

Hitting the Green Wall ... and Beyond

How is the UK development industry building sustainable foundations?





Contents

3	Foreword
5	Introduction
7	Background and methodology
8	Overview and key findings
11	Chapter 1: Awareness and understanding
15	Chapter 2: Green strategies and targets
19	Chapter 3: Feasibility
23	Chapter 4: Responsibility for sustainability
27	Chapter 5: Benchmarks
33	Chapter 6: Green agreements revisited
37	Chapter 7: Greening existing stock
41	Chapter 8: Realising green value
44	Appendix A: Sustainability timeline
46	Appendix B: Sustainability benchmarks index
55	Appendix C: Additional graphs
56	Acknowledgements



Foreword

The crises of the last two to three years have hit the property industry badly. However, if we hope to learn anything from them, we need to improve the identification and management of long term risks - including sustainability.

Despite such difficult market conditions, this report *Hitting the Green Wall ... and Beyond* confirms that while the importance accorded to the sustainability agenda has dipped marginally in the property sector, the issue has not gone away. Rather, what has emerged is that while the main drivers have been and will remain regulation, both sticks and carrots, Government action is now prompting reciprocal moves in the markets. Thus, looking 'beyond', what I see is a move towards a green investment tipping point.

Albeit slowly, the wheels are turning and the market is steadily starting to incorporate the sustainability agenda in its ways of working. For owners today, sustainable buildings offer prospects but little proof of lower yields, shorter voids, and slower depreciation in the value of buildings over time. However, in the near future legitimate concerns about the upfront costs of creating sustainable buildings will likely be offset by evidence that financial risks can be reduced. At the other end of the market, initially sceptical occupiers are now increasingly enthused by

the notion of high-performing buildings that can invigorate staff, improve productivity, reduce overheads and generate positive input to annual reports. The pace of progress is likely to accelerate as markets recover and evidence of such benefits moves from being a trickle to a stream.

So even though we have clearly seen that environmental issues are not as yet critical factors in property management and investment, particularly at a time when rents and yields are under intense pressure, they undoubtedly represent a significant long term risk slowly reflected in the way property players are addressing the issue. However, given that major changes to property portfolios can take years, investors need to consider impacts of sustainability when carrying out refurbishments today. It is thus time that the debate about sustainable property moved on – away from the narrow issue of cost savings – to the real issues, the long term risks.

Of course, markets are only created through co-operation and, with this in mind, trust between owners and occupiers will either be the loose brick that takes the property sector down the green-washing road or the cement that will harden sustainability and lead to the green investment tipping point.



Tatiana Bosteels
 Head of Responsible
 Property Investment
 Hermes Real Estate
 Investment Management



Introduction

Welcome to *Hitting the Green Wall ... and Beyond*, a collaborative effort between the British Property Federation (BPF)¹, Spada² and Taylor Wessing³, and a follow up to Taylor Wessing's 2009 report *Behind the Green Façade*.

The UK development industry has recently found itself facing unprecedented economic challenges and a changing political landscape. Another significant challenge that continues for the industry is how to deliver a commercially effective sustainable built environment. The aim of this report is to further examine this issue and assess the progress of the industry in building sustainable foundations.

This report shows that progress has been made since our last report. Increasing regulation is driving the sustainability agenda forward. Industry is establishing

strategies and structures to deliver sustainability objectives and is seeking to capture these in contracts and best practice. However, measuring sustainability and realising green value presents difficulties with a plethora of benchmarks, indices and standards in use. These sustainable foundations must be built upon if the industry is to find viable solutions and maximise the opportunities that the sustainability agenda creates.

We hope that you find this report valuable and thought provoking.



Helen Garthwaite
UK Head of Construction
and Engineering
Taylor Wessing LLP

It is now widely accepted that the UK property industry has a vital role to play in delivering the reductions in emissions necessary for the UK to meet its 2050 targets. The British Property Federation is committed to helping all sectors of the industry integrate sustainability into their business models, and research such as this report is essential to build knowledge and understanding in our complex and fragmented industry and drive the agenda forward.

It is apparent that greening existing stock will have to be a major focus. This

report shows that respondents across all sectors shared common drivers towards refurbishment, providing common ground for us to work from. However, our research also reveals that the majority of respondents believe Government targets to be unrealistic, demonstrating the need for closer Government / industry collaboration.

We still have a long way to go, and we hope that this research makes a genuine contribution to the journey.



Liz Peace
Chief Executive
BPF

Engineering close to zero emissions from the UK's built environment by 2050 is a business and social project of such magnitude and complexity, affecting so many diverse interests, that it is difficult to think of many peacetime parallels.

This report into the UK development industry's attitudes towards the sustainability agenda - and its preparedness for change - represents Spada's second collaboration with Taylor Wessing. It is our first with the BPF, whose participation now unlocks the insights of many of the most important players across the industry.

As researchers and communications advisers we are committed, first, to establishing a reliable fact-base and, second, to helping establish reporting norms and measures that are both material and consistent to unlock future progress. Clarity is essential given the diversity of stakeholders attempting to grapple with sustainability, the complex flows of information across a fragmented industry, and the linguistic and benchmarking confusion that confronts it.

We hope this second report will shed further light on a fascinating venture which is critical for us all.

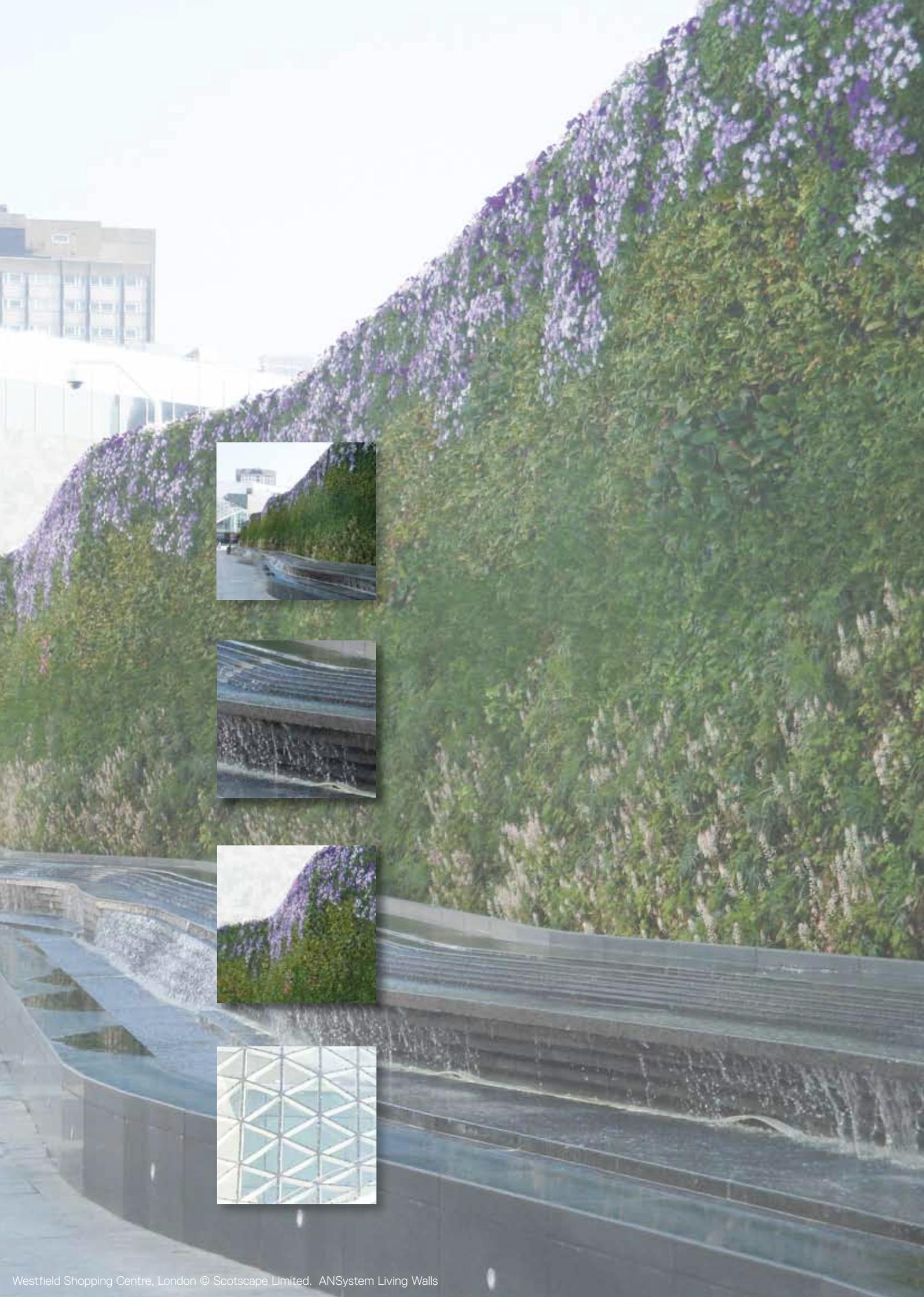


Gavin Ingham Brooke
Chief Executive
Spada

¹ BPF: A membership organisation devoted to representing the interests of all those involved in property ownership and investment (www.bpf.org.uk).

² Spada: A dedicated professional services public relations and research consultancy (www.spada.co.uk).

³ Taylor Wessing LLP: A leading, full-service international law firm (www.taylorwessing.com).



Background and methodology

This report builds upon the findings of the award-winning Taylor Wessing survey and report, *Behind the Green Façade*⁴. *Hitting the Green Wall ... and Beyond* brings together another set of views from the largest and most extensive sample so far of the UK development industry. Importantly, we are also able to begin tracking views over time and identify trends.

Background

The period between the publication of *Behind the Green Façade* and this report, *Hitting the Green Wall ... and Beyond*, has seen a number of noteworthy events that have had a significant impact on the UK development industry. We anticipate that these may have shaped respondents' thinking and will continue to do so in the years ahead.

First, of course, is the global recession. Bloomberg called it the worst since the 1930s, whilst others have described it as the most severe in over a century. Sustainability implies long term commitment, and the tension between this and more immediate business concerns has challenged previous priorities and ambitions.

Sustainability has also been the subject of intense political debate, nationally and internationally, and this is likely to continue. The sense of uncertainty created by the lack of a binding global agreement continues to shape, or rather confuse, public opinion.

The burden and complexity of regulation affecting sustainability at EU and national levels has increased. We believe that this trend will only continue. Perhaps spurred by the recession, and reflecting the medium to long term nature of sustainability, the industry has responded in a variety of ways, including consultations, reports and statements of best practice.

Research methodology

The survey upon which the findings of this report are based was undertaken from 14 October to 10 November 2009. Over 7,000 individuals representing a wealth of organisations across the UK development industry were surveyed online, using a specially constructed and targeted database. This database is an expanded version of the one used for *Behind the Green Façade* and, in addition, includes all members of the BPF.

The current report also incorporates issues raised and views put forward at the BPF's Autumn Conference on Sustainability, hosted by Taylor Wessing on 17 November 2009⁵.

Over 800 respondents from UK based companies, organisations and academic institutions completed the online survey, and categorised themselves into one of the following UK development industry sectors:

Investors (including funders)	138
Developers	133
Contractors	114
Technical Advisers (including architects and specialist consultants)	235
Non-technical Advisers (including valuers, agents and other non-technical advisers)	160
End Users (such as occupiers and tenants)	78

Whilst all the organisations polled form part of the UK development industry, their corporate structure and approach to the sector vary greatly in practice. Throughout the report, we have referred to the 'delivery' side (Developers, Contractors, Technical Advisers and Non-technical Advisers) and the 'commissioning' side (Investors and End Users) of the industry and our results often show clear distinctions in sentiment between these groups. It is also important to note that there is a difference between respondents' own corporate policy and their policy for built assets they create. Both of these aspects seem to have been considered in many responses.

The quotations which appear throughout the report are taken from open ended survey questions. All remarks remain anonymous, although the general sector of the respondent is given to provide necessary context.

Throughout the report, we have used the following definition of sustainability: "meeting the needs of the present without compromising the ability of future generations to meet their own needs."⁶ This is consistent with the definition that was used in *Behind the Green Façade*.

4 *Behind the Green Façade*, released January 2009 (www.taylorwessing.com/sustainability) – research also undertaken by Spada. Winner of the Victor Ludorum Award and the Research Award at the *Estates Gazette* Property Marketing Awards 2009 (<http://www.propertymarketingawards.co.uk/>).

5 BPF Sustainability Conference – Driving Change in Existing Non-Domestic Buildings (17 November 2009).

6 The Brundtland Report / Our Common Future. 1987. World Commission on Environment and Development. United Nations. Oxford University Press: New York.

Overview and key findings

	Key finding	... and beyond
Awareness and understanding	<ul style="list-style-type: none"> > The importance accorded to sustainability has dipped, but only very slightly (3%). > A minority of respondents feel they are communicating sustainability performance 'quite well' or 'very well' to internal (47.4%) or external (33.7%) audiences. 	<ul style="list-style-type: none"> > Better communication with internal and external stakeholders will be essential. This needs to be predicated on widely accepted practices, measures and language. > Demonstrating compliance and providing technical information will soon become standard practice but there is future value in communicating the business benefits achieved through sustainability.
Green strategies and targets	<ul style="list-style-type: none"> > Most organisations (71.71%) now have sustainability strategies in place, usually covering at least energy usage and waste. However, the success of strategies is not widely measured – only around half of respondents set internal targets (50.82%) and a minority set targets related to business dealings (35.77%). > Some organisations are putting sustainability at the heart of broader business strategy. 	<ul style="list-style-type: none"> > Increasing Government regulation and social pressure may catalyse further strategic refinement. > The Carbon Reduction Commitment Energy Efficiency Scheme ('CRC'), in particular, may prompt action. > Collaborative working between organisations will entrench best practices.
Feasibility	<ul style="list-style-type: none"> > The industry is driven by legislation and regulation. These will remain primary future drivers. > The Government's carbon reduction targets are, however, viewed with widespread scepticism. 	<ul style="list-style-type: none"> > With an industry which is sceptical of the Government's carbon reduction targets, closer collaboration between Government and the industry will be essential. > Government will have to walk a fine line between using 'carrot' and 'stick' methods to realise change.
Responsibility for sustainability	<ul style="list-style-type: none"> > Sustainability is now a top level item at over 80% of respondent organisations, yet it is unclear who supports the senior management team, as only a minority of respondents employ dedicated staff (36.18%) or consultants (36.05%). 	<ul style="list-style-type: none"> > It is likely that more dedicated staff will need to be hired, and that specialist external advisers will need to be used more frequently. > We foresee the formation of an industry body to regulate sustainability consultants.

	Key finding	... and beyond
Benchmarks	<ul style="list-style-type: none"> > A plethora of indices, standards, ratings and accreditations, measuring hugely diverse factors, are available to the industry. > EPCs, BREEAM ratings, EIAs and ISO 14001 ratings are the most commonly used benchmarks. > Reporting upon sustainability is common. 	<ul style="list-style-type: none"> > We believe a series of linked, common national and international benchmarks are likely to evolve, dealing with building construction, use and investment performance. > Some voluntary benchmarks may become, in effect, mandatory through industry promotion and use.
Green agreements revisited	<ul style="list-style-type: none"> > Almost 60% of respondents have used some form of green agreement, but there is a clear preference for non-binding options. > Developers are most likely to use binding agreements. 	<ul style="list-style-type: none"> > Collaborative and non-binding agreements will continue to grow in popularity due to their flexibility. > We envisage the development of binding provisions where regulation carries risks or penalties. > Improved energy efficiency is likely to be the initial focus for many binding and non-binding agreements.
Greening existing stock	<ul style="list-style-type: none"> > Improved operational efficiency and greater flexibility of use are the most powerful drivers for greening existing stock. > The industry seems unconcerned about future energy security. 	<ul style="list-style-type: none"> > We believe large scale retro-fitting joint ventures between investors and those planning, designing and constructing sustainable buildings are likely. > The introduction of feed-in tariffs will lead to an increase in the use of roof space for renewable energy microgeneration, creating opportunities for new income streams from property assets.
Realising green value	<ul style="list-style-type: none"> > Demonstrating green value is increasingly important, and approximately a third of respondents ask for or provide information on sustainability during financial transactions. > There is little consensus around how best to measure green value. 	<ul style="list-style-type: none"> > We need standard industry benchmarking tools which enable organisations to make clear value comparisons between sustainable buildings. > We expect that the market will increasingly place a 'brown tariff' on buildings not regarded as sustainable.



Only 47.4% of respondents feel their organisation publicises its sustainability performance well internally - this drops to 33.7% for external audiences.



Chapter 1:

Awareness and understanding

Is sustainability still important?

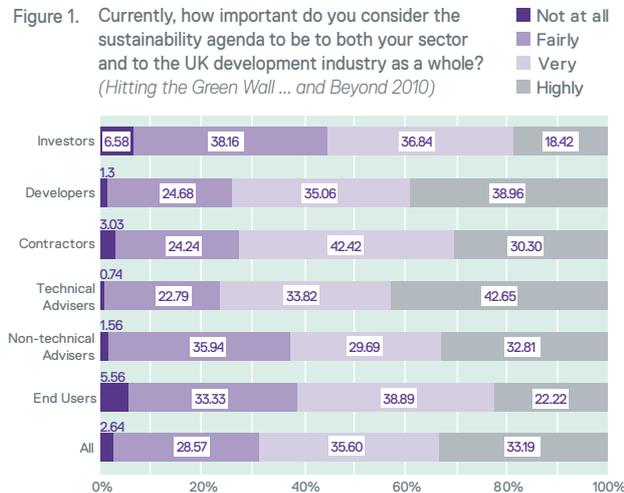
“ Our future ambitions are to ensure our sustainability policy and credentials are recognised internally and externally ... ”

Technical Adviser

Awareness and understanding

Is sustainability still important?

Figure 1. Currently, how important do you consider the sustainability agenda to be to both your sector and to the UK development industry as a whole? (Hitting the Green Wall ... and Beyond 2010)

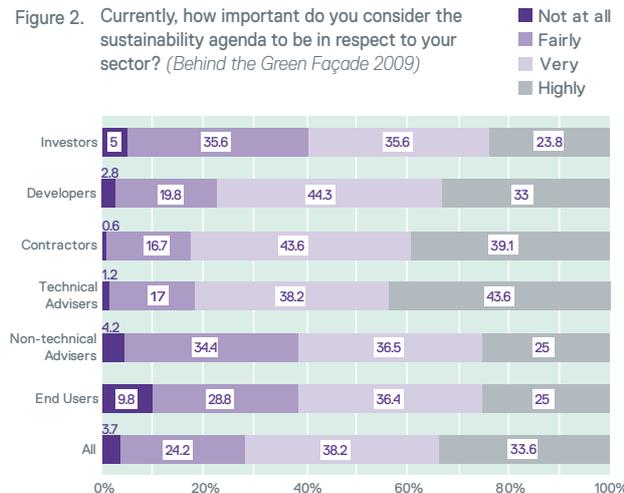


In late 2008, with the UK facing the worst recession in living memory, awareness of the sustainability agenda in the UK development industry was examined as part of *Behind the Green Façade*. Whilst the overall level of awareness of, and importance placed upon, the agenda was found to be high, there was widespread confusion as to what sustainability actually meant. With no common definition, there was evidence of diverse approaches across the industry, characterised by fragmented views across its different sectors.

Behind the Green Façade accepted that a single definition of sustainability was unlikely to be achievable (or perhaps even desirable), but highlighted the need for the development of common language, frameworks and messages to demonstrate the inherent value in sustainability.

Hitting the Green Wall ... and Beyond revisits this theme in light of the recession and the continuing prominence of sustainability as a mainstream business and political topic.

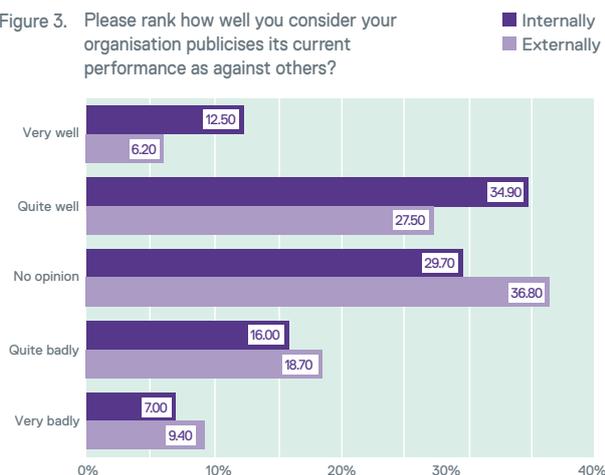
Figure 2. Currently, how important do you consider the sustainability agenda to be in respect to your sector? (Behind the Green Façade 2009)



Durable commitment

Some commentators argued that industry commitment to sustainability would wane as a result of economic pressures. Our survey findings show that awareness of, and importance afforded to, the sustainability agenda remains high. A clear majority in all sectors considered the sustainability agenda to be very or highly important (68.79% - Figure 1), only a slight difference from the previous survey (71.8% - Figure 2). The results dipped in all sectors except Non-technical Advisers and End Users where there was no appreciable change. Around 5% fewer Technical Advisers, 4% fewer Investors and 3% fewer Developers rated sustainability as being very or highly important. For Contractors however, the figure fell by approximately 10%. We suggest that Contractors felt the full impact of the recession later than many Investors and Developers. That, coupled with a squeeze on historically tight margins and the need to focus on cash-flow, may account for the greater drop here.

Figure 3. Please rank how well you consider your organisation publicises its current performance as against others?



The slight dip overall indicates remarkable resilience in an industry that has borne the brunt of a major recession, suggesting that commitment to the sustainability agenda is real and durable – rather than lip service paid when economic times are good. Stakeholder expectations, alongside increasing regulatory pressures (see timeline in Appendix A), may have bolstered the commitment. As predicted in *Behind the Green Façade*, organisations appear to have used the recent past to review and develop sustainability objectives. Perhaps this results from a search to find ways of improving business efficiency and harnessing new business opportunities.

Complexity remains

The survey evidence suggests that there is still no commonly understood and interpreted agenda across the industry. When asked what their future aspirations with regard to sustainability were, respondents' comments covered a broad spectrum. They included meeting technical standards and regulatory requirements, communication and reputational matters, and financial themes, revealing a variety of goals and a complex tapestry of drivers. The consequence may be that organisations waste time and resource in seeking to embrace sustainable measures.

Is there a need for better communication?

Our findings suggest that there is a need for better communication around sustainability matters, both internally and externally. Only 47.4% of all respondents said that their organisation currently communicates performance very well or quite well to internal audiences (Figure 3). The high level of neutral responses could indicate that organisations feel they have not yet made sufficient progress against sustainability goals to warrant a communications campaign.

Respondents rated their organisation's external communication as worse than its internal communication (Figure 3). Only 33.7% felt their organisation communicated quite well or very well with external audiences; over a quarter felt their organisation communicated quite badly or very badly.

Many respondents emphasised that organisations are looking to improve communications programmes; perhaps indicating a perceived link between better communication and business benefits. There is also recognition that employee engagement is key to effective delivery of sustainability targets. These factors, coupled with potential reputational risk and the impact of increased regulatory reporting requirements (Figure 7), will shape the development of future communications programmes.

“ We need to do more to communicate our success, particularly internally to ensure that all of our staff understand that sustainability is a corner stone of what we do ... ”

Developer

... and beyond

- > Commitment to sustainability issues is likely to increase. This will be driven both by more regulation and a greener social and political landscape focused on eliminating 'wastefulness'.
- > A common 'currency' of widely understood and adopted practices, frameworks, measures and linguistic terms is required to inform future debate.
- > Communication around a complex sustainability agenda will need to bridge many traditional stakeholder divides with clear and compelling facts and messages. To meet this challenge a blend of tools, techniques and insights will be required, drawn from disparate disciplines including public relations, internal communications, branding, organisational consulting, HR, technical environmental consulting and legal advice.
- > Greater collaboration between Government and the industry may eventually unlock more widespread sharing of best practice, tools and joint approaches for tackling sustainability issues, building upon the work already being undertaken.
- > Better internal communication is likely to drive take up of sustainable business opportunities and improve performance against sustainability objectives (e.g. energy and waste efficiency targets). It may also lead to improved employee satisfaction and retention.
- > The external communication of sustainability successes and failures will grow in significance, particularly with increased regulatory reporting requirements. In future, technical compliance will be standard practice and the real value will be in communicating business benefit unlocked through sustainability.
- > The limited mandatory reporting that forms part of the Carbon Reduction Commitment Energy Efficiency Scheme ('CRC') may catalyse a wider review of the communication of sustainability performance and lead to more sophisticated use of communication techniques.



71.71% of organisations surveyed had a sustainability strategy in place, but only half set targets to measure progress.

Chapter 2:

Green strategies and targets

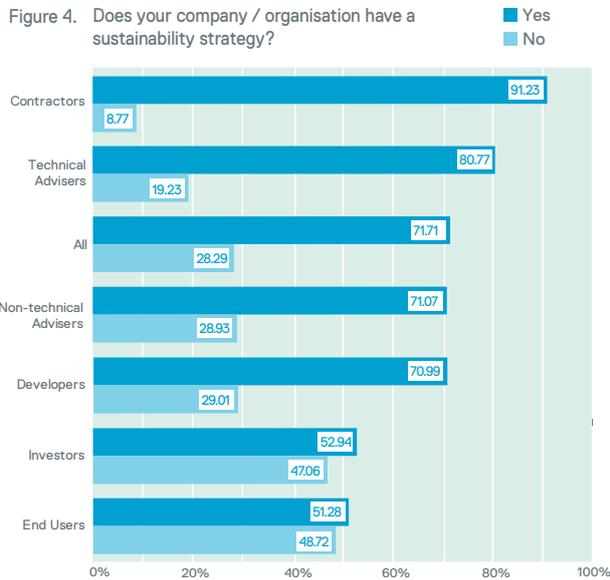
Are they a part of business?

“ We do not set ourselves targets. We meet whatever sustainability targets are necessary and are planning reasons for achieving highest possible BREEAM ratings in order to sell our product. ”

Developer

Green strategies and targets

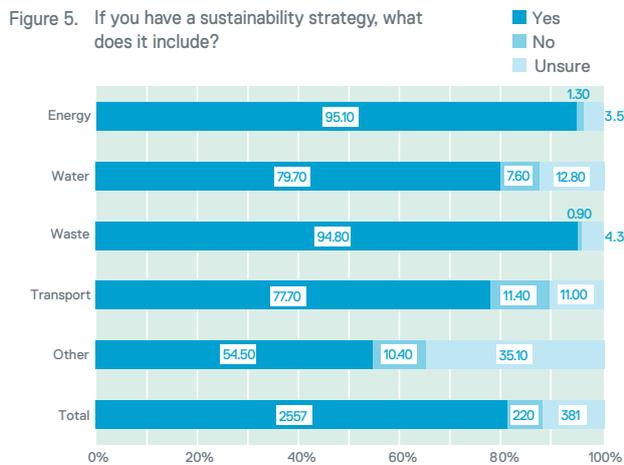
Are they part of business?



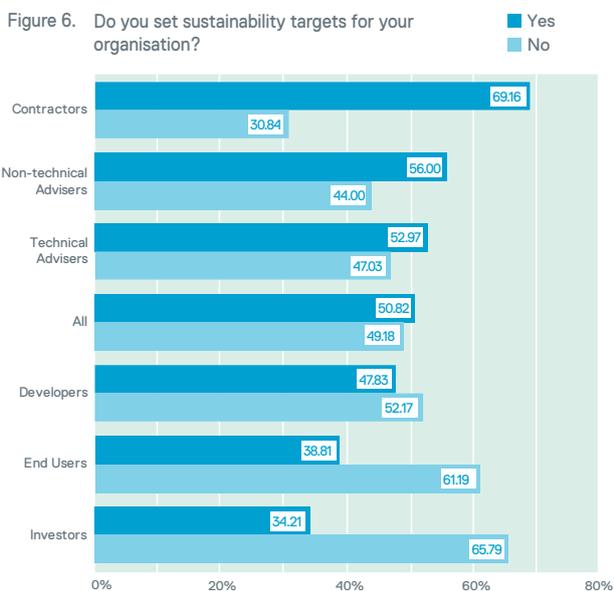
In order to meet sustainability goals at organisational and industry level, clearer strategies need to be planned and executed. We set out to explore the extent to which organisations had strategies relating to sustainability; which individuals or office holders had responsibility for implementing these strategies; and the key areas they focused upon.

The status quo: who has strategies in place?

High awareness levels seem to be translating into commitment and action, led from the top of organisations. Close to three quarters (71.71%) of organisations surveyed had a sustainability strategy in place (Figure 4), which indicates that sustainability strategies are well entrenched within the industry. It is also clear that sustainability is now a Board-level agenda item: 81.44% of respondents said that primary responsibility for sustainability strategy or environmental policy lay with senior executives or the senior management team (considered further in Chapter 4, see Figure 10).



When broken down by industry sector, the results showed a disparity between the delivery and commissioning sides of the industry. As can be seen in Figure 4, the vast majority of Technical Advisers (80.77%) and Contractors (91.23%) have sustainability strategies, but this figure is lower for Developers (70.99%) and Non-technical Advisers (71.07%). The results also showed a much smaller reported prevalence of formal sustainability strategies for End Users (51.28%) and Investors (52.94%). This distinction is not unexpected. Technical Advisers and Contractors are at the sharp end of sustainability. Sustainability has become a business critical issue for them, and at a faster rate than for other respondents. Contractors in particular have to meet onerous regulatory requirements in this area, and having a sustainability strategy and being able to demonstrate sustainability credentials is often a requirement of tender processes. It may also be the case that, as a result of the financial crisis, Contractors placed much greater emphasis on targeting public sector work, where more importance is placed upon the ability to demonstrate sustainability. Internal sustainability credentials and strategies have been of less relevance to End Users and Investors in the procurement of projects; rather, the sustainability accreditation of the building has been the focus. Developers and Non-technical Advisers, not surprisingly, sit somewhere between the two.



What do they cover?

Predictably, factors that are visible and measurable (and thus more easily managed), such as energy (95.1%) and waste (94.85%), are the primary areas addressed within sustainability strategies (Figure 5). These can deliver 'quick and easy' wins. Water usage is also addressed by the majority of such strategies (79.7%), with the sustainability of transport (77.7%) featuring in approximately three quarters of these. The focus on energy is not surprising given current regulation, such as the CRC, which creates direct financial implications for organisations. However, it may also indicate, along with the

high ranking for addressing waste, that organisations are not only concerned with minimising regulatory costs but also with maximising savings.

Are these strategies measured and monitored?

Despite the widespread prevalence of sustainability strategies, only just over half of respondents (50.82%) set targets against which to measure progress (Figure 6). Organisations from the delivery side of the industry were most likely to set targets, with Contractors (69.16%), being followed by Non-technical Advisers (56%) and Technical Advisers (52.97%). End Users (38.81%) and Investors (34.21%) were the least likely to set targets. Of those organisations that did set targets, a very high percentage – almost 95% – regularly monitor sustainability performance against these targets.

It would be almost unthinkable for businesses to define a strategy but not set targets in other key corporate dimensions. This could imply that sustainability strategies are viewed in a superficial fashion by some in the industry, or, as an area to which they are not prepared to commit real resource, because of the perceived cost, without evidence of significant return. Such organisations may approach sustainability strategy in a reactive manner, only responding to regulatory targets – a theme which came through in a number of comments. Another explanation could be that certain sectors are unsure how best to measure sustainability performance, or lack effective tools to do so.

We also asked respondents if they set sustainability targets for their business dealings, and if so, whether they measured their performance against these targets (see Figures 24 and 25 in Appendix C). Just over one third (35.77%) of respondents have in place sustainability targets for external business dealings, and for those that do have such targets in place, 84.48% regularly monitor performance against these. This finding strengthens the impression that some sustainability strategies are currently superficial. Other organisations appear to be concerned that if they set targets and fail to meet them, they will have to explain poor performance to their customers and others. It is possible that organisations would like to set external targets, but that the perceived difficulty in monitoring sustainability throughout a supply chain and measuring value, coupled with the real resource needed, is holding back progress.

A strategic shift?

There is anecdotal evidence that some organisations have moved on from stand-alone sustainability strategies and are now concentrating on integrating sustainability as a core part of their broader business. Comments included aspirations "to be an organisation that has sustainability as an integral part of our business" and "to be recognised as a leader in sustainability and carbon reduction from the products and services we undertake".

... and beyond

- > Large organisations that are declared leaders in sustainability will inevitably influence the way smaller organisations develop their sustainability strategies. With the trend towards collaborative structures and working practices, the best practices developed by such organisations could fast become minimum accepted standards.
- > We expect that more organisations will begin to place sustainability at the heart of business strategy. However, a significant number will continue to behave in a reactive manner and will only create strategies and set targets if motivated by regulation or other drivers.
- > The CRC, although focused purely upon energy efficiency, is also the first sustainability related piece of regulation that is designed to bring about structural and behavioural change on an organisation wide level, rather than being directed at specific buildings. This, combined with the associated direct financial implications, has the potential to spark wide-ranging reviews of strategy across all industry sectors.
- > Increasingly stringent regulation, combined with social and customer pressure, is likely to catalyse further development of sustainability strategies amongst Investors and End Users.
- > There is a need for more evidence that investment in green strategies, and the setting and meeting of targets, can be of real commercial value. Investment in these strategies now may be a leap of faith but failure to future-proof a business so as to meet the sustainability challenge will in time become a significant commercial risk. For top-level management, the key decision is when to take this step.

73.36% of respondents said the Government's target of making all new commercial property zero carbon by 2019 was not realistic.



Chapter 3:

Feasibility

Does the industry believe
its targets are achievable?

“ Our main target is to achieve at least a 5% reduction in carbon emissions by 2012 (compared with 2008 emissions). ”

Non-technical Adviser

Feasibility

Does the industry believe its targets are achievable?

Figure 7. Which of the following would influence your organisation to give sustainability, environmental targets and energy use a higher priority?

Influence	Mean score (1 is the most important, 5 is the least important)
Increased regulation and policy (eg. the building regulations, Carbon Reduction Commitment, Energy Performance Certificate, waste management)	2.68
More grants and financial and fiscal incentives	2.94
Financial and fiscal penalties for poor performance	3.16
Evidence of an effect on asset value or cost	3.28
Other	3.33
Contractual obligations	3.68
Mandatory public reporting	3.79
Evidence of enhanced marketability	3.87
Corporate social responsibility goals	4.03
Evidence of enhancement of brand or protection of organisation's reputation	4.06
Better internal information / awareness raising	4.15
Professional body industry best practice requirements	4.47
Membership of collaborative partnerships and schemes	4.70

Behind the Green Façade found that regulation was most likely to motivate the UK development industry to take further steps towards achieving sustainability goals. We set out to examine current drivers, future motivators and to uncover industry perceptions of the Government's carbon reduction targets for the built environment.

Is mandatory regulation still the most effective motivator?

Figure 7 shows which factors respondents felt would influence their organisation to give a higher priority to sustainability and environmental targets. Regulation and Government policy come out top, followed by economic considerations, in the form of grants and incentives. Economic penalties were ranked third, with evidence of effect on asset value or cost ranked fourth. This mirrors the findings of *Behind the Green Façade*, where respondents ranked regulation and tax breaks as the most important steps Government could take to encourage progress.

The results imply that the industry has a fairly fixed perception of what currently drives change, and what will do so in future. Regulation is still the key driver. Market forces are seen as capable of driving change, but with the reservation that they will not bring about the urgently required changes quickly enough. Government therefore continues to have a key role to play in developing further regulation, but to be effective it must involve significant industry input. One of the Government's first major tasks will be to convince the industry of the viability of its carbon reduction targets, as well as communicating to industry sectors how they can help achieve them.

Respondents also ranked evidence of an effect on asset value or cost relatively highly. We believe that developing a system of identifying, measuring and communicating green value will be essential for future motivation and progress (considered further in Chapter 8).

What does the industry think of the Government's carbon reduction targets?

We asked whether the industry felt that the Government's stated carbon reduction targets in the residential and commercial sectors were feasible. In both cases, a large majority of respondents (76.13% and 73.36% respectively) felt that the targets were unrealistic (Figures 8 and 9).

These results suggest a widespread belief that the targets may be unattainable. Contractors, Technical Advisers and Non-technical Advisers were slightly less pessimistic about zero carbon targets being met for residential property by 2016. Developers are a little more optimistic about the 2019 target for zero carbon commercial property, with almost one

third considering the target to be realistic – compared with less than a fifth of Developers who feel that the residential property zero carbon target is realistic. Non-technical Advisers and Investors are notably more negative about the commercial property zero carbon targets. The greater optimism of Developers about the commercial property zero carbon target suggests that developing technologies in the commercial property sector, coupled with the additional time period for compliance and the element of control they can retain over commercial buildings, make the target more achievable. The fact that Non-technical Advisers and Investors were more sceptical suggests that economic confidence is lagging somewhat behind operational confidence – perhaps the product of the recession and lower awareness as these sectors are more removed from the delivery process.

... and beyond

- > With an industry that is sceptical about carbon reduction targets, closer collaboration between Government and the industry is essential if these are to be met.
- > Government will need to work with all sectors to understand fragmented views and identify why certain sectors feel the targets are more achievable than others. Exploring this may assist with identification of barriers to delivery and the development of solutions.
- > Government faces a huge challenge in striking the right balance between 'carrot' and 'stick' in order to secure its sustainability objectives. It is incumbent upon the industry to engage as much as possible and attempt to meet and exceed targets. Industry bodies have a role to play here.
- > An inconsistent approach to regulation and its implementation, or the setting of targets that are perceived as unachievable, is likely to impact negatively on the delivery of the sustainability agenda by the industry.

Figure 8. Is the Government's plan for making all new housing zero carbon by 2016 realistic?

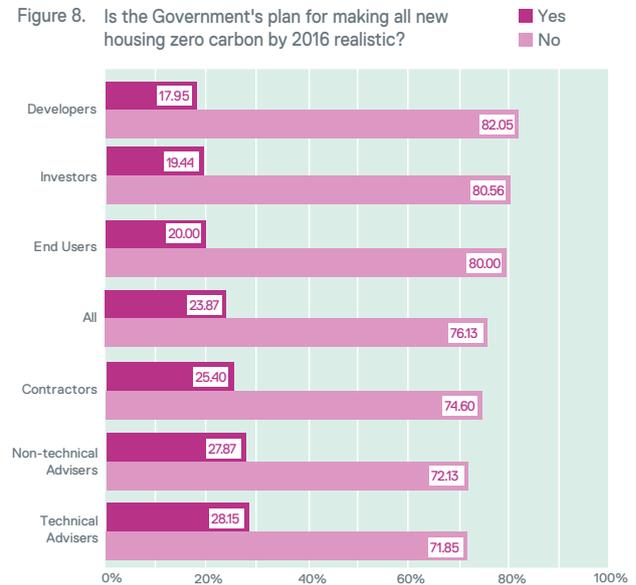
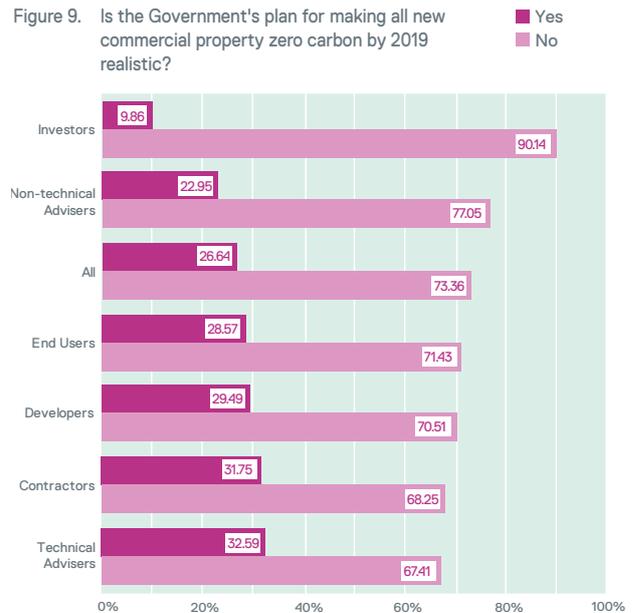


Figure 9. Is the Government's plan for making all new commercial property zero carbon by 2019 realistic?





81.10% of respondents indicated that either senior management or a senior executive held responsibility for sustainability strategy.



Chapter 4:

Responsibility for sustainability

Who delivers the green agenda?

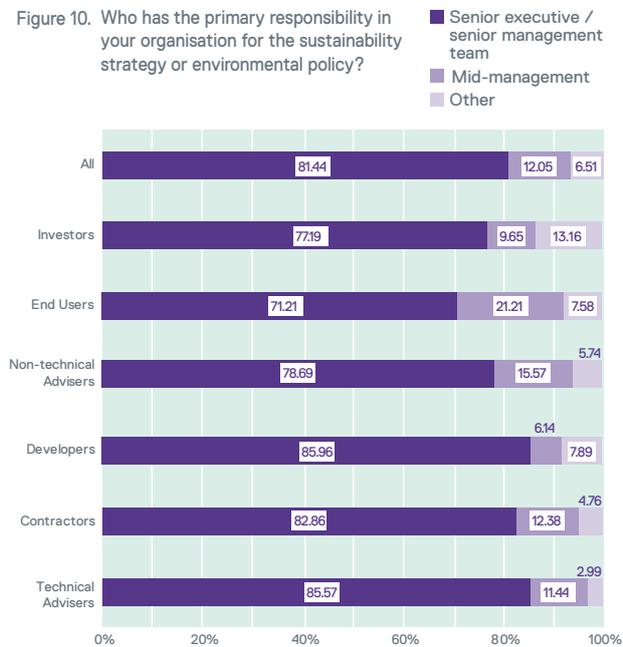
“ We have discussed the need for an improved focus on sustainability issues at Board level. ”

Investor

Responsibility for sustainability

Who delivers the green agenda?

Figure 10. Who has the primary responsibility in your organisation for the sustainability strategy or environmental policy?



We sought to establish where responsibility for sustainability lies within organisations, the depth of resource allocated and where the industry sources its advice. In doing so, we were able to gauge commitment to the sustainability agenda across the industry.

Sustainability: a top level item across all sectors

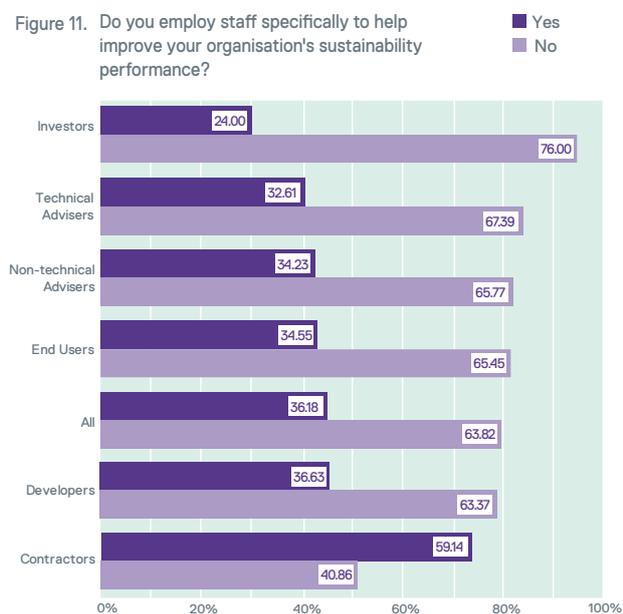
Over 80% of respondents stated that responsibility for sustainability strategy or environmental policy resided at a senior level, either with senior executives or the senior management team. This fits with the anecdotal evidence of a strategic shift in some organisations from a standalone sustainability strategy to integration of sustainability into their broader business strategy (see Chapter 2). The findings were similar across all sectors (see Figure 10) with the notable exception of End Users, where only 71.21% indicated that sustainability was dealt with at senior management level (the lowest response).

What these results do not reveal is whether those charged with responsibility for these issues are appointed specifically to manage and improve sustainable performance, or whether their sustainability role is an adjunct to other duties. It may be the case that, whilst senior management hold ultimate responsibility and perhaps a 'sustainability title', much of their responsibility is delegated or outsourced.

Who works with the senior team internally?

Only a minority of respondents (36.18%) across all sectors employed staff specifically to improve their sustainability performance (Figure 11). With over 80% of respondents identifying senior management as responsible for sustainability strategy, this raises the question – who is actually implementing the strategy? As previously noted, most organisations are not setting targets relating to their sustainability strategy, so it is perhaps not surprising that dedicated staff are not yet employed.

Figure 11. Do you employ staff specifically to help improve your organisation's sustainability performance?



The findings for Contractors and Technical Advisers stand out. Almost 60% of Contractors employ staff specifically to improve their organisation's sustainability performance – a marked difference to other sectors, such as Developers of whom 36.63% indicated they have dedicated sustainability staff. We suggest that this is because meeting sustainability targets is a greater element of a Contractor's business activity, so engagement of specific staff is essential. Interestingly, less than a third (32.16%) of Technical Advisers employ specific staff. We believe that many of the Technical Advisers surveyed are involved in the provision of sustainability advice, so the resource is likely to exist in-house.

Is responsibility for delivery outsourced?

Approximately one third (36.05%) of all respondents indicated that they employed external consultants to help them improve their sustainability performance (Figure 12). Only 39.56% of Contractors employ technical consultants to help improve their performance, presumably because they otherwise have this resource in-house. In marked contrast, Developers are far more likely to outsource, with 63.37% indicating they employed consultants specifically to help develop and improve their performance. Similarly, a relatively high percentage of Investors (45.45%) indicated they outsourced to technical consultants. As with Developers, the provision of sustainability advice is not core to the business of Investors and therefore it is more effective to outsource this work.

Where does the industry look for advice?

Respondents were asked to rank sources that they relied on for advice on environmental matters (on a scale of 1 to 5, with 1 being the most important - Figure 13). There was a clear preference for reliance on specialist environmental consultants (1.68) and professional industry bodies (1.99) for advice. Lower down the scale came official Government sources (2.16) and legal advisers (2.44). It is not surprising that environmental consultants are the first choice as a source of advice given the historic focus on the physical aspects of sustainability and the technical knowledge and qualifications these consultants have. The greater reliance on consultants and professional bodies as sources of advice contrasts with the earlier finding that outsourcing to consultants is relatively low. It suggests that although organisations only currently outsource on a limited basis, they consider these consultants to be a trusted source of information.

There is clear evidence of the involvement of top level management in sustainability. This has not translated comprehensively into the employment of dedicated staff members or the engagement of external consultants to facilitate delivery of sustainability strategies, indicating that the depth of commitment to sustainability in many organisations is still at an early stage.

Figure 12. Do you employ consultants specifically to help improve your organisation's sustainability performance?

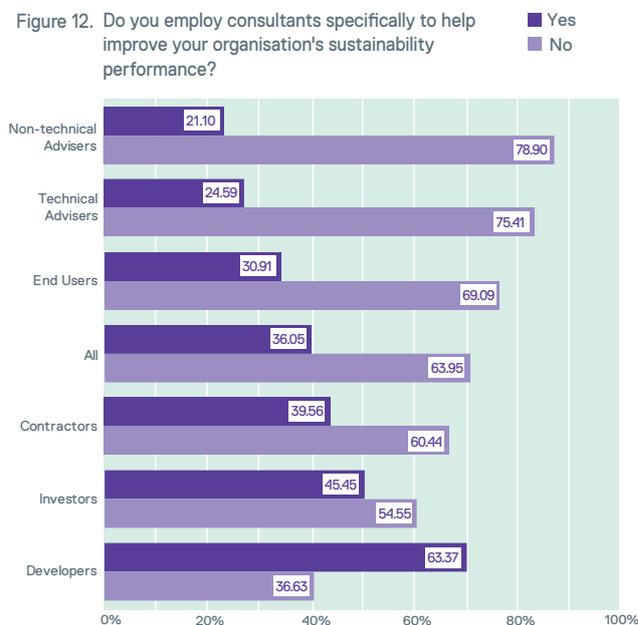


Figure 13. Please tell us which sources your organisation relies on for advice on environmental matters.

Influence	Mean score (1 is the most important, 5 is the least important)
Specialist environmental consultants	1.68
Professional industry bodies	1.99
Other	2.16
Official Government sources	2.16
Legal advisers	2.44

... and beyond

- > As organisations commit further to sustainability, it is likely that more dedicated staff will be hired, and that external advisers will be used more frequently. This may be accelerated by the increasing challenges of regulatory compliance, such as mandatory reporting.
- > We predict that the number and importance of specialist sustainability advisers will increase and that a professional industry body for these advisers will evolve. This may create business opportunities for certain parts of the industry, although it may involve a new layer of cost for others.
- > As the complexity and volume of regulation increases, contractual mechanisms will continue to evolve in response. In the future, lawyers will need to take account of sustainability issues when advising across all their traditional legal services.



40.98% of End Users and 38.39% of Investors do not report on sustainability at all, in contrast to the 90.38% of Contractors who do.



Chapter 5:

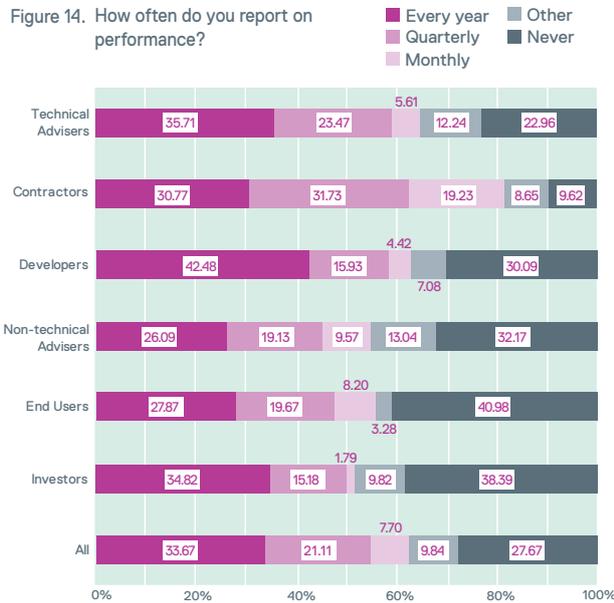
Benchmarks

How does the industry
measure performance?

“ We want all of our assets to
achieve a recognisable sustainable
rating.”
Investor

Benchmarks

How does the industry measure performance?



Benchmarking sustainability performance in the UK development industry is fundamental: it allows organisations to substantiate and contrast competing green claims. Despite a plethora of benchmarks, the industry has not come together around one, or even a core group of these. This was evidenced strongly by the breadth of replies received when respondents were asked to identify those benchmarks of which they were aware. This has led to difficulties in measuring success and in calculating green value.

We considered the frequency of sustainable reporting in the UK development industry and sought to identify which benchmarks organisations consider to be essential in their business dealings.

In recent years, a wealth of sustainable measurement tools have evolved. For the purposes of this report, we have broken these down into the following categories⁷:

- > buildings and products: accreditation and ratings – these include BREEAM, LEED, Environmental Impact Assessment (EIA), Energy Performance Certificates (EPC) and Display Energy Certificates (DEC);
- > organisations: accreditation and ratings – these include ISO 14001 and Carbon Trust Gold Standard;
- > corporate, financial and investment performance ratings – these include FTSE4GOOD and Dow Jones; and
- > league tables and other ratings – such as the CRC league table (first to be issued in 2011).

Within the above categories, there are differences between the benchmarks, including geographical scope (some are confined to national borders while others are global) and whether they are mandatory or voluntary (those which are legislative in origin tend to be mandatory).

How often do respondents report on performance?

The majority of respondents (72.33%) said they reported on sustainability, with 7.70% reporting on a monthly basis,

“ We are currently surveying all of our property assets to determine their current carbon foot print and BREEAM rating with the intention to upgrade all assets to a higher standard. ”

Investor

⁷ An extensive database of international benchmarks can be found on the Taylor Wessing sustainability microsite (www.taylorwessing.com/sustainability). Details of the benchmarks discussed in this report and other benchmarking tools can be found at Appendix B.

21.11% reporting on a quarterly basis, 33.67% reporting on an annual basis and the remainder reporting on another basis (Figure 14). Annual reports are currently considered to be the most appropriate, cost-effective and manageable vehicle for reporting upon an organisation's sustainability record and improvement. This is not surprising as it would tie in with annual corporate reporting⁸.

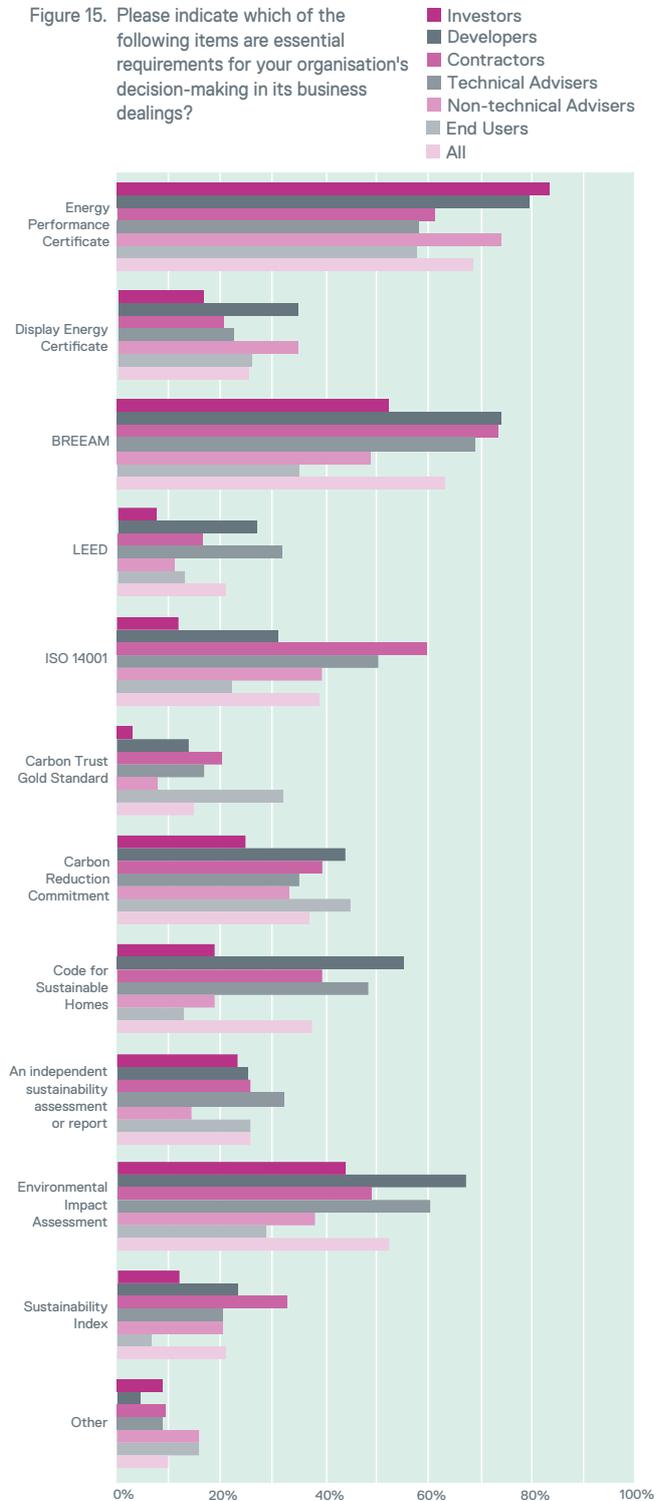
Contractors were the most active reporters, with nearly two thirds reporting either annually (30.77%) or quarterly (31.73%). A reason why more Contractors report on a quarterly basis could be that they are more likely to have established sustainability strategies in place (see Chapter 2), and have easier access to in-house skilled resources (Chapter 5). Publicising their ability to do this improves their reputation, profile and brand, and may help to sell services.

Less than half of End Users and Non-technical Advisers report annually (27.87% and 26.09% respectively) or quarterly (19.67% and 19.13% respectively). 40.98% of End Users and 38.39% of Investors do not report at all. These results are probably the most obvious demonstration and reflection of a theme emerging from the survey, namely that sustainability is being driven more by the delivery side of the industry than by the commissioning side.

Which benchmarking tools are being used by the industry?

Whilst there are many benchmarking tools, we selected a number of more commonly mentioned benchmarks and asked respondents whether these were essential requirements for their business dealings. As can be seen in Figures 15 and 16, the top four benchmarks identified as essential requirements were an EPC (68.9%), a BREEAM rating (63.71%), an EIA (52.48%) and an ISO 14001 rating (39.52%). Two of the top decision making items, namely, EPCs and EIAs, are derived from regulation and are compulsory where they apply, so it is not surprising that these have been named as essential tools. None of the respondent sectors regarded a DEC as being one of the four

Figure 15. Please indicate which of the following items are essential requirements for your organisation's decision-making in its business dealings?

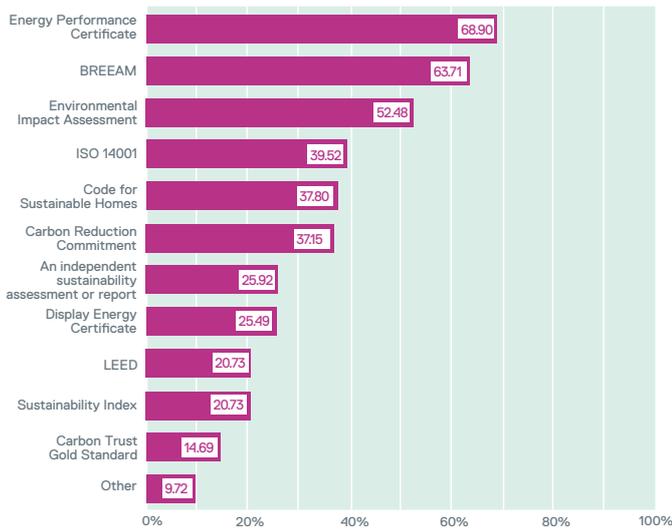


⁸ For further analysis, see Spada's 2008 White Paper *Environmental Reporting: Trends in FTSE 100 Sustainability Reports* (available at www.spada.co.uk/environmental-reporting).

Benchmarks ... continued

How does the industry measure performance?

Figure 16. Please indicate which of the following items are essential requirements for your organisations decision making in its business dealings?

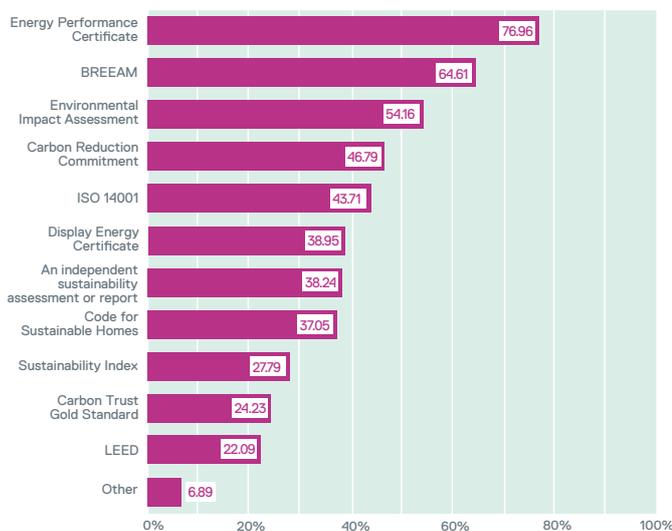


top essential requirements, even though they, like EPCs, are a regulatory requirement (albeit not of such universal application). Respondents ranked DEC's in a surprisingly low eighth position (25.49%).

The BREEAM rating is clearly highly regarded by all sectors, with Technical Advisers and Contractors regarding it as their most essential requirement. Its popularity is reflected in common references to it within development contractual agreements and tender documents. The benchmark ranked as the overall fourth essential requirement is the globally recognised standard, ISO 14001, which generates performance improvements. ISO 14001 is rated more highly by Technical Advisers (ranked third most important requirement) than by Developers (ranked seventh most important requirement) and Investors (ranked eighth most important requirement). It is interesting that non-mandatory rating methods such as these are considered so favourably, bearing in mind they may set higher sustainability requirements than mandatory regulatory requirements.

In contrast, the US Green Building Council's Leadership in Energy and Environmental Design (LEED) (20.73%), the Sustainability Index (20.73%) and the Carbon Trust Gold Standard (14.69%) were ranked as the three least important benchmarks for business dealings. The high ranking of BREEAM, when compared with other global building rating methods such as LEED and the Sustainability Index, is perhaps a reflection of its place in its market of origin, but also suggests that American led initiatives such as LEED and the Sustainability Index are yet to find their feet on a global or, more particularly, a European stage.

Figure 17. Is it likely that any of these items will be a future requirement of your organisation? If so, which?



The response in relation to the Carbon Trust Gold Standard is also interesting. The majority of respondents across the sectors regarded it as the least important benchmark, apart from End Users, who regard it as their fourth most important consideration. The standard is awarded to companies that measure, manage and reduce their carbon metric, and it is one of only two early action metrics recognised under the CRC, although the list of recognised early action metrics may soon expand. Its popularity amongst End Users can perhaps be explained by the fact that those who are aware of it tend to be more complex organisations, and would therefore derive more benefit from such a standard. As the CRC progresses, we may see an increased use of the Carbon Trust Gold Standard as organisations seek to comply with their CRC obligations.

Will these benchmarks remain important in the future?

Given the responses above, the results shown in Figure 17 are unsurprising. When asked to look to the future, respondents identified the same top three benchmarks as essential decision making requirements: EPC (76.96%), BREEAM (64.61%) and an EIA (54.16%). Respondents regarded EPCs as set to remain important with a markedly stronger showing (8% up). DEC's look set to increase in importance, moving from eighth to sixth place (38.95%). The CRC league table ranking rose from sixth place to fourth place (46.79%), which is to be expected given that the CRC, implemented in April 2010, is only just taking effect and will undoubtedly have a major future impact on the UK development industry. The increasing importance of the CRC league table ranking resulted in ISO 14001 falling from fourth to fifth place (43.71%). However, the importance of the Sustainability Index (27.79%), Carbon Trust Gold Standard (24.23%) and LEED (22.09%) is predicted to decrease – which is particularly surprising for the Carbon Trust Gold Standard given that it is an identified performance metric under the CRC. This may be indicative of a lack of detailed awareness of the CRC.

“ [We want] to be able to report internally and externally on a regular and clear basis, but against measure and benchmarks that we have confidence in. ”

Investor

... and beyond

- > There are signs that some voluntary benchmarks may evolve such a robust status through constant use that they will eventually become mandatory requirements for a commercial development.
- > Benchmarks themselves will continue to evolve, as technological enhancements push the boundaries of what constitutes a 'sustainable' building. Buildings will need to be flexible to allow for future upgrades to maintain the same sustainability benchmarking 'ranking'. Future-proofing is key to new and existing sustainable developments.
- > We believe it is inevitable that, in the medium to long term, some form of carbon reporting, above and beyond the requirements of the CRC, will become mandatory. Resulting league table rankings will become highly significant - effectively communicating good rankings or managing poor performance will be critical.
- > There is a clear need for the rationalisation of the plethora of benchmarking tools to enable national and global comparisons. We believe a series of interlinked common benchmarks are likely to evolve that deal with building construction, use and investment performance.
- > Leading organisations and industry bodies are well placed to play a key role in shaping which benchmarking tools will become accepted as industry norms.



Almost 60% of respondents have used some form of green agreement, with non-binding agreements preferred.



Chapter 6:

Green agreements revisited

A new role for contracts?

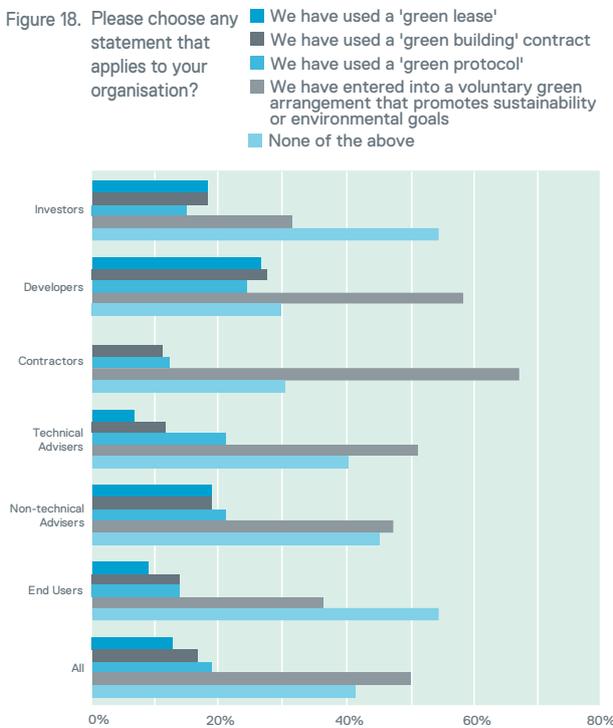
“There is a lack of knowledge or understanding of what these entail.”

End User

Green agreements revisited

A new role for contracts?

Figure 18. Please choose any statement that applies to your organisation?

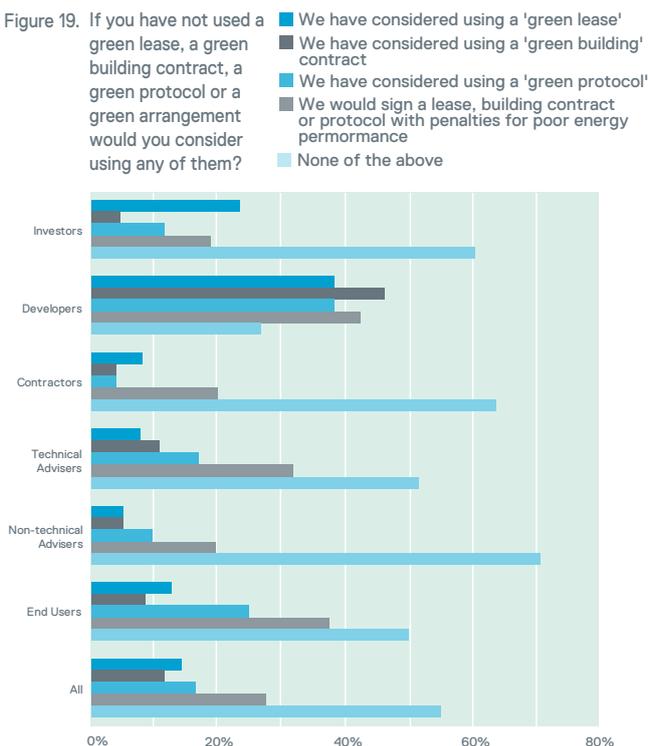


If emissions targets are to be met, regulations and policy relating to the development and operation of sustainable buildings are likely to increase. To be effective, they will need to be developed and implemented cohesively. Green agreements - for these purposes green leases, building contracts, protocols and voluntary arrangements such as memoranda of understanding - provide contractual mechanisms to deal with the allocation of the benefits and burdens that accompany regulatory change. When it comes to applying the sustainability agenda, green agreements can also provide a level of detail that translates from macro to micro level. These contractual frameworks give organisations an important platform to pursue their sustainability strategies.

Use and awareness of green agreements

One of the findings of *Behind the Green Façade* was that the UK development industry had poor awareness of green contract provisions and protocols, with 36% of respondents unaware of their existence (this figure rose to 46% for End Users). This report did not directly deal with the question of awareness, but asked respondents whether they had used a green agreement. Responses clearly illustrate that there is now a much wider awareness and indeed use, with almost 60% of respondents indicating that they had used a green agreement (Figure 18).

Figure 19. If you have not used a green lease, a green building contract, a green protocol or a green arrangement would you consider using any of them?



Developers were most likely to use binding agreements, with 26.37% saying they had used green leases and 27.47% saying they had used a green building contract. Interestingly, only 9.09% of End Users indicated that they had used a green lease but 36.36% reported use of a voluntary arrangement. This could indicate that binding contractual provisions in leases are being negotiated to become voluntary arrangements. 10.98% of Contractors had used a green building contract but, again, there was high use of voluntary arrangements (67.07%). This shows that the take up of green contractual provisions at the commissioning end of the industry is filtering down to the delivery side where historically voluntary technical codes and policy have been in place. Almost half of Investors indicated that they had used a green agreement (45.12%), suggesting that awareness in this sector has increased.

Overall, the most popular type of green agreement by far is a voluntary green arrangement that promotes sustainability measures or environmental goals. This could be because such arrangements are perceived to be more flexible or because these arrangements do not disturb historic contractual relationships. Whatever the cause, what is demonstrated is the growing interest and demand

for more structured contractual arrangements to promote sustainable behaviour. There is clear evidence that the industry wants to make its commitments formal but the depth of understanding is perhaps not yet there to have the confidence to develop these into binding arrangements.

The future for green agreements

We asked the 41.22% of respondents who said that they had not used a green agreement whether they would consider using such agreements in the future. The results are shown in Figure 19; almost half replied that they would consider using green agreements. This, combined with the results above, suggests that around 80% of respondents are either using green agreements or would consider using green agreements in the future.

Respondents indicated that they would be most likely to consider a contract or protocol with penalties for poor energy performance (27.56%). This suggests that some organisations see merit in entering into agreements with real sanctions in order to deliver green benefits, such as cheaper energy bills, or to avoid regulatory risks, such as those relating to the CRC.

Respondents mentioned a number of industry standard green agreements. These included the Better Building Partnership (BBP) model form green lease clauses and memoranda of understanding for use by landlords and tenants. In addition, the Joint Contracts Tribunal (JCT) has incorporated optional provisions in its suite of standard agreements⁹ that enable sustainable development and environmental considerations to be addressed. There are clear signs that industry is already seeking to standardise previously bespoke contractual practices¹⁰.

... and beyond

- > Green agreements will play an increasingly important role in managing the present and future requirements of sustainable regulation and policy. Green agreements can add the layer of sophistication that legislation cannot cater for.
- > Take up in the use of green agreements is likely to become more widespread within, and across, all industry sectors. Green provisions will feature in the full range of agreements in use in the UK development industry.
- > We predict wider use of collaborative and non-binding measures. These measures are flexible and can respond to regulatory step changes more easily and quickly.
- > There are signs that non-binding agreements will move to become binding provisions, particularly where legislation becomes more prescriptive and carries risks or penalties. Improved energy efficiency is likely to be an area where this will first develop.
- > Vertical green collaborative relationships between landlords and tenants are developing. In addition, the lateral relationship between organisations in multi-tenanted developments will become a consideration as 'green' occupiers seek to control the operational performance and behaviour of other tenants to support their sustainability strategies and avoid reputational risk.

“ We are currently reviewing our procedures going forward to use green leases especially as existing leases expire. ”
Investor

⁹ Schedule 2 of Revision 2 of the 2009 JCT suite.

¹⁰ A number of these key developments are noted on the Taylor Wessing Sustainability Timeline (www.taylorwessing.com/sustainability).

Improved operational flexibility is ranked as the strongest factor when considering greening existing stock.



Chapter 7:

Greening existing stock

Is the industry investing in retro-fit projects?

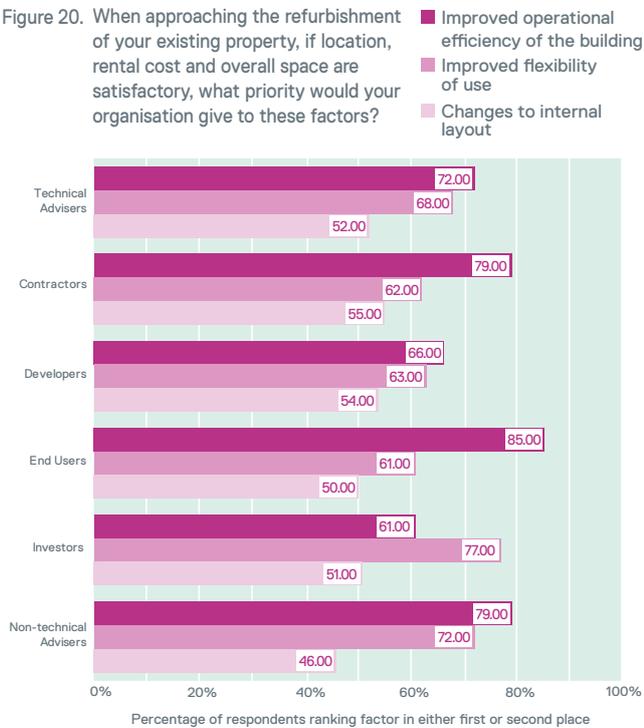
“ We currently own our existing office space and we are developing our approach to improve its environmental performance. ”

Developer

Greening existing stock

Is the industry investing in retro-fit projects?

Figure 20. When approaching the refurbishment of your existing property, if location, rental cost and overall space are satisfactory, what priority would your organisation give to these factors?



Whilst the main focus of recent policy has been on the green credentials of new buildings, only 2% of all building stock in the UK is less than five years old. Retro-fitting - the process by which the environmental performance of existing buildings is improved - will need to force its way onto the agenda if we are to make significant improvements in the sustainability of the built environment. Retro-fitting existing stock presents one of the greatest challenges facing the industry, as it will require huge short term investment with the long term benefits ultimately attaching to the building. Property owners, investors and financiers are, however, already forming joint ventures with the specific objective of investing money in the retro-fit of existing built assets.

What sustainable factors influence refurbishment?

We asked respondents to assess the importance of four factors when looking at refurbishment of a property that they currently own or occupy, and when looking at the refurbishment of a property in which they are looking to invest. The four factors were: improved operational efficiency of the building (energy, water, etc); changes to the internal layout of the building; changes to the exterior aesthetics of the building and its surrounding areas; and improved flexibility of use.

The respondents as a whole for both questions gave highest importance to improved operational efficiency, followed closely by improved flexibility of use, with internal layout being less important, and exterior aesthetics trailing along in fourth (see Figures 26 and 27 in Appendix C). However, there were clear differences between two key sectors – the End Users and the Investors (see Figures 20 and 21). For End Users, the operational efficiency of the building is of prime importance. On both questions, some 60% of End Users ranked it their first priority and over 80% placed it first or second in rank. For them, improved flexibility of use and changes to the internal layout of the building were of lesser importance. Investors, on the other hand, see flexibility of use as the main consideration – 41% ranked it first for their existing buildings and this increased to 46% for investments. Operational efficiency dropped to second place for their existing buildings and fell to third, behind changes to the internal layout, in investment considerations. This reflects the differing ways in which these sectors perceive value.

The other sectors followed the rankings of the respondents as a whole, with the only difference being in the strength of feeling expressed by the different sectors. Generally, the rankings for the first question (existing buildings) were slightly more emphatic than those for the second (future investment), probably reflecting the fact it is easier to have clarity of thought about something that currently exists, rather than a future possibility.

What will drive steps to improve energy efficiency in the industry?

From the options listed in Figure 20, Technical Advisers, Contractors and Developers all agreed that regulation was the main driving force, followed by price level and then availability of technology. Not surprisingly, as they are the ones who pay

Figure 21. When approaching the refurbishment of an existing building in which your organisation proposes to invest, if location, rental cost and overall space are satisfactory, what priority would you give to these factors?



the bills, End Users saw price as the most dominant driving force, then regulation and availability of technology. Investors and Non-technical Advisers follow a similar pattern. On first ranking alone, regulation is well ahead of price; however, when second rankings are taken into account too, price shoots ahead into pole position, especially for Non-technical Advisers. None of the sectors saw security of energy supply as important. These results closely mirror those found in *Behind the Green Façade*, when respondents also ranked regulation and energy costs as the top two drivers towards sustainability. The fact that the main drivers at present remain regulation and price is no great surprise.

It is clear why energy price is important to End Users and, as might be expected, regulation is influencing Investors and Non-technical Advisers. Investors seek to keep pace with regulation to avoid obsolescence and maintain lettability. Non-technical Advisers are required to take into account tangible, robust factors in arriving at valuation decisions, and regulation is an indelible cost signal compared with energy pricing, weighing retro-fit options and security of energy supply. This underscores how important it is that Government gets the incentives and market signals right when regulating; arguably it has not at present.

The CRC seeks to compel landlords and tenants to co-operate on energy efficiency programmes through pricing mechanisms, without addressing the practical issues that make such co-operation difficult. Landlords generally procure the energy for their buildings, but how they charge their tenants for it may not bear any relation to the amount they actually use; tenants may, or may not, be energy efficient, but this may have no bearing on the amount they pay to the landlord. With this split in purchasing and operational responsibility, it is difficult for landlords and managing agents to know, and even more difficult to influence, how much energy a particular tenant uses. Meanwhile, very few tenants know how much energy the landlord's services use, and what proportion is attributable to them.

EPCs, based on buildings' theoretical energy performance, send clear signals in relation to the replacement of kit, but are ineffective in showing tenants how efficiently they are using the space and also how effectively it is being managed by the landlord or managing agent. Over the last two years, the public sector has witnessed the adoption of DEC's, which are based on actual energy use and are issued annually. The certificates convey actual and potential energy efficiency, incorporating all the energy uses in the building, instead of only the fixed services, as is the case with EPCs.

DECs, if adopted by the private sector, would provide a convenient indicator of the operational energy efficiency of the building, which could be used by valuers, investors, funders, occupiers and owners alike, alongside the asset performance information provided by EPCs. They would also be of enormous benefit in allowing the benchmarking of buildings against their peers, further refining and linking sustainability performance to the financial performance of properties.

Figure 22. Which of the following is most likely to drive steps to improve energy efficiency?

Influence	Mean score (1 is the most important, 5 is the least important)
Regulation	2.01
Energy price (level and volatility)	2.07
Availability of cost effective technology	2.71
Security of energy supply	3.21

... and beyond

- > Government, as one of the largest owners and occupiers of property, will need to lead by example through meeting or surpassing across its own portfolio the standards it sets for others, and then communicating these successes.
- > The need for greater efficiencies throughout the finance, design, construction and operational stages of developments holds the potential for new business opportunities.
- > The introduction by the Government of feed-in-tariffs will encourage more owners of, and investors in, property portfolios to analyse how their stock can be used to provide new income streams and harness green value. For example, roof space may be used to accommodate equipment for renewable energy microgeneration for sale back to the national grid.
- > DEC's will be adopted by industry and investor bodies as another tool to illustrate just how well retro-fitted buildings perform, when compared to other buildings that have not been improved.
- > Industry sectors involved in planning, designing and constructing sustainable buildings will form more joint ventures with investors to retro-fit not just single buildings but entire estates. The economies of scale and the continuing emergence of 'cleantech' technologies will allow this to happen.

Almost a third of respondents gather or provide information on sustainability when providing finance or considering external fundraising.



Chapter 8:

Realising green value

Are organisations assessing green value?

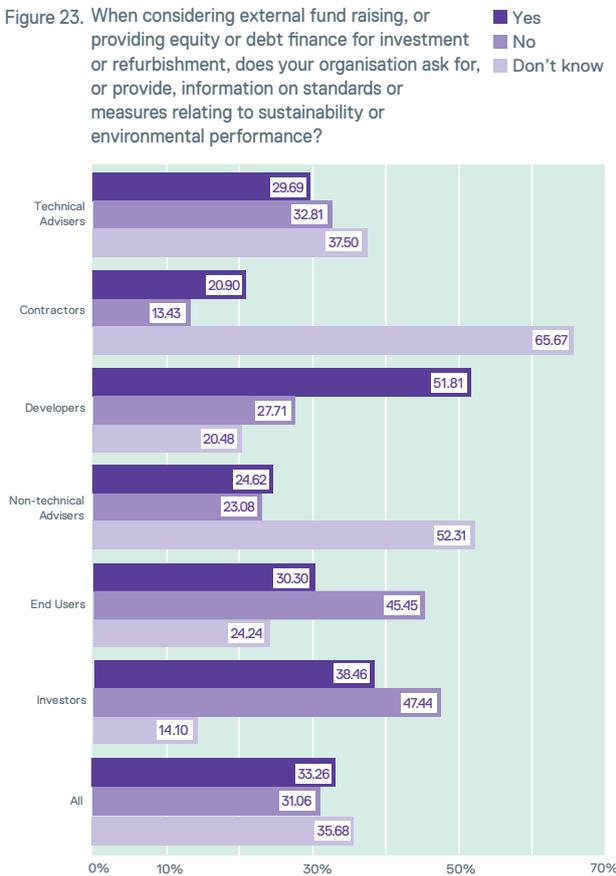
“ We recognise that sustainability is at the heart of our mission to create value for our clients ... ”

Developer

Realising green value

Are organisations assessing green value?

Figure 23. When considering external fund raising, or providing equity or debt finance for investment or refurbishment, does your organisation ask for, or provide, information on standards or measures relating to sustainability or environmental performance?



It is widely accepted that in order to drive the long term sustainability agenda, organisations must be in a position to realise and communicate the related value. Organisations and researchers face a number of challenges when seeking to assess this value. The term 'green value' means different things to different people. Some organisations will be solely focused upon a direct link between sustainability and economic value. This may be the increased value of a building, or it could be expressed as a cost saving through lower energy bills. Others will see value in indirect benefits, such as an enhanced reputation, better employee engagement and retention, and the ability to attract new business. As we have seen (Chapter 5), assessment of value is made more challenging by the plethora of tools available for measuring sustainability and environmental credentials. This results in it being difficult to compare the green value of one building against another, whether in its construction, use or as an investment. We sought to establish, at a very basic level, whether organisations are currently factoring green value into investment decisions, either on an individual building or organisation wide level.

Is green value an investment factor?

The results displayed in Figure 23, suggest that around a third of respondent organisations are currently looking at sustainability or environmental performance when considering investment. This figure is higher than we would have expected, given the lack of standardisation and application of benchmarking tools.

The responses from Developers, End Users and Investors are of most interest, as these organisations are the ones regularly seeking, or providing finance, in the industry. Collectively, 42.78% of these organisations ask for, or provide, information relating to sustainability or environmental performance. This appears to be led by Developers with 51.81% providing information in the course of transactions. However, almost half of the End Users (45.45%) and Investors (47.44%) questioned do not ask for, or provide, information relating to sustainability or environmental performance, suggesting that those providing capital are a long way from uniformly requesting information. The relatively high proportion of 'don't knows' from Technical Advisers, Contractors and Non-technical Advisers (48.46% across the three sectors) is not surprising given it is unlikely that these sectors would be involved in regularly seeking or providing finance.

“About 80% of the ecological footprint can be diminished just by changing design, without increasing significantly the cost.”

Developer

Whilst a significant proportion of the industry appears to be looking at sustainability or environmental performance when seeking or providing finance, what is not clear is what measures are being used in such assessment. It is also not apparent whether this information is translating into an increase or decrease in the capital or rental value of the particular building under consideration.

Is there long term green value?

There is a lack of credible empirical data applicable to the UK development industry and in particular the UK investment market. Studies in other countries provide useful guidance in this area, but the applicability of these international studies to the UK development industry is limited. New research is beginning to emerge in the UK and, for example, the Investment Property Data Bank (IPD) has recently started to track whether the capital value of a small number of buildings is affected by their sustainability credentials. There is also increasing anecdotal evidence of the development of a brown tariff – that is, in choosing between two buildings where price levels are relatively similar, organisations will naturally select the greener building. Further studies in the UK will be needed to establish whether the sustainability credentials of a building translate into a measurable capital or rental premium.

In assessing value, organisations are starting to recognise the wider benefits, such as the ability to demonstrate an organisation's corporate social responsibility and sustainability strategy by occupying a sustainable building. Occupying such a green building is also seen by some as adding value by enabling organisations to future-proof their businesses and operations against the effects of new regulation and the further development of the sustainability agenda. Technical advances and regulation are creating value opportunities such as the potential for new income streams from renewable energy microgeneration (see Chapter 7) and carbon trading.

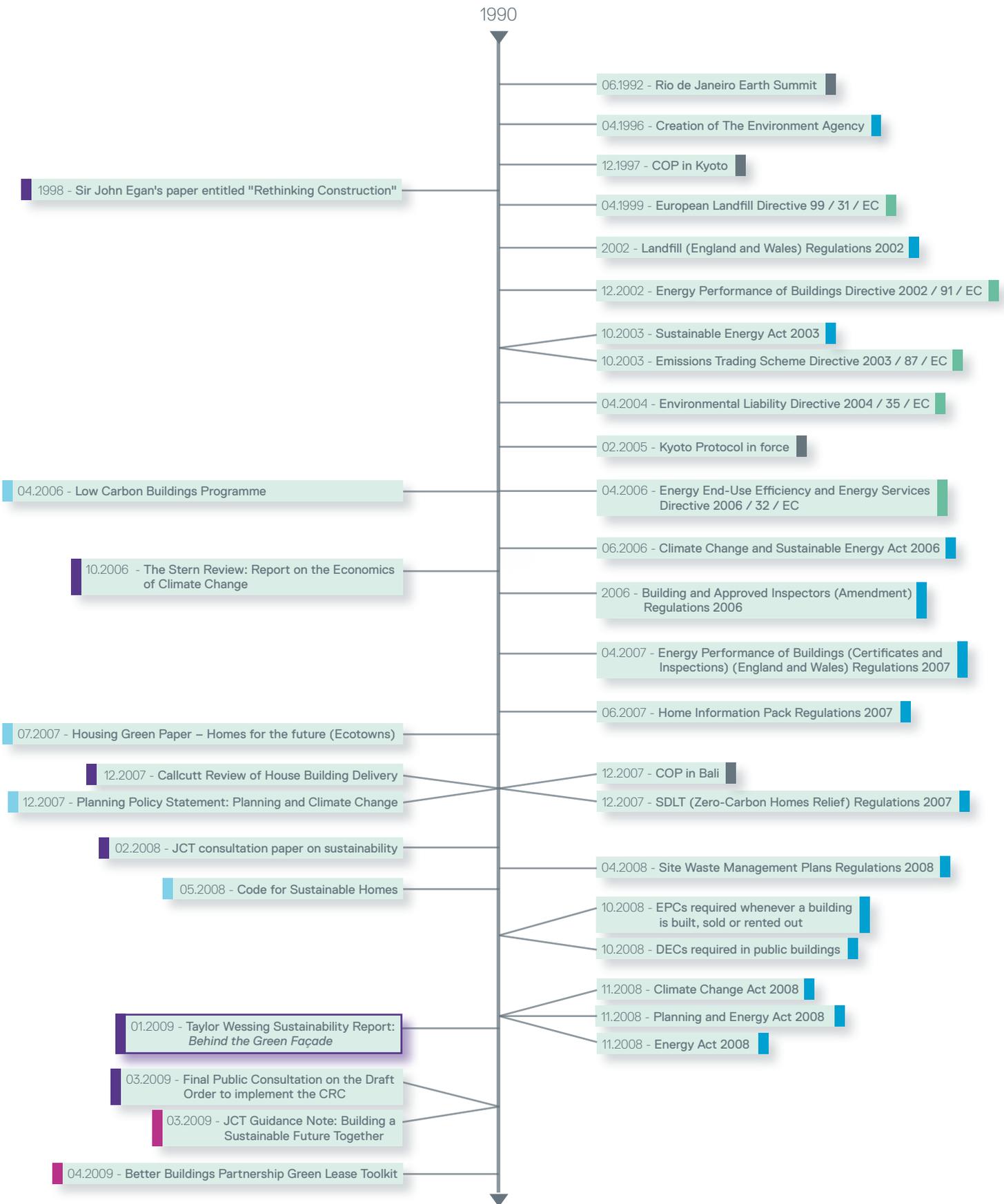
In Chapter 2, we noted that some organisations now put sustainability at the heart of their business strategy, rather than approaching it as a standalone item. This may suggest recognition of the potential value associated with sustainability in the long term. Those organisations that are prepared to incorporate sustainability in broader business strategy will be better placed to take advantage of the opportunities that are appearing and to realise their green value.

... and beyond

- > Only if measurable value, typically economic, is seen as a direct benefit of sustainability will organisations be incentivised to go further than required by regulation.
- > Accepted industry methods and tools need to evolve to enable organisations to make clear value comparisons between sustainable buildings. This is likely to extend to the development of standard methods of presenting and reporting the results of these standardised measurements.
- > Established industry bodies will play a vital role in the measurement of green value. The RICS guidance to valuers on how to incorporate the sustainable aspects of a building into a valuation is evidence of this starting to happen.
- > An ability to understand and demonstrate the impact of sustainability on brand equity would be desirable.
- > We expect that the market will noticeably move further to reflect a 'brown tariff' on buildings which are not regarded as sustainable.
- > Innovation in building design and use is essential if we are to see continued progress of the sustainability agenda. Innovation will only continue if it can be demonstrated that the benefits significantly outweigh the costs.

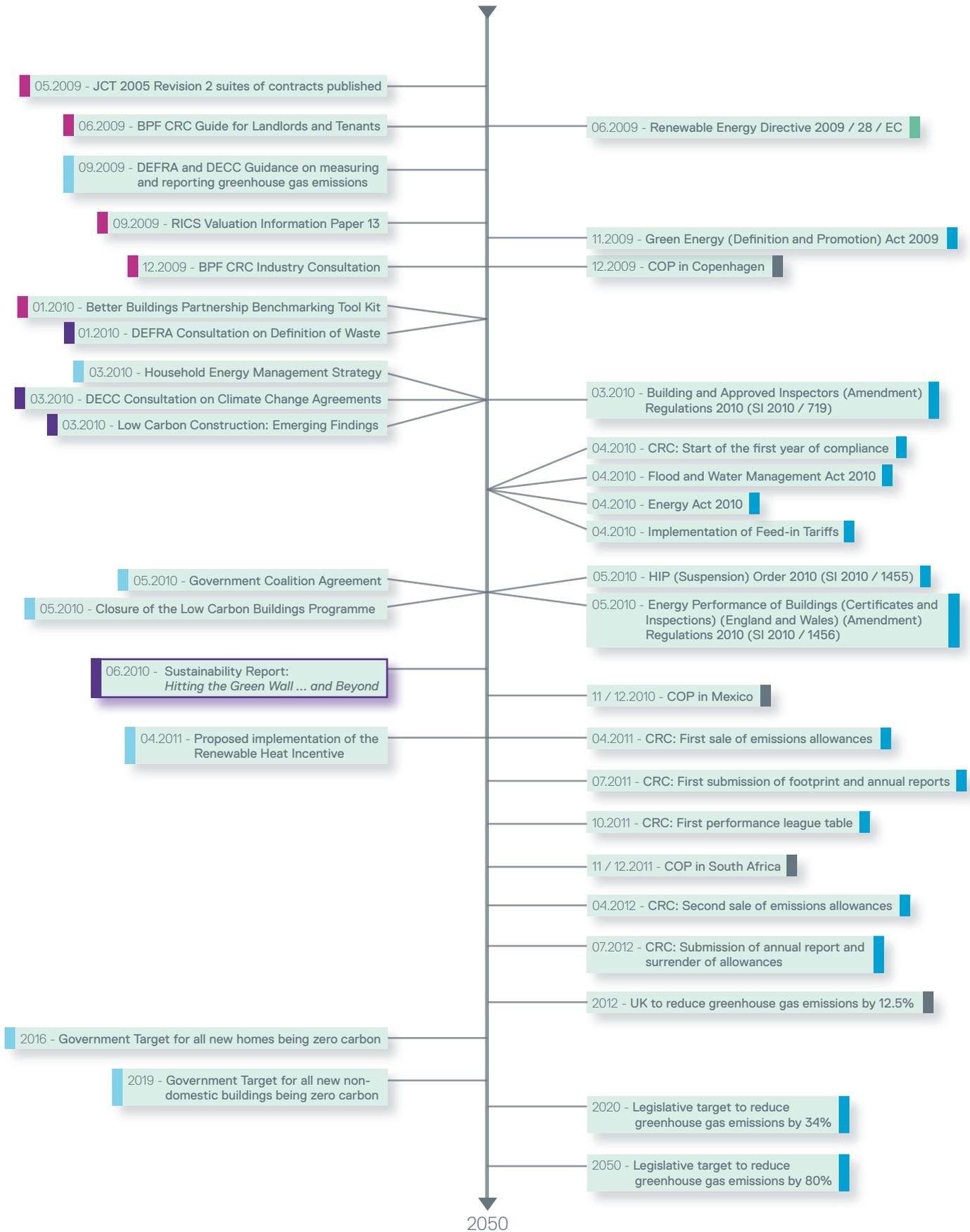
Appendix A

Sustainability timeline¹¹



- Government Policy, targets and guidance codes
- Key reports and consultations
- Industry standards and responses
- International Agreements / Treaties
- EU Legislation
- UK Legislation

11 This timeline is a snapshot of the Taylor Wessing Sustainability Timeline, (a full version can be found at: www.taylorwessing.com/sustainability).



Appendix B

Sustainability benchmarks index

The index below provides a snap shot of current International, European and UK environmental indices, benchmarks, standards and accreditations, including both voluntary and mandatory ratings and assessments that are used by the development industry.

The tables below are a guide to current sustainability and environmental benchmarks only. For the full version of this list, please refer to the Taylor Wessing Sustainability Benchmarks Index at www.taylorwessing.com/sustainability

Buildings and products: accreditation and ranking

Accreditation	Description	Organisation	Geographical Region
Association for Environment Conscious Building Carbon Lite Energy Standards (AECB CarbonLite Energy Standards)	The AECB CarbonLite Programme is aimed at practitioners involved in the design, construction and use of low-energy, low-CO2 emissions buildings. A 3-stage set of energy performance standards (the AECB Silver Standard, the Passivhaus Standard and the AECB Gold Standard), applicable to both residential and non-residential buildings, is central to the CarbonLite Programme. The standards are designed to help guide all those involved in the delivery and use of energy-efficient, low-carbon new-build properties.	Association for Environment Conscious Building (AECB, the Sustainable Building Association)	UK
Association for Environment Conscious Building Water Standard (AECB Water Standard)	The AECB Water Standard is applicable to new homes, the refurbishment of existing dwellings and also to non-domestic buildings. This standard sits alongside the AECB's CarbonLite Energy Standards and is aimed at architects, designers, house builders and specifiers. The standard is based on performance requirements for individual water-using devices.	Association for Environment Conscious Building (AECB, the Sustainable Building Association)	UK
BCA Green Mark Scheme	The BCA Green Mark Scheme is a benchmarking scheme which promotes sustainability in the built environment and incorporates internationally recognised best practices in environmental design and performance. It is used to assess the sustainability of new and operational buildings in the residential and non-residential sectors.	Singapore Building and Construction Authority	Singapore
Building Research Establishment Global Environmental Assessment Method (BRE Environmental Assessment Method) (BREEAM)	BREEAM sets the standard for best practice in sustainable design and measures a building's environmental performance by assessing buildings against a set criteria. BREEAM is used all around the world and can also be tailored for use for any specific country or region. Specific versions of BREEAM are available for the UK, the Gulf and Europe.	Building Research Establishment (BRE) Global	UK (but can be adapted for international use)
Building for Life Standards	Building for Life is a standard (resulting from a partnership between several UK national agencies including the Commission for Architecture and the Built Environment (CABE), Communities and Local Government (CLG) and the Home Builders Federation) for well-designed homes and neighbourhoods. It scores the design quality of planned or completed housing developments against the 20 Building for Life criteria.	Building for Life	UK
Building Regulations	The Building Regulations are made under powers provided in the Building Act 1984, and apply in England and Wales. The current edition of the regulations is 'The Building Regulations 2000' (as amended) and the majority of building projects are required to comply with them. They exist to ensure the health and safety of people in and around all types of buildings (i.e. domestic, commercial and industrial). They also provide for energy conservation, and access to, and use of, buildings.	Government	UK
Civil Engineering Environmental Quality Assessment and Award Scheme (CEEQUAL)	CEEQUAL is an UK industry scheme for assessing environmental and sustainability performance in civil engineering and public realm projects. It is widely used by major civil engineering clients, designers and contractors.	Institution of Civil Engineers	UK
Cleaner and Greener Seal	The Cleaner and Greener certification programme helps buildings, events, companies and organisations reduce their carbon emissions. The programme assesses an entity's carbon footprint and uses the Cleaner and Greener Seal to communicate positive environmental actions to the public.	Leonardo Academy	US

We believe that the information listed in these tables is comprehensive. If there are other benchmarks that you think should be included in this list, then please do let us know at sustainabilitybenchmarks@taylorwessing.com

- UK mandatory
- UK voluntary

Accreditation	Description	Organisation	Geographical Region
Code for Sustainable Homes	The Code for Sustainable Homes sets out the standard for the sustainable design and construction of new homes in England, Wales and Northern Ireland. It does not apply to Scotland. The Code measures the sustainability of a new home against nine categories of sustainable design. The Code became operational from 1 April 2007 and, subject to certain exceptions, from 1 May 2008 all new homes are required to have a Code rating against the Code and for a Code certificate to be included within the Home Information Pack.	Government	England, Wales and Northern Ireland
Comprehensive Assessment System for Building Environmental Efficiency (CASBEE)	CASBEE is Japan's green building standard. It uses building environmental efficiency as a basis for assessment by dividing the building environmental quality and performance by the building environmental loads.	Japan Sustainable Building Consortium (JSBC)	Japan
Display Energy Certificate (DEC)	DECs are required in all buildings occupied by a public authority with a floor area over 1,000m ² . DECs show the actual energy usage of a building, the operational rating, and help the public see the energy efficiency of a building. Certification is based on the energy consumption of the building as recorded by gas, electricity and other meters. A DEC is accompanied by an advisory report that lists cost effective measures to improve the energy rating of the building.	Government	UK
Ecology, Energy saving, Wastereduction and Health (EEWH)	EEWH is the green building evaluation system adopted by the Taiwan Green Building Council.	Taiwan Green Building Council	Taiwan
Ecoprofile	Ecoprofile was developed by the Norwegian Building Research Institute on behalf of the Norwegian Environmental Protection Department. Ecoprofile is used as a design tool, an environmental management tool and to classify a building's environmental performance.	Norwegian Environmental Protection Department	Norway
Energy Performance Certificate (EPC)	EPCs are required whenever a building (homes, commercial and public buildings) is built, sold or rented out under the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007. The certificate provides 'A' to 'G' ratings for the building, with 'A' being the most energy efficient and 'G' being the least, with the average rating up to 2008 being 'D'.	Government	UK
ENERGY STAR	ENERGY STAR is the US Government backed symbol for energy efficiency to help save money and protect the environment through energy efficient products and practices. Products can earn the ENERGY STAR label by meeting the energy efficiency requirements set forth in ENERGY STAR product specifications.	US Environmental Protection Agency and US Department of Energy	US
Environmental Impact Assessment (EIA)	EIA is a procedure that must be followed for certain types of development before they are granted development consent. The requirement for EIA comes from a European Directive (85 / 33 / EEC as amended by 97 / 11 / EC). The procedure requires the developer to compile an Environmental Statement (ES) describing the likely significant effects of the proposed development on the environment and proposed mitigation measures. The ES must be circulated to statutory consultation bodies and made available to the public for comment. Its contents, together with any comments, must be taken into account by the competent authority (eg local planning authority) before it may grant consent.	Government	UK

Appendix B

Sustainability benchmarks index ... continued

Buildings and products: accreditation and ranking ... continued

Accreditation	Description	Organisation	Geographical Region
Green Globes	The Green Globes system is used in Canada and the USA. It is an online assessment and rating system which assesses how green a building is in relation to design, operation and management.	Green Building Initiative (GBI) owns and operates Green Globes in the USA. In Canada, the Building Owners and Managers Association of Canada (BOMA BEST) owns and operates Green Globes for existing buildings while all other Green Globes products in Canada are owned and operated by ECD Jones Lang LaSalle	Canada and the USA
Green Seal Environmental Standards	Green Seal provides science based environmental certification standards. It has environmental leadership standards for a range of building and home improvement products.	Green Seal	Global
Green Star	Green Star is an Australian voluntary environmental rating system that evaluates the environmental design and construction of buildings.	Green Building Council of Australia	Australia
Haute Qualité Environnementale (High Environmental Quality) (HQE)	HQE is a French voluntary certification system for residential and non-residential buildings.	Association Haute Qualité Environnementale	France
HK BEAM	HK BEAM is a voluntary assessment system used in Hong Kong and is largely based on the UK BREEAM system. It assesses all building types at both design and operational stages.	HK BEAM Society	Hong Kong
ICC-700, National Green Building Standard (NGBS)	The NGBS defines green building for single and multifamily homes, residential remodelling projects and site development projects. It is the first residential green building rating system to receive American National Standards Institute (ANSI) approval.	International Code Council (ICC) and National Association of Home Builders (NAHB)	US
Investment Property Databank (IPD) Environment Code (IPD Environment Code)	The IPD Environment Code is a good practice global standard for measuring the environmental performance of corporate buildings.	Investment Property Databank (IPD)	Global
Investment Property Databank / Investment Property Forum (IPF) Sustainable Property Index UK (ISPI)	The IPSI is a financial performance index which tracks the investment performance of the more sustainable commercial buildings in the UK on a quarterly basis. It was commissioned by the IPF from the IPD.	Investment Property Forum (IPF)	UK
International Organisation for Standardisation 15392:2008 (ISO 15392:2008)	ISO 15392:2008 identifies and establishes general principles for sustainability in building construction. It is applicable to buildings and other construction works, as well as to the materials, products, services and processes related to the life cycle of buildings and other construction works. It does not provide benchmarks that can serve as the basis for sustainability claims nor is it intended to provide the basis for assessment of organisations or other stakeholders.	International Organisation for Standardisation (ISO)	Global
International Organisation for Standardisation Technical Specification 21931:2006 (ISO / TS 21931:2006)	ISO / TS 21931:2006 provides a general framework for improving the quality and comparability of methods for assessing the environmental performance of buildings. It identifies and describes issues to be taken into account when using methods for the assessment of environmental performance for new or existing building properties in the design, construction, operation, refurbishment and deconstruction stages. It is intended to be used in conjunction with the ISO 14000 series of International Standards.	International Organisation for Standardisation (ISO)	Global
International Organisation for Standardisation Technical Specification 21929-1:2006 (ISO / TS 21929-1:2006)	ISO / TS 21929-1:2006 provides a framework, makes recommendations, and gives guidelines for the development and selection of appropriate sustainability indicators for buildings.	International Organisation for Standardisation (ISO)	Global

- UK mandatory
■ UK voluntary

Accreditation	Description	Organisation	Geographical Region
Label for Environmental, Social and Economic Buildings (LenSE)	LEnSE is a European research project. It aims to develop a method for the assessment of the sustainability performance of existing, new and renovated buildings, which is broadly accepted by European stakeholders. This method will allow for future labelling of buildings, in a way similar to the Energy Performance Directive.	Belgian Building Research Institute (Belgium), ARMINES-ENSMP (France), Building Research Establishment (BRE) (UK), PODE+W / E Consultants (Netherlands), Planair (Switzerland), Czech Technical University (Czech Republic), European Profiles (Greece)	Europe
Leadership in Energy and Environmental Design (LEED)	US third party certification programme and nationally accepted benchmark for the design, construction and operation of high performance green buildings.	US Green Building Council (USGBC)	US
Lead for the Environment in Sustainable Building system (LiderA)	The LiderA system is a voluntary assessment system operated in Portugal. The system assesses the sustainability of a wide range of building types from the design stage through to operational stage. Buildings are rated on a scale of A to G.	LiderA	Portugal
Living Building Challenge	Environmental rating system that focuses on required environmental design elements, diverging dramatically from the credit based approach of North America's dominant rating system, LEED.	International Living Building Institute	Canada and US
MINERGIE	MINERGIE is an environmental assessment system for new and refurbished buildings in Switzerland.	Minergie Building Agency	Switzerland
National Australian Built Environment Rating System (NABERS)	NABERS is a performance based rating system for existing buildings. NABERS rates buildings on their measurable operational impacts on the environment.	New South Wales Department of Environment, Climate Change and Water	Australia
Passivhaus	German voluntary energy efficiency standard for buildings. It is not an energy 'performance' standard; it is a concept to achieve highest thermal comfort conditions on low total costs. It results in ultra-low energy buildings that require little energy for space heating or cooling. It can be used for both residential and non-residential buildings and for both new buildings and refurbishments.	Passivhaus Institut	Global
PromisE	The PromisE system was developed to allow the environmental assessment and classification of new and existing residential and commercial buildings.	Ministry of the Environment, Finland	Finland
Protocollo ITACA (Innovation and Transparency of the Contracts and Environmental Compatibility)	Protocollo ITACA is an assessment standard that defines green building. It has been adopted in a number of Italian regions.	Federal association of the Italian regions and autonomous provinces (ITACA)	Italy
Qatar Sustainability Assessment System (QSAS)	QSAS is a green building rating system developed for Qatar which takes into account the specific requirements of the region.	BARWA Real Estate Company (BARWA) and QATARI DIAR Real Estate Investment Company (Qatari Diar)	Qatar
Royal Institute of Chartered Surveyors Red Book (RICS Red Book)	Issued in April 2010, this book features guidance on how valuers should factor in a building's sustainability credentials. The change to the Red Book incorporates the RICS guidance in the Valuation Information Paper 13: Sustainability and Commercial Property Valuation.	Royal Institute of Chartered Surveyors (RICS)	UK
Sustainable Building Assessment Tool (SBAT)	The SBAT was developed to relate to the context of a developing country. It is designed to support sustainable development. It describes 15 sets of objectives, under the headings of economic, environmental and social, that should be aimed for in buildings and measures the extent to which these are achieved.	Council for Scientific Research (CSIR) (South Africa)	South Africa
Sustainable Development Model for Mexico	National Housing Agency of Mexico (CONAVI) has established a sustainable development model for Mexico. It is being demonstrated by Urbi, a leading housing developer, in the development of Valle Las Palmas. The project is intended to create an independent, ordered and sustainable town, including energy independence, industry and services.	National Housing Agency of Mexico (CONAVI)	Mexico

Appendix B

Sustainability benchmarks index ... continued

Organisations: accreditation and ranking

Accreditation	Description	Organisation	Geographical Region
Carbon Disclosure Leadership Index	The Carbon Disclosure Project (CDP) was launched in 2000 to collect and distribute information that will motivate investors, corporations and governments to take action to prevent climate change. CDP operates in most of the major economies in the world and is the only global climate change reporting system. Thousands of companies report their greenhouse gas emissions and climate change strategies through CDP every year. CDP produces annual reports which analyse these company responses. The Carbon Disclosure Leadership Index scores companies on the quality of their reporting to CDP.	Carbon Disclosure Project (CPD)	Global
Carbon Trust Standard	The Carbon Trust Standard was developed by the Carbon Trust in 2007 / 08 to encourage good practice in carbon measurement, management and reduction by businesses and public sector organisations. It is designed to provide a robust, objective and consistent methodology for assessing corporate carbon performance.	Carbon Trust	UK
Green Dragon	Green Dragon is a stepped standard recognising effective environmental management. The standard offers an environmental management system relevant to the specific needs of companies and organisations and rewards actions taken to achieve environmental improvements.	Groundwork in Wales	Wales
Greenhouse Gas Protocol Corporate Standard	The Greenhouse Gas Protocol is one of the most widely used international accounting tools for government and business leaders to quantify and manage greenhouse gas emissions.	World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD)	Global
ISO 14001:2004	ISO 14001:2004 is an internationally accepted standard that sets out how an organisation can go about putting in place an effective environmental management system.	International Organisation for Standardisation (ISO)	Global
ISO 14031:1999	ISO 14031:1999 is an internationally accepted standard that incorporates the use of performance indicators into environmental management systems.	International Organisation for Standardisation (ISO)	Global
ISO 14064-1:2006	ISO 14064-1:2006 provides a specification (at the organisation level) for quantification and reporting of greenhouse gas emissions and removals.	International Organisation for Standardisation (ISO)	Global
People 4 Earth global sustainability standard	The People 4 Earth global sustainability standard has been developed for trusted products and enables consumers, companies and non-governmental organisations to take measurable steps toward sustainable consumption and production.	People 4 Earth	Global
Sustainable Homes Index for Tomorrow (SHIFT)	Sustainable Homes developed SHIFT partnership with the Tenants Services Authority, World Wildlife Fund, Bank of Scotland Corporate and the UK Green Building Council. SHIFT provides an assessment of an organisation's sustainability performance and recommendations on how to improve. The Sustainable Homes Index For Tomorrow is a best practice group. The outcome of the assessment will be a benchmark rating allowing continuous improvement and comparison against similar organisations and best practice. Assessment focuses on four criteria - strategy and management, offices, existing stock and new build.	Sustainable Homes, Tenants Services Authority, World Wildlife Fund, Bank of Scotland Corporate and the UK Green Building Council (UKGBC)	UK
Sustainability Reporting Guidelines (G3)	The Sustainability Reporting Guidelines (G3) set out the principles and indicators that organisations can use to measure and report their economic, environmental, and social performance.	Global Reporting Initiative (GRI)	Global
Venue Sustainability Rating	Benchmarked sustainability rating for event venues in the UK. The criteria measured ranges from recycling and waste, to energy and efficiency and the venues' contribution to the local community.	Conference Care	UK

■ UK mandatory

■ UK voluntary

* Geographical Region of Companies that are Listed on the Indices
(not country where Index is based)

Corporate, financial and investment performance ratings

Index	Description	Index provider	Geographical Region*
Advanced Sustainable Performance (ASPI) Eurozone Index	European index of reference of companies and investors wishing to commit themselves in favour of sustainable development and corporate social responsibility.	Vigeo in cooperation with STOXX Ltd	Europe
Claymore / MAC Global Solar Energy Index	This index tracks companies based on the relative importance of solar power within the company's business model.	MAC Indexing LLC	Global
Corporate Sustainability Index (ISE)	This index measures the total return on a theoretical portfolio composed of stocks issued by companies highly committed to social responsibility and corporate sustainability (maximum of 40 companies). These stocks are selected amongst BM&FBOVESPA's most actively traded securities in terms of liquidity, weighted according to the outstanding shares' market value.	BM&FBOVESPA	Global
DZ NH BfOM Value Select Index	This index is composed of 16 shares which are selected from a multistage process. Oekom research selects from securities listed in the Dow Jones STOXX 600 Index those companies which meet Oekom research's ethical, social and environmental standards. Regard is then had to the companies' compliance with the independent negative criteria of Bank für Orden und Mission, a subsidiary of vr bank Untertaunus eG.	DZ Bank	Europe
Ethical Canadian Index (ECI)	Broad-based index of Canadian public companies that is screened for environmental, social, and governance practices.	The Ethical Funds Company	Canada
Ethibel Sustainability Index (ESI)	This index tracks the financial performance of the world's leading companies in terms of sustainable development.	Ethibel and Standards & Poor	Global
European Renewable Energy index (ERIX)	This index tracks the performance of the largest stocks in the European renewable energy sectors such as wind, solar, biomass and water energy.	Societe Generale	Europe
FTSE4GOOD and various	The FTSE4GOOD measures the performance of companies that meet globally recognised corporate responsibility standards and facilitates investment in those companies on a global scale. In addition, the FTSE Group has many other indices which measure various aspects of various types of organisations' sustainable performance in various jurisdictions. Please refer to www.taylorwessing.com/sustainability for details of these indices.	FTSE Group	Global
Global Challenges Index (GCX)	50 securities from globally active companies, which are promoting sustainable development through their range of products and services.	Hanover Stock Exchange in cooperation with Oekom Research AG	Global
GreenTec Climate 30	Thirty global enterprises relating to green technology, particularly renewable energies.	GreenTec Invest AG	Global
HVB Nachhaltigkeitsindex	Oekom Research identifies companies with good track records in environmental and social areas. Next, HVB picks out the 16 largest and most solvent European companies with the highest anticipated dividend yields.	Bayerische Hypo - und Vereinsbank AG	European
JSE SRI Index	This index measures companies' policies, performance and reporting in relation to environmental, economic and social sustainability issues.	Eiris	South Africa
Jantzi Social Index	Socially screened, market capitalisation-weighted common stock index consisting of 60 Canadian companies that pass a set of broadly based environmental, social, and governance rating criteria.	Michael Jantzi Research Associates (MJRA)	Canada
Kempen SNS Smaller Europe SRI Index	150 Socially Responsible Investment (SRI) companies from the HSBC Smaller European Companies Index. Small-cap companies must pass sustainability criteria based on environmental performance, social performance and business ethics.	Kempen Capital Management & SNS Asset Management	Europe
LBBW Nachhaltigkeit Strategie-Index	This index is a listing of companies which are gaining a competitive advantage by achieving a balance between economic, social and environmental goals.	LBBW	Europe
Natur-Aktien-Index (NAI) Index	This is a benchmark for the economic success of 30 companies which globally contribute to ecologically and socially sustainable ways of doing business.	SECURVITA	Global

Appendix B

Sustainability benchmarks index ... continued

Corporate, financial and investment performance ratings ... continued

Index	Description	Index provider	Geographical Region*
nx25	This is a benchmark for the economic success of 25 companies that support ecological and social sustainability worldwide.	Öko-Invest-Verlag	Global
OeSFX - OeKB Sustainability Fund Index	Funds are eligible for the inclusion in the index if they invest in companies whose environmental and ethical / social practices are particularly responsible.	Oesterreichische Kontrollbank AG (OeKB)	Austria
RENIXX® - Renewable Energy Industrial Index - World	This is a global stock index which comprises the performance of the world's 30 largest companies of the renewable energy industry. Whose weighting in the index is based on the market capitalisation.	IWR	Global
UmweltBank-AktienIndex (UBAI)	This index contains 18 listed German stocks specialising in ecology and sustainable management.	UmweltBank AG	Germany
Various Deutsche Borse	The Deutsche Börse has numerous indices which measure aspects of various types of organisations' sustainable performance in various jurisdictions including Germany and Switzerland. Please refer to www.taylorwessing.com/sustainability for details of these indices.	Deutsche Börse	Various
Various Dow Jones	The Dow Jones has numerous indices which measure aspects of various types of organisations' sustainable performance in various regions including the United States, Asia-Pacific and Europe. Please refer to www.taylorwessing.com/sustainability for details of these indices.	Dow Jones	Various
Various E. Capital Partners	has numerous indices which measure aspects of various types of organisations' sustainable performance in various regions. Please refer to www.taylorwessing.com/sustainability for details of these indices.	E.Capital Partners	Various
Various HSBC	HSBC has numerous indices which measure aspects of various types of organisations' sustainable performance in various regions. Please refer to www.taylorwessing.com/sustainability for details of these indices.	HSBC	Various
Various NASDAQ	NASDAQ has numerous indices which measure aspects of various types of organisations' sustainable performance in various regions. Please refer to www.taylorwessing.com/sustainability for details of these indices.	NASDAQ	Various
Various SAM Group and Dow Jones & Company	SAM Group and Dow Jones & Company has numerous indices which measure aspects of various types of organisations' sustainable performance in various regions. Please refer to www.taylorwessing.com/sustainability for details of these indices.	SAM Group and Dow Jones & Company	Various
Various Societe Generale	Societe Generale has numerous indices which measure aspects of various types of organisations' sustainable performance in various regions. Please refer to www.taylorwessing.com/sustainability for details of these indices.	Societe Generale	Various
Various Wilderhill	Wilderhill has numerous indices which measure aspects of various types of organisations' sustainable performance in various regions. Please refer to www.taylorwessing.com/sustainability for details of these indices.	Wilderhill	Various

■ UK mandatory

■ UK voluntary

* Geographical Region of Companies that are Listed on the Indices (not country where Index is based)

League tables and other ratings

Index	Description	Index provider	Geographical Region*
Awards for Environmental Excellence	Royal Society for the encouragement of Arts, Manufacture and Commerce (RSA) accredited awards for most successful green innovators and environmental breakthroughs.	Environmental Data Interactive Exchange (Edie)	Europe
Calvert Social Index	The Calvert Social Index is a broad benchmark for measuring the performance of large, US based companies. A social audit is conducted in the following areas: products, environment, workplace and integrity.	Calvert Group	US
Business in the Community's Corporate Responsibility Index (BITC's CR Index)	BITC's CR Index is the UK's leading voluntary benchmark of corporate responsibility. It helps companies to integrate and improve corporate responsibility throughout their operations by providing a systematic approach to managing, measuring and reporting on business impacts in society and on the environment.	Business in the Community (BITC)	UK
Green Business Awards (Green Globes)	The Green Business Awards reward excellence in green practice, strategy and products. They evaluate initiatives by UK business for achieving environmental sustainability and implementing smart business practice.	ENDS and Management Today	UK
Carbon Reduction Commitment League Table	As part of the carbon reduction commitment, the Environment Agency will publish league tables of participants performance at the end of each year.	Environment Agency	UK
FIDIC Project Sustainability Management Guidelines	FIDIC's Project Sustainability Management Guidelines were created to assist project engineers and other stakeholders in setting sustainable development goals for their projects that are recognised and accepted by as being in the interests of society as a whole. The process is also intended to allow the alignment of project goals with local conditions and priorities and to assist those involved in managing projects to measure and verify their progress.	FIDIC	Global
Green Apple Awards	Annual international campaign to recognise, reward and promote environmental best practice around the world.	Green Organisation	Global
Green Awards	These awards recognise and reward creative work that communicates the importance of corporate social responsibility, sustainable development and ethical best practice in any sector and across any marketing discipline.	Green Business Enterprises Ltd	Global
Green Giants league table	Annual league table of European businesses which are making sustainability and cost savings dovetail with solutions and strategies.	REurope	UK
Landlord's Energy Statement (LES) and Tenant's Energy Review (TER) (LES-TER)	The LES is a tool that helps landlords understand their buildings' energy efficiency and compare the performance of common services (heating, lighting and ventilation) against similar buildings with similar uses. This identifies any areas for improvement. The TER is a tool which allows tenants to gather information on the energy and emissions they purchase directly from suppliers. It also records 'stress' factors (such as high densities of occupation, long hours and intensive energy uses). It assists tenants in making energy reductions in the electricity uses they control through the production of an automated energy savings report, helping to identify potential savings opportunities.	British Property Federation (BPF)	UK
UK's 60 Best Green Companies	League tables of the UK's most environmentally aware companies with the most environmentally engaged workforces.	Sunday Times	UK



Appendix C

Additional graphs

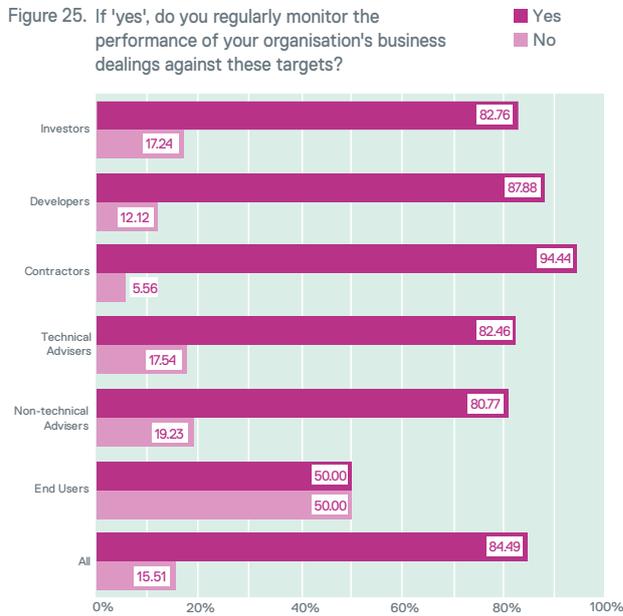
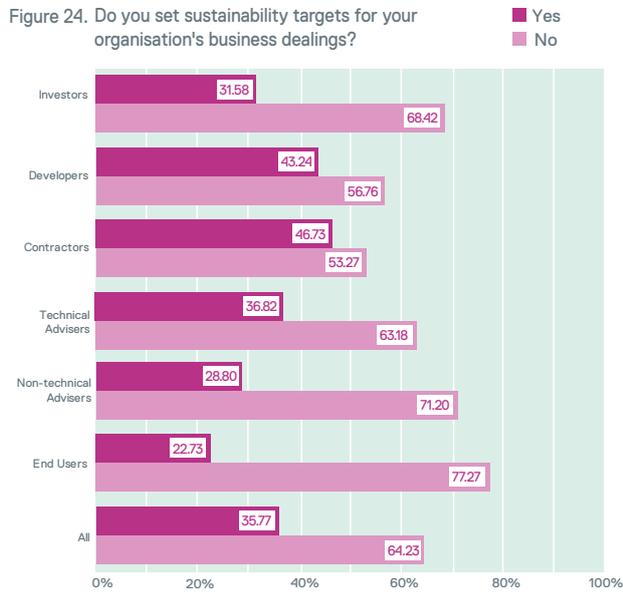


Figure 26. When approaching the refurbishment of your existing property, if location, rental cost and overall space are satisfactory, what priority would your organisation give to these factors?

Influence	Mean score (1 is the most important, 5 is the least important)
Improved operational efficiency of the building (energy water etc)	1.93
Improved flexibility of use	2.11
Changes to the internal layout of the building	2.34
Changes to the exterior aesthetics of the building and its surrounding area	3.62

Figure 27. When approaching the refurbishment of an existing building in which your organisation proposes to invest, if location, rental cost and overall space are satisfactory, what priority would you give to these factors?

Influence	Mean score (1 is the most important, 5 is the least important)
Improved operational efficiency of the building (energy water etc)	2.02
Improved flexibility of use	2.04
Changes to the internal layout of the building	2.47
Changes to the exterior aesthetics of the building and its surrounding area	3.47

Acknowledgements

The BPF, Spada and Taylor Wessing wish to thank all those who took the time to participate in our survey and who contributed their expertise in the development of this report.

With special thanks to:

Simon Pringle and Kevin Schofield of Mason Hardy

Imagery courtesy of:

- > The Crown Estate
- > Land Securities Group plc
- > Patrick Blanc
- > Scotscape Limited

The BPF, Spada and Taylor Wessing take their environmental responsibility seriously, therefore this report has been predominantly distributed electronically.

© Taylor Wessing 2010

This publication is intended for general public guidance and to highlight issues. It is not intended to constitute legal advice.

Taylor Wessing's international offices operate as one firm but are established as distinct legal entities. For further information about our offices and the regulatory regimes that apply to them, please refer to www.taylorwessing.com/regulatory.html



Liz Peace

Chief Executive
+ 44 (0)20 7802 0100
lpeace@bpf.org.uk

Patrick Brown

Assistant Director (Sustainability)
+ 44 (0)20 7802 0108
pbrown@bpf.org.uk



Gavin Ingham Brooke

Chief Executive
+ 44 (0)20 7269 1430
gib@spada.co.uk

Dillon Mann

Associate Director
+ 44 (0)20 7269 1430
dillonmann@spada.co.uk

spada



Helen Garthwaite

UK Head of Construction and Engineering
+ 44 (0)20 7300 4064
h.garthwaite@taylorwessing.com

Alistair Watson

UK Head of Planning and Environment
+ 44 (0)20 7300 4240
a.watson@taylorwessing.com

TaylorWessing



Certificate No. EMS 532521

