The Green Construction Board

Minimum energy performance standards for commercial real estate
Background

- Assess the implications of regulations requiring Minimum Energy Performance Standards (MEPS) for non-domestic privately rented properties

- Identify if particular property types and/or locations are likely to be adversely affected

- Project team – Sweett, SIAM and Kingston University
By April 2018, it will be unlawful to let properties failing to achieve a minimum standard of energy efficiency

Minimum standard expected to be EPC rating of E

Owners of failing properties will need to invest to improve rating

Only need to invest in works that are ‘cost effective’ i.e. could qualify for Green Deal funding

In time, E rated properties may also be affected
Implications for owners

- **Market conditions**
  - Raises profile of energy ratings
  - May be considered a ‘risk’ factor
  - Potential for some value depreciation
  - Potential for unrecoverable costs

- **Building specific**
Is the building A-D rated?

No Immediate Risk

Will there be cyclical works at end of tenancy?

Some Risk

Will value growth justify improvement?

Moderate Risk

Are there any cost effective* works?

Are there any cost effective* works?

Is there a local supply of better buildings?

Is there a local supply of better buildings?

High Risk

Severe Risk

Are there any cost effective* works?

Moderate Risk

Are the works expensive relative to rents?

Moderate Risk

Is there a material effect on cash flow?

High Risk
Implications for owners

Building specific

- Potential for cost effective savings
- Total additional (out of cycle) cost
- Significance relative to future income
- Landlord liability for costs
5 questions

1. What is the extent and distribution of affected properties?

2. How many F/G EPCs will be improved by cyclical refurbishment/redevelopment before April 2018?

3. Can F/G EPCs be cost effectively moved to E or above?

4. Is the capital cost of ‘cost effective measures’ significant?

5. Are landlord liabilities during void periods significant?
Other questions (not tested)

- Are the predicted savings realistic?
- Is the occupier prepared to contribute?
- What happens to properties with short life-expectancies?
Extent and distribution of affected properties
Overall dataset

- 400,000 EPC’s (Spring 2013)
- 19% (75,000) are F/G rated
- 17% (67,000) are E rated
- 6,000 new EPCs lodged per month
Regional distribution

- Broadly consistent distribution of ratings
- The number of certified properties varies
105 post code areas in England & Wales.

% F/G varies between 12.2% (Uxbridge) and 26.5% (London West).
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% F/G varies between 12.2% (Uxbridge) and 26.5% (London West).
Post code area – EFG ratings

Proportion of all certified properties

Number of certificates

[Graph showing distribution of EFG ratings across different post code areas, with a circle highlighting a specific region.]
Post code districts

- 706 districts
- Wider variation
- Historic spa towns
- London
- Greatest variation within postcodes

<table>
<thead>
<tr>
<th>Post code district</th>
<th>% EFG</th>
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<tbody>
<tr>
<td>Bath</td>
<td>52%</td>
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<tr>
<td>Tunbridge Wells</td>
<td>51%</td>
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<tr>
<td>London Victoria/St James's</td>
<td>49%</td>
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<td>London West End</td>
<td>47%</td>
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<td>London WC</td>
<td>47%</td>
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<td>Stourbridge</td>
<td>45%</td>
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<tr>
<td>Southall</td>
<td>23%</td>
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</table>
By building type

- Offices sector has highest % of E, F and G ratings

- Small sample
  - Retail warehouses
  - Hotels
  - Industrial
How many F/G EPCs will be improved through cyclical activities by 2018?
Many F/G buildings may be approaching obsolescence

Generally little opportunity to add sufficient value from refurbishment

Therefore, without a stimulus, investment likely to be deferred

For some buildings (esp retail) re-letting my trigger refit that addresses F/G rating
Can F/G EPCs be cost effectively improved to E or above?
## 14 Archetype buildings

<table>
<thead>
<tr>
<th>Type</th>
<th>Sector</th>
<th>Servicing</th>
<th>Fabric / Glazing</th>
<th>Notes</th>
<th>EPC</th>
<th>Score</th>
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<tbody>
<tr>
<td>1</td>
<td>Industrial</td>
<td>Heating</td>
<td>Poor fabric / no insulation</td>
<td>Original services</td>
<td>G</td>
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<td>Heating</td>
<td>1990 Part L / limited insulation</td>
<td>Mid range lighting</td>
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<td>Late 90s / early 00s (insulated)</td>
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<td>Retail – shop</td>
<td>Air con</td>
<td>Poor fabric / lighting</td>
<td>Original services</td>
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<td>162</td>
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<tr>
<td>6</td>
<td>Retail – shopping centre</td>
<td>Air con</td>
<td>Poor fabric / lighting</td>
<td>Original services</td>
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<td>7</td>
<td>NV Office</td>
<td>Heating</td>
<td>Poor insulation &amp; glazing (1980s)</td>
<td>Original services</td>
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<td>8</td>
<td>NV Office</td>
<td>Heating</td>
<td>Pre 1995 / double</td>
<td>Original services</td>
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<td>AC Office</td>
<td>Air con</td>
<td>Poor insulation &amp; glazing (1980s or before)</td>
<td>Original services</td>
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<td>10</td>
<td>AC Office</td>
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<td>Poor insulation &amp; glazing (1980s or before)</td>
<td>Replaced services - post 2000</td>
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Upgrade options

- Costed as non cyclical replacements (worst case)

- Measures include:
  - Lighting and controls
  - Power factor correction
  - Pumps
  - Boilers
  - Chiller
  - Insulation
  - Windows
Cost effective improvements

- ‘Cost effective’ measures insufficient for air conditioned offices
- Some buildings can achieve a D but not a lower rating of E
Cost effective improvements

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- Some buildings can achieve a D but not a lower rating of E
## Cost effective improvements

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<tr>
<th>Location</th>
<th>Inner London</th>
<th>Outer London</th>
<th>South East</th>
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Is the capital cost significant?
How significant are the costs

- Varies with circumstances
- For most F/G EPCs, MEPS obligations are equivalent to <12 months rent
- Often much less
- For some industrials in low value locations costs could equal 2-5 years rent
Are landlord liabilities during voids significant?
Landlord liability during voids

- For most buildings / locations liability is less than a few % of rental income

- Often much less

- For some industrial buildings with low rents and high voids income might fall 10-15%
Example A

- Naturally ventilated office – G rated
- Rents ~£15 per sqft, voids ~15%
- One of many similar properties in the area
- Measures to improve
  - Boiler, pumps
  - Lighting and controls
- Cost of D rating ~£9 per sqft
- Impacted by MEPS
- Measures improve rating to E/D
- Cost is <12 months rent
- Voids costs <1.5% of income
- Chance of cost recovery = good
- Risk = Moderate
Example B

- Industrial warehouse – G rated
- Rents ~£3 per sqft, voids ~40%
- Otherwise comparable properties with better ratings nearby
- Measures to improve
  - Boiler, pumps
  - Lighting and controls
  - Insulation
- Cost of E/ D rating £7-9 per sqft
- Impacted by MEPS
- Measures improve rating to E
- Cost is >12 months rent
- Voids costs >15% of income
- Chance of cost recovery = poor
- Risk = Severe
Findings

1. MEPS will impact large numbers of properties directly, and many more indirectly

2. Implications influenced by market and building specific factors

3. Regulation will result in significant numbers of properties making improvements in their energy performance that would otherwise be unlikely
Findings

4. Naturally ventilated offices, industrial and retail archetypes can be improved from F/G to D cost effectively

5. Older F/G AC offices are unlikely to achieve E or above as a direct result of MEPS

6. Often better to improvement to an EPC of D rather than E
7. Risks building specific, but greatest for buildings already close to obsolescence

8. For some buildings, MEPS compliance could equal several years’ rent and could materially reduce net income

9. In general, MEPS costs are <12 months rent

10. In general, landlord liability during voids is a few % of income or less
Recommendations

1. EPC method must provide a robust indication of likely energy savings

2. Clear guidance on future changes to minimum standards

3. Further investigation into:
   - Energy performance of industrial buildings
   - Economic implications for tertiary stock
   - Application to buildings with imminent redevelopment
   - Total numbers of properties affected by MEPS
The Green Construction Board

Minimum energy performance standards for commercial real estate