EPC dataset.

**Table A6: Business characteristics by rented and non-rented properties**

	Private Rented Sector			Non-rented	All non-domestic	P-value
	Low EPC	High EPC	Total PRS			
Low turnover (<£500k pa)	96.0%	93.0%	94.1%	79.6%	93.3%	<b>&lt;0.001</b>
High turnover (>£500k pa)	4.0%	7.0%	5.9%	20.4%	6.7%	<b>&lt;0.001</b>
Low employment (<=250)	99.7%	99.4%	99.5%	98.6%	99.5%	<b>&lt;0.001</b>
High employment (>250)	0.3%	0.6%	0.5%	1.5%	0.5%	<b>&lt;0.001</b>
Franchise	22.4%	29.6%	26.9%	60.3%	28.7%	<b>&lt;0.001</b>
Standalone	77.6%	70.4%	73.1%	39.7%	71.3%	<b>&lt;0.001</b>
n (properties)	8,709	61,934	66,839	3,804	70,643	

Notes: 'Low EPC' refers to EPC grades of F and G; 'High EPC' refers to EPC grades of A+, A, B, C, D, and E. The p-values relate to the difference between rented and non-rented properties. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: Variables for business characteristics are found in the IDBR dataset. EPC variables are found in the non-domestic EPC dataset.

**Table A7: Distribution of EPCs by property location (region) for properties in the private rented sector**

	East Anglia	East Midlands	Greater London	North East	North West	South East	South West	Wales	West Midlands	Yorkshire & the Humber	All PRS	P-value
A+ / A	1.3%	1.3%	1.5%	1.8%	1.2%	1.2%	1.7%	1.5%	0.9%	1.8%	1.4%	<b>&lt;0.001</b>
B	8.4%	8.0%	7.2%	11.3%	8.1%	7.6%	8.6%	7.9%	7.2%	7.9%	7.9%	<b>&lt;0.001</b>
C	25.7%	25.3%	27.3%	28.5%	29.8%	30.1%	29.6%	30.5%	28.3%	28.5%	28.6%	<b>&lt;0.001</b>
D	30.2%	31.5%	33.0%	29.6%	32.4%	33.2%	31.5%	31.2%	32.1%	30.8%	32.2%	<b>&lt;0.001</b>
E	19.8%	19.4%	17.8%	17.8%	16.7%	16.8%	16.9%	17.5%	18.3%	17.1%	17.5%	<b>&lt;0.001</b>
F	7.1%	7.1%	5.9%	5.8%	5.6%	5.5%	5.6%	6.1%	6.1%	6.9%	6.0%	<b>&lt;0.001</b>
G	7.4%	7.4%	7.3%	5.3%	6.2%	5.6%	6.0%	5.3%	7.2%	7.1%	6.5%	<b>&lt;0.001</b>
Ave. energy performance rating	93.2	93.7	92.7	87.6	90.1	89.0	88.6	89.1	92.8	91.0	90.8	<b>&lt;0.001</b>
n (properties)	2,646	4,863	13,571	2,427	6,625	16,341	6,597	2,519	5,981	5,197	66,767	

Notes: 'All PRS' shows the distribution of EPC for properties in the private rented sample with data on region. P-values are from joint-orthogonality tests, which test the significance of differences for multiple categories. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: EPC and region variables are found in the non-domestic EPC dataset.

**Table A8: Distribution of EPCs by property location (rural and urban areas) for properties in the private rented sector**

	Urban	Rural	All PRS	P-value
A+ / A	1.2%	1.5%	1.4%	<b>0.002</b>
B	7.6%	7.9%	7.8%	0.157
C	28.2%	28.9%	28.6%	<b>0.032</b>
D	32.5%	32.1%	32.3%	0.237
E	17.8%	17.2%	17.5%	0.065
F	6.0%	5.9%	5.9%	0.526
G	6.7%	6.5%	6.6%	0.226
Average energy performance rating	91.6	90.1	90.9	<b>&lt;0.001</b>
n (properties)	30,519	30,384	60,903	

Notes: 'All PRS' shows the distribution of EPC for properties in the private rented sample with data on rural/urban classification. This table excludes properties in Wales. The p-values relate to the difference between properties in urban and rural areas. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: Rural/urban classification variables are found in ONS data. EPC variables are found in the non-domestic EPC dataset

**Table A9: Distribution of EPCs by property type for properties in the private rented sector**

	Retail	Restaurant, bar & cafes	Offices & workshops	Industrial	Ware-houses	Hospitals & primary care	Educ-ation	Hotels	Other	All PRS	P-value
A+ / A	0.9%	0.4%	1.1%	1.1%	2.1%	4.5%	9.1%	1.3%	2.6%	1.4%	<b>&lt;0.001</b>
B	7.2%	4.2%	6.7%	4.2%	6.9%	21.0%	35.0%	11.8%	18.2%	7.9%	<b>&lt;0.001</b>
C	32.1%	27.1%	25.1%	27.6%	30.3%	35.4%	21.9%	39.0%	29.7%	28.6%	<b>&lt;0.001</b>
D	31.1%	38.8%	32.6%	35.0%	33.7%	23.8%	20.0%	30.6%	24.6%	32.2%	<b>&lt;0.001</b>
E	15.2%	20.6%	19.9%	21.7%	16.5%	8.9%	9.1%	13.6%	14.0%	17.5%	<b>&lt;0.001</b>
F	5.9%	5.8%	6.9%	5.8%	5.2%	3.7%	2.4%	2.5%	5.6%	6.0%	<b>&lt;0.001</b>
G	7.6%	3.0%	7.9%	4.7%	5.3%	2.8%	2.6%	1.3%	5.3%	6.5%	<b>&lt;0.001</b>
Ave. energy performance rating	90.5	89.9	95.8	92.1	88.8	72.4	64.4	76.9	81.8	90.8	<b>&lt;0.001</b>
n (properties)	19,422	6,026	24,493	3,608	7,221	2,057	1,292	772	1,948	66,839	

Notes: P-values are from joint-orthogonality tests, which test the significance of differences for multiple categories. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: EPC and property type variables are found in the non-domestic EPC dataset.

**Table A10: Distribution of EPCs by landlord type (type of entity) for properties in the private rented sector**

	Corporate domestic	Corporate foreign	Individual	All PRS	P-value
A+ / A	1.4%	2.1%	0.8%	1.4%	<b>0.005</b>
B	7.9%	8.3%	3.9%	7.9%	<b>&lt;0.001</b>
C	28.6%	29.3%	22.8%	28.6%	<b>0.001</b>
D	32.3%	29.7%	29.5%	32.2%	<b>0.009</b>
E	17.5%	18.8%	17.2%	17.5%	0.282
F	5.9%	5.6%	14.0%	6.0%	<b>&lt;0.001</b>
G	6.4%	6.2%	11.9%	6.5%	<b>&lt;0.001</b>
Average energy performance rating	90.6	90.2	105.1	90.8	<b>&lt;0.001</b>
n (properties)	63,907	2,029	903	66,839	

Notes: P-values are from joint-orthogonality tests, which test the significance of differences for multiple categories. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: Landlord type variables are found in the Land Registry dataset. EPC variables are found in the non-domestic EPC dataset.



**Table A11: Distribution of EPCs by landlord type (portfolio size) for properties in the private rented sector**

	Small (<=10)	Large (>10)	All PRS	P-value
A+ / A	1.0%	1.8%	1.4%	<b>&lt;0.001</b>
B	7.1%	8.8%	7.9%	<b>&lt;0.001</b>
C	27.7%	29.7%	28.6%	<b>&lt;0.001</b>
D	32.6%	31.9%	32.2%	0.054
E	18.0%	17.0%	17.5%	<b>0.001</b>
F	6.5%	5.2%	5.9%	<b>&lt;0.001</b>
G	7.0%	5.8%	6.4%	<b>&lt;0.001</b>
Average energy performance rating	92.4	88.6	90.6	<b>&lt;0.001</b>
n (properties)	34,697	31,239	65,936	

Notes: Properties owned by individual owners are not included in this table as the sample does not allow for the creation of a variable for portfolio size. The p-values relate to differences between properties owned by landlords with small and large portfolios. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: Variable for portfolio size is generated based on data from the Land Registry dataset. EPC variables are found in the non-domestic EPC dataset.

## Non-Domestic Minimum Energy Efficiency Standards Research

**Table A12: Distribution of EPCs by business characteristics for properties in the private rented sector**

	Turnover			Employment			Franchise			All PRS
	Low (<£500k)	High (>£500k)	P-value	Low (<=250)	High (>250)	P-value	Yes	No (stand-alone)	P-value	
A+ / A	1.3%	2.4%	<b>&lt;0.001</b>	1.4%	3.8%	<b>&lt;0.001</b>	2.0%	1.1%	<b>&lt;0.001</b>	1.4%
B	7.5%	14.0%	<b>&lt;0.001</b>	7.8%	12.7%	<b>0.001</b>	11.4%	6.5%	<b>&lt;0.001</b>	7.9%
C	28.2%	33.8%	<b>&lt;0.001</b>	28.6%	30.6%	0.430	32.0%	27.3%	<b>&lt;0.001</b>	28.6%
D	32.3%	30.0%	<b>0.002</b>	32.2%	29.9%	0.390	30.3%	32.9%	<b>&lt;0.001</b>	32.2%
E	17.8%	12.5%	<b>&lt;0.001</b>	17.5%	16.6%	0.654	14.6%	18.6%	<b>&lt;0.001</b>	17.5%
F	6.1%	4.3%	<b>&lt;0.001</b>	6.0%	3.2%	<b>0.037</b>	4.9%	6.4%	<b>&lt;0.001</b>	6.0%
G	6.7%	3.1%	<b>&lt;0.001</b>	6.5%	3.2%	<b>0.017</b>	4.8%	7.2%	<b>&lt;0.001</b>	6.5%
Average energy performance rating	91.5	79.8	<b>&lt;0.001</b>	90.9	80.6	<b>&lt;0.001</b>	84.4	93.2	<b>&lt;0.001</b>	90.8
n (properties)	62,903	3,936		66,525	314		17,965	48,874		66,839

Notes: P-values relate to differences between tenant business types. Differences are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant differences are highlighted in bold.

Source: Variables for business characteristics are found in the IDBR dataset. EPC variables are found in the non-domestic EPC dataset.

**Table A13: Associations between building, landlord/tenant characteristics and EPCs for properties in the private rented sector**

	Low EPC (F/G): Model 1		Low EPC (F/G): Model 2	
	Value	P-value	Value	P-value
<b>Region</b>				
East Anglia	0.016*	0.052	0.014*	0.094
East Midlands	0.018***	<b>0.009</b>	0.017**	<b>0.014</b>
North	-0.011	0.128	-0.012*	0.098
North West	-0.009*	0.092	-0.009*	0.089
South East	-0.016***	<b>&lt;0.001</b>	-0.018***	<b>&lt;0.001</b>
South West	-0.006	0.227	-0.009	0.107
Wales	-0.005	0.497	-0.007	0.369
West Midlands	0.006	0.280	0.005	0.359
Yorkshire and the Humber	0.014**	<b>0.033</b>	0.013*	0.050
<b>Property type</b>				
Education	-0.023***	<b>0.003</b>	-0.015**	<b>0.049</b>
Hospitals and primary care	-0.011	0.128	-0.008	0.285
Hotels	-0.048***	<b>&lt;0.001</b>	-0.037***	<b>&lt;0.001</b>
Industrial	0.014**	<b>0.040</b>	0.019***	<b>0.005</b>
Retail	0.053***	<b>&lt;0.001</b>	0.053***	<b>&lt;0.001</b>
Offices and workshops	0.059***	<b>&lt;0.001</b>	0.063***	<b>&lt;0.001</b>
Storage (warehouses)	0.018***	<b>0.003</b>	0.025***	<b>&lt;0.001</b>
Other	0.025***	<b>0.003</b>	0.030***	<b>&lt;0.001</b>
<b>Ownership type</b>				
Corporate foreign	-0.007	0.427	-0.003	0.692
Individual	0.128***	<b>&lt;0.001</b>	0.127***	<b>&lt;0.001</b>
<b>Business characteristics</b>		<b>&lt;0.001</b>		<b>&lt;0.001</b>
Turnover high (>£500k)	-0.030***	<b>&lt;0.001</b>	-0.027***	<b>&lt;0.001</b>
Employment high (>250)	-0.049***	<b>0.002</b>	-0.033**	<b>0.040</b>
Franchise	-0.028***	<b>&lt;0.001</b>	-0.025***	<b>&lt;0.001</b>

<b>Controlling for Floor space</b>		<b>X</b>
<b>n (properties)</b>	66,839	66,839

Notes: Both models are OLS regressions where the outcome variable is 1 if the property has an EPC of F or G and 0 if the property has an EPC of A+, A, B, C, D, or E. In both models, standard errors are clustered at the landlord level. Omitted values (comparison values) are: Greater London for region, Restaurants, Cafes and Bars for Property type, Corporate domestic for Ownership type, Turnover low for Turnover, Employment low for Employment and Stand alone for Franchise/Stand alone. Stars denote the p-value level:  $p < 0.1$  \*,  $p < 0.05$  \*\*,  $p < 0.01$  \*\*\*. Coefficients are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant coefficients are highlighted in bold.

Source: Variables for business characteristics are found in the IDBR dataset. EPC, property type, floor space, and region variables are found in the Non-domestic EPC dataset. Ownership type variables are found in the Land Registry dataset.

**Table A14: Associations between property, landlord and tenant characteristics and EPC ratings (defining location as urban/rural) for properties in the private rented sector**

	Low EPC (F/G): Model 1		Low EPC (F/G): Model 2	
	Value	P-value	Value	P-value
<b>Location</b>				
Rural	-0.000	0.913	-0.002	0.540
<b>Property type</b>				
Education	-0.023***	<b>0.004</b>	-0.016*	0.051
Hospitals and primary care	-0.011	0.174	-0.007	0.356
Hotels	-0.050***	<b>&lt;0.001</b>	-0.038***	<b>&lt;0.001</b>
Industrial	0.015**	<b>0.045</b>	0.019***	<b>0.008</b>
Retail	0.053***	<b>&lt;0.001</b>	0.054***	<b>&lt;0.001</b>
Offices and workshops	0.060***	<b>&lt;0.001</b>	0.064***	<b>&lt;0.001</b>
Storage (warehouses)	0.016***	<b>0.009</b>	0.023***	<b>&lt;0.001</b>
Other	0.026***	<b>0.003</b>	0.032***	<b>&lt;0.001</b>
<b>Ownership type</b>				
Corporate foreign	-0.005	0.534	-0.002	0.789
Individual	0.131***	<b>&lt;0.001</b>	0.129***	<b>&lt;0.001</b>
<b>Business characteristics</b>				
High turnover (>median)	-0.033***	<b>&lt;0.001</b>	-0.030***	<b>&lt;0.001</b>
High employment (>250)	-0.050***	<b>0.002</b>	-0.033**	<b>0.043</b>
Franchise	-0.029***	<b>&lt;0.001</b>	-0.025***	<b>&lt;0.001</b>
<b>Controlling for Floor space</b>			X	
<b>n (properties)</b>	60,903		60,903	

Notes: Both models exclude properties in Wales as ONS classification does not cover areas in Wales. Both models are OLS regressions where the outcome variable is 1 if the property has an EPC of F or G and 0 if the property has an EPC of A+, A, B, C, D, or E. In both models, standard errors are clustered at the landlord level. Omitted values (comparison values) are: Greater London for region, Restaurants, Cafes and Bars for Property type, Corporate domestic for Ownership type, Turnover low for Turnover, Employment low for Employment and Stand alone for Franchise/Stand alone. Stars denote the p-value level:  $p < 0.1$  \*,  $p < 0.05$  \*\*,  $p < 0.01$  \*\*\*. Coefficients are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant coefficients are highlighted in bold.

Source: Location data (rural/urban) is from the ONS. Business characteristics are from the IDBR. EPC, property type, and floor space data are from the non-domestic EPC Register. Ownership data are from the Land Registry.

**Table A15: Associations between property, landlord and tenant characteristics and EPC ratings (including portfolio size of landlord) for properties in the private rented sector**

	Low EPC (F/G): Model 1		Low EPC (F/G): Model 2	
	Value	P-value	Value	P-value
<b>Region</b>				
East Anglia	0.019**	<b>0.027</b>	0.017*	0.053
East Midlands	0.019***	<b>0.005</b>	0.018***	<b>0.009</b>
North	-0.008	0.291	-0.009	0.225
North West	-0.006	0.306	-0.006	0.281
South East	-0.015***	<b>0.001</b>	-0.016***	<b>&lt;0.001</b>
South West	-0.004	0.448	-0.006	0.241
Wales	-0.002	0.813	-0.004	0.636
West Midlands	0.009	0.132	0.008	0.187
Yorkshire and The Humber	0.017***	<b>0.008</b>	0.016**	<b>0.014</b>
<b>Property type</b>				
Education	-0.025***	<b>0.001</b>	-0.018**	<b>0.023</b>
Hospitals and primary care	-0.014**	<b>0.046</b>	-0.011	0.125
Hotels	-0.055***	<b>&lt;0.001</b>	-0.044***	<b>&lt;0.001</b>
Industrial	0.011*	0.100	0.016**	<b>0.019</b>
Retail	0.051***	<b>&lt;0.001</b>	0.051***	<b>&lt;0.001</b>
Offices and workshops	0.058***	<b>&lt;0.001</b>	0.062***	<b>&lt;0.001</b>
Storage (warehouses)	0.015***	<b>0.009</b>	0.022***	<b>&lt;0.001</b>
Other	0.021**	<b>0.011</b>	0.027***	<b>0.002</b>
<b>Ownership type</b>				
Corporate foreign	-0.005	0.520	-0.002	0.788
Large portfolio	-0.022***	<b>&lt;0.001</b>	-0.021***	<b>&lt;0.001</b>
<b>Business characteristics</b>				
Turnover high (>median)	-0.025***	<b>&lt;0.001</b>	-0.023***	<b>&lt;0.001</b>
Employment high (>250)	-0.047***	<b>0.003</b>	-0.032*	0.050

	Low EPC (F/G): Model 1		Low EPC (F/G): Model 2	
	Value	P-value	Value	P-value
Franchise	-0.025***	<b>&lt;0.001</b>	-0.022***	<b>&lt;0.001</b>
<b>Controlling for Floor space</b>			X	
<b>n (properties)</b>	65,936		65,936	

Notes: Both models exclude properties owned by individuals as these are part of sample and thus it is infeasible to generate a variable for portfolio size. Both models are OLS regressions where the outcome variable is 1 if the property has an EPC of F or G and 0 if the property has an EPC of A+, A, B, C, D, or E. In both models, standard errors are clustered at the landlord level. Omitted values (comparison values) are: Greater London for region, Restaurants, Cafes and Bars for Property type, Corporate domestic for Ownership type, Turnover low for Turnover, Employment low for Employment and Stand alone for Franchise/Stand alone. Stars denote the p-value level: p<0.1 \*, p<0.05 \*\*, p<0.01 \*\*\*. Coefficients are considered to be statistically significant if the p-value is lower than 0.05. P-values of statistically significant coefficients are highlighted in bold.

Source: Variables for business characteristics are found in the IDBR dataset. EPC, property type, floor space, and region variables are found in the Non-domestic EPC dataset. Ownership type variables are found in the Land Registry dataset.

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