



# **SOFT LANDINGS: THE BENEFITS TO COMMERCIAL PROPERTY OWNERS**

# Introduction

The commercial property sector is waking up to the fact that it needs to take responsibility on climate change and there is a broad recognition that a significant gap exists between the design expectations and operational performance of buildings.

Shortcomings can arise at any stage of a project's lifecycle, from initial briefing, project design, construction, all the way through to operational management. The problem is often exacerbated by the separation of construction and management teams, telescoping of commissioning periods, inadequate training at handover and a lack of feedback throughout the design and construction process.

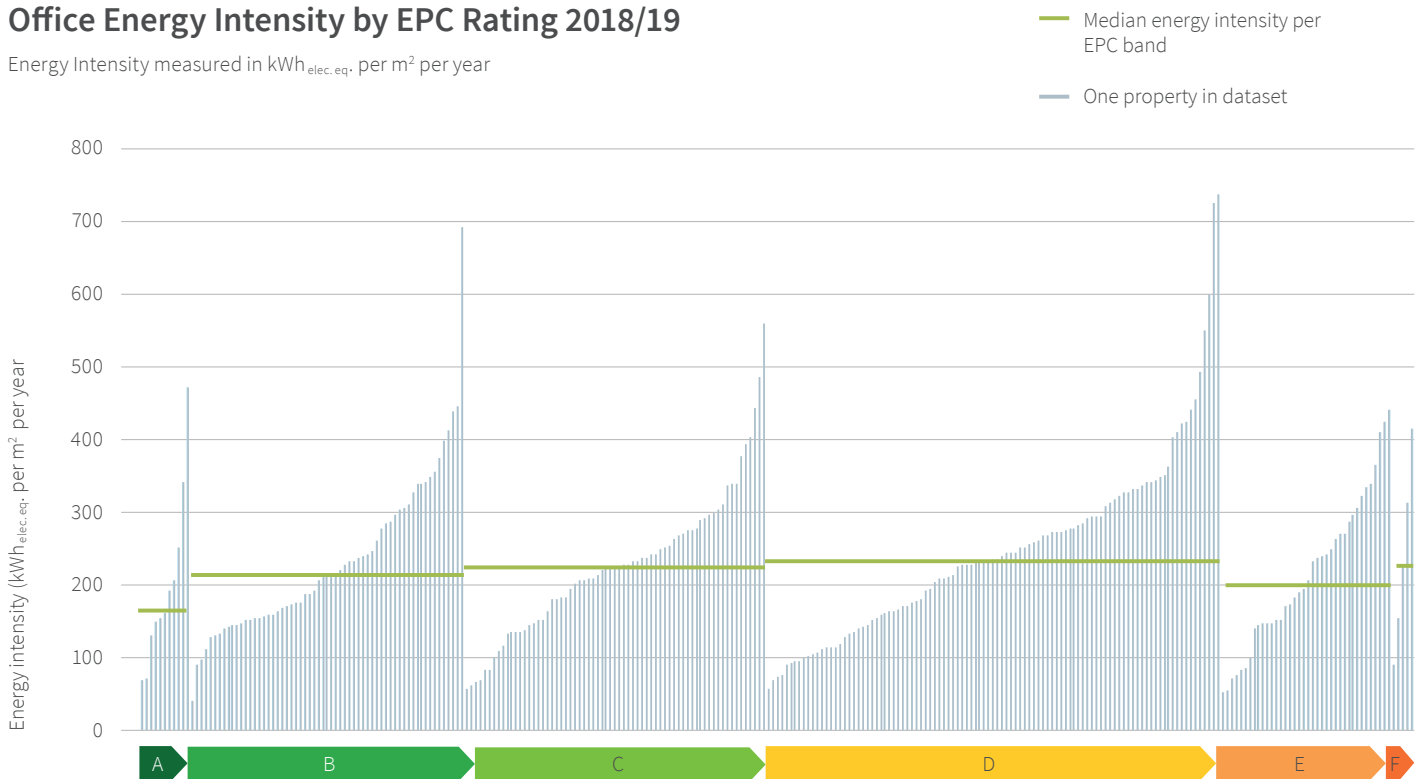
Traditionally, design teams' and contractors' involvement ceases at the handover stage. This often limits the transfer of knowledge to the management team as well as the opportunity for the design teams to learn from what has historically worked well or poorly. Similarly, management teams are rarely required to contribute to briefing and design development. This misses the

opportunity to add value through the incorporation of their practical understanding of building operation. These missed opportunities ultimately result in a building which does not reach its full potential and ultimately delivers a lower quality building to the client and occupier.

This issue comes into sharp focus as property owners are coming under increasing pressure to demonstrate how well they run their buildings to investors, occupiers and wider stakeholders. The inability for design targets to translate to operational performance poses a risk to both property owners and their supply chain when seeking to deliver sustainable, healthy buildings that can meet both their own, and users', expectations. A clear example of the "performance gap" can be seen with energy consumption using data from the BBP's Real Estate Environmental Benchmark, wherein actual energy performance data has no correlation with the EPC ratings of office buildings (see graph below).<sup>2</sup> This poses significant risks in the property sector's growing ambition and desire to support the transition to a net zero carbon economy through the delivery of net zero carbon buildings.

## Office Energy Intensity by EPC Rating 2018/19

Energy Intensity measured in kWh<sub>elec,eq.</sub> per m<sup>2</sup> per year



Source: Real Estate Environmental Benchmark: 2019 Energy Snapshot

For any given development project, the performance gap may result from a combination of factors, including:

- an unclear client brief regarding the project's aims and success criteria,
- a lack of focus on operational outcomes at the design stage,
- the over-estimation of needs resulting in over-specification in design,
- poor quality construction materials,
- cost-cutting exercises during construction,
- a tightened commissioning period,
- insufficient training for the facilities management team, and
- a lack of process in place to obtain and disseminate feedback about the performance of the building in operation (i.e. a lack of post-occupancy evaluation).

To address the performance gap and deliver better buildings, clients and project teams should adopt a collaborative mindset focused on operational outcomes. This is easier said than done; collaborating throughout the design and delivery process requires a culture change across the industry.

Soft Landings supports this process by enabling closer collaboration between the various stakeholders involved in a project, helping clients and project teams deliver buildings that meet their design intent, and ultimately, creating better buildings.

This guide aims to provide information to building owners and investors regarding how their new or refurbished buildings can benefit from Soft Landings, as well as how the approach can be adopted and implemented in their projects.

BSRIA guides such as BG 54/2018<sup>3</sup>, BG 38/2018<sup>4</sup> and BG 74/2019<sup>5</sup> can be used in conjunction with this guide.



# What is Soft Landings?

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Soft Landings is a delivery approach which aims to create buildings that meet clients' needs. This approach helps to reduce the performance gap, optimise the operational performance of buildings, and create healthy and comfortable environments for the end users. It covers a project from inception through to completion and operation. This scope ensures the project success criteria are clearly defined from the start and placed at the heart of the design, construction and operational stages of the project.

The Soft Landings Framework (BG 54/2018) has been developed to provide some guidance on how construction professionals can implement Soft Landings in their projects. The Framework includes six Phases:

## **1. INCEPTION AND BRIEFING**

Defining and understanding the project's success criteria and how these should be promoted and protected throughout the project.

## **2. DESIGN**

Reviewing previous, similar projects and using the lessons learned to inform the design and ensure the success criteria and targets set are realistic.

## **3. CONSTRUCTION**

Ensuring that the construction team is fully aware of the project's success criteria and that all construction activities and value engineering exercises support these criteria.

## **4. PRE-HANDOVER**

Confirming that the building is ready for occupancy and the facilities team understands how to manage and control the building.

## **5. INITIAL AFTERCARE**

Ensuring information and support are provided to the end users and initial teething issues are addressed quickly.

## **6. EXTENDED AFTERCARE AND POST-OCCUPANCY EVALUATION (POE)**

Assessing the building's performance against the defined success criteria, finding solutions to issues (if any) related to operational performance, and capturing and disseminating lessons learned.

The Framework also explains the objectives of each Phase and provides guidance and examples of activities that can be considered to meet the objectives.

# Benefits

For commercial property owners, the business benefits of implementing Soft Landings can be summarised as follows:

## 1. IMPROVING CUSTOMER EXPERIENCE

The Soft Landings approach enables the property owner to provide spaces that are in line with the original design intent, which occupants can make use of accordingly. The facilities management team will likewise be able to understand the building, how it operates and how to optimise its performance according to user needs. Thus, for a new customer taking space in a building, the efficient setup and optimisation of that space is a clear business benefit. The Soft Landings approach can also help the project team ensure that any fit-outs are compatible with the building design and services, further helping the customer to deliver on their own performance requirements.

### Happy customer, happy owner

*“The quality of 30 Broadwick Street and exemplary handover of our restaurant space enabled us to complete our fit-out and be open to customers on schedule to a tight timeframe.”*

Benoit Noyez, Assistant Manager, The Ivy Soho Brasserie, occupier at 30 Broadwick Street

## 2. DELIVERING PERFORMANCE OUTCOMES

With clear project success criteria set out at the Inception and Briefing Phase, as well as a continuous focus on outcomes throughout the process, project partners can ensure that the client is handed a building that delivers on its design intent. The Soft Landings pre-handover activities also ensure that the building is managed effectively and consistently. This can result in improved operational performance and a reduction in the performance gap, providing a more comfortable, more efficient building, in addition to cost savings.

### Building performance becomes business as usual

*“The substantial cost savings and CO<sub>2</sub> reductions achieved through our RE:FIT project with E.ON and other specialists at Palestra show the power of partnership working.”*

Quinten Babcock, Environmental Manager at Transport for London

## 3. STREAMLINING THE COMPLETION PROCESS

The Pre-Handover, Initial Aftercare and Extended Aftercare activities included in the Soft Landings approach can ensure a smooth handover from the contractor to the building owners and managers. This minimises snagging and defects but can also ensure that building managers understand how to operate the building well, enabling fine-tuning and post-occupancy evaluation (POE) to inform the ongoing operation and management of the building.

### Integral part of successful buildings

*“Soft Landings has been an integral part of our successful delivery of Lendlease’s residential and mixed-use schemes here in the UK. The process also represents an increasingly critical milestone in our circular economy approach to buildings, establishing baselines for reference from theoretical to actual performance throughout the lifecycle. In turn this enables us to introduce measures and incentives to optimise demand response and ultimately deliver better performing buildings.”*

Mark Williams, Lead MEP Development Manager – Product Residential, Integrated Solutions Europe, Lendlease

## 4. FOSTERING COLLABORATION AND COMMUNICATION

The collaborative working approach of Soft Landings enables a 'no-blame' culture with an improved understanding of responsibilities for the whole project team. Overseen by a Soft Landings Champion who is nominated by the client, every member of the team has a role to play in achieving the success criteria: design and construction teams take greater long-term responsibility for the building design, and the facilities management team feel more valued and take greater accountability for building performance. The increased dialogue between teams also identifies issues up front in a way that would not be possible if working in silos. The structured approach both ensures that knowledge is not lost when key personnel change and also provides a clear framework to identify lessons learned that can be passed on to future projects.

### CASE STUDY 1: Transport for London – Palestra

Transport for London (TfL) completed a major RE:FIT project with E.ON and specialist partners to improve energy efficiency at Palestra, a large office building in Southwark. Cost savings and CO<sub>2</sub> reductions in the first year significantly exceeded E.ON's performance guarantees and improvements have also helped improve occupant satisfaction.

Palestra is a large, complex building that provides accommodation for people and technology essential to keeping London's transport network running 24/7. TfL had already raised the building's BREEAM sustainability



### Accountability & learning for the long-term

*"We learned a lot. Issues on lifts picked up at 30 Broadwick Street have been rectified on the design for at least one future development currently at design stage."*

Janine Cole, Director of Sustainability and Community at Great Portland Estates Plc

## 5. SUPPORTING VOLUNTARY STANDARDS AND COMMITMENTS

Soft Landings is an approach that enables the team to establish key success criteria that support not only internal specifications but also voluntary ratings such as BREEAM, WELL Building Standard, Design for Performance, ISO Certification, Ska, FitWel and WiredScore.

rating from Very Good to Excellent, after acquiring the head lease in 2008. In 2015, TfL appointed E.ON to carry out an energy performance contract, through the Greater London Authority's RE:FIT programme. TfL chose to use a Soft Landings approach in order to coordinate the complex project and the number of parties being involved in the scheme.

### The improvements resulted in:

- £445,000 Annual energy cost savings,
- 17% reduction in CO<sub>2</sub> emissions compared to the measurement and verification baseline,
- Greater occupant satisfaction, and
- Automatic operation of Combined Cooling, Heating & Power (CCHP) plant for the first time.

### Benefits of using Soft Landings:

From the outset, Soft Landings provided a framework for all parties to work collaboratively on improving the building's operational performance. E.ON's energy solutions team engaged with TfL's environmental manager early on to understand the key success criteria for the project. A clear communication process and long-term commitment from all project partners were key to success, with everyone working together to deliver a lasting solution.

# How to Implement Soft Landings in your Projects

## EARLY ENGAGEMENT OF THE PROPERTY/FACILITIES MANAGEMENT TEAMS

It is very important to engage with the end users and the property/ facilities management team at the beginning of the project when the project success criteria are being set. This helps the project team to understand the end users' needs and expectations. The property/facilities management team can also benefit from this by better understanding how the building is planned to operate; that in itself can improve operational efficiency. In the case of speculative properties, where end users, and in some cases the property/facilities management team, are unknown at the beginning of the project, the project teams should ideally seek advice from end users and property/facilities management teams of similar buildings to receive input as early as possible.

### Smoother handovers

*“When implemented effectively, Soft Landings upgrades good handovers into great handovers, de-stressing the user experience and helping Lendlease create the best places.”*

David Wright, Head of Building Services – Integrated Solutions, Europe, Lendlease

## VALUE OF THE SOFT LANDINGS CHAMPION

The Soft Landings Framework suggests every project should have a Soft Landings Champion, nominated by the client, and a Soft Landings Lead, identified in the project team. The Champion, with the support of the Lead, ensures Soft Landings principles are adopted, Soft Landings activities are carried out and the success criteria are protected throughout the project. Therefore, the Soft Landings Champion and the Lead should ideally stay with the project through to completion and end-use. Where this is not possible, an appropriate handover process should take place. This will be especially important for procurement processes where key members of a team may come and go. Soft Landings Champions do not need to have any specific qualifications, but they need to be enthusiastic individuals with good communication and facilitation skills.

The Champion and Lead should meet towards the end of each Soft Landings Phase to review the activities for the completed Phase. The activities for the next Phase can also then be revisited and planned for in greater detail.

## INPUTS AND OUTCOMES

For clients to get what they need, it is essential that they articulate their desired outcomes. An operational outcome depends not only on a design input but also on the choice of a product, the quality of its installation, its commissioning, its usability and its maintainability. The Framework recommends workshops/meetings to be organised during Soft Landings Phases 2 to 5. This can help the team ensure that design input is transferred to operational benefits and support the project's success criteria. These workshops are referred to as “reality-checking”. BSRIA guide BG 27/2011<sup>6</sup> provides more information on reality-checking workshops.

## FLEXIBILITY FOR SCALE

The Soft Landings Framework provides guidance that can help the project team pay closer attention to the outcome of any decisions they make throughout the project.

The Framework includes examples of activities, however, these examples are not intended to be prescriptive. The Framework has been developed to suit all building projects regardless of their types and sizes. It can also be tailored to make sure it is fit for purpose without losing focus on the Soft Landings core principles. Ideally, the Soft Landings activities explained in the Framework should be integrated with the project's normal delivery process. For those interested in learning more, BSRIA Guide BG 38/2018<sup>4</sup> explains what the minimum requirement is for a project to be truly called a Soft Landings project.

### Continuous learning

*“Workspace and its design and construction partners are already putting the lessons learnt at Brickfields into practice in other new centres, from tighter noise specifications for air conditioning units to zoned lighting systems. Workspace is also looking at rolling out its tailored Soft Landings Framework on other projects.”*

Stacey Ann Medar, Energy and Sustainability Manager, Workspace

## CASE STUDY 2: Great Portland Estates – 30 Broadwick Street

Great Portland Estates (GPE) is a property investment and development company focused entirely on central London. In 2015, its post-occupancy evaluations on recently completed developments revealed opportunities to improve the move-in experience for occupiers by smoothing the transition between construction and operation. GPE decided to test the potential of Soft Landings at 30 Broadwick Street, a 92,300 sq ft office and retail development in Soho. Through Soft Landings, operational issues at 30 Broadwick Street were identified early enough to put a plan in place.

### Great Portland Estates' experience of using Soft Landings at 30 Broadwick Street:

- Communication between teams was improved, by ensuring design and construction teams understood operational issues, and operational teams understood the building from the beginning.
- Issues were addressed before they arose: CCTV cameras, monitors and pass readers were all moved to help people pass through the building more easily once in use, rather than being done after the building was finished.
- 110 estimated hours invested by the building management team in Soft Landings, saving significant time when compared with time spent resolving issues once the property was occupied.
- Less than 0.25% of total project cost estimated on Soft Landings, funded through capex.
- A 174% increase in average office rent and a new record office rent for Soho were achieved.
- Occupiers were attracted including private equity firms EQT and Exponent, Boston Digital and The Ivy Soho Brasserie.



### How to get Soft Landings off the ground?

The 30 Broadwick Street team was open to the process of using Soft Landings. The architect and M&E consultant could see the benefit of Soft Landings. The principal contractor was keen to use this approach for research and development purposes. GPE and the building management team recognised its potential to improve the move-in experience for occupiers. There was full support at every level.

Now that the benefits of Soft Landings have been proven on one GPE building, it is easier to get buy-in on other projects. Great Portland Estates has rolled out its Soft Landings brief for all new developments. A member of the GPE team or a member of the consultant team acts as Soft Landings Champion, overseeing the process and managing the outcomes of regular meetings between design, project and operational teams, as well as ensuring that Services Consultants and Building Services Managers provide essential information from the commissioning process to building management teams in the run-up to practical completion.



## CAPEX AND OPEX

One essential point to consider when implementing Soft Landings is to have a continuity of budget to cover the activities after practical completion (PC). Activities done before and after PC are split between Capital Expenditure (CAPEX) and Operational Expenditure (OPEX).

The CAPEX budget is set at the start of the project and is normally restricted. The OPEX budget is not always readily available at practical completion or handover. Thus, when adopting Soft Landings, it is essential to consider one of the following options:

- 1) Retention of a percentage of the CAPEX budget after practical completion to carry out post-occupancy evaluation (POE) activities
- 2) Early securing of OPEX to enable early engagement with the project team, as well as the operation & maintenance team, to carry out POE activities
- 3) A multi-stage contract that will enable payment on completion of each Soft Landings Phase

While the owners/investors of speculative buildings may generally focus on short-term considerations rather than OPEX, allocating budgetary resources early on remains a critical factor in determining the success of the Soft Landings approach.

## Competitive advantage

*“A property company that can deliver Soft Landings by setting a customer-focused brief, constantly reviewing the design and properly commissioning and operating the building is more likely to have satisfied customers. And in the changing world of property a developer that has satisfied customers will be more successful than their competitor who does not.”*

Iain Trent, Engineering Director, Landsec

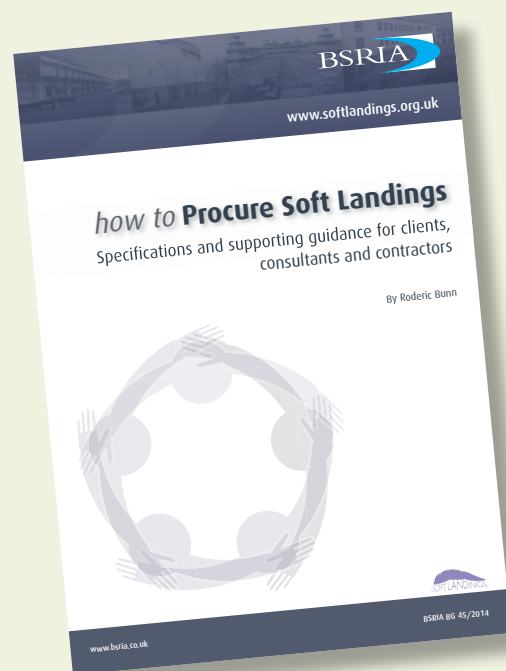
## SOFT LANDINGS AND PROJECT MANAGEMENT

Most of the Soft Landings activities, such as client briefing meetings, design review meetings/workshops and on-site progression meetings should be done as part of the standard project management process, rather than something separate. It is therefore essential to map Soft Landings onto existing project management activities to increase efficiency. POE activities should also be merged, where possible, with operation and maintenance reviews and planning activities.

## BSRIA PROCUREMENT GUIDE

It is important to ensure delivery partners are on board with the Soft Landings approach. BSRIA Guide BG 45/2014<sup>7</sup> provides a set of requirements for delivery of Soft Landings that can also be incorporated into invitation to tender (ITT) documents. The guide is aimed at clients who wish to appoint design professionals and main contractors to deliver a Soft Landings project. It also provides additional guidance to main contractors for the appointment of subcontractors. The guide provides, where possible, examples of real Soft Landings projects.

The requirements presented in the guide should be carefully reviewed and selected to match the client/end user needs before being incorporated into the ITT documents. On some projects, it is even worth considering issuing a standalone Soft Landings specification to clarify the obligation of contractors and subcontractors after practical completion, in addition to the need for retention over three years to complete POE.



# Challenges and Opportunities with Soft Landings

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Soft Landings requires a whole-life approach to buildings that is embedded throughout the development process. This can, in the first instance, present new challenges but in turn it can also lead to opportunities.

- Soft Landings is an approach to enable performance outcomes, not a set of pre-defined project specifications; it is a “how to do” as opposed to a “what to do” framework. Getting buy-in for a new way of working and ensuring that this is embedded throughout the development process is critical.
- Ideally, Soft Landings needs to be initiated at the Inception and Briefing Phase. However, this does not always happen in practice. Although the principles can be applied at later Phases of the project, delayed application may mean that opportunities to inform the project design and development processes are lost.
- Implementing the Soft Landings approach requires increased levels of coordination and this can be perceived as an additional layer of administration. However, alongside this potential for pushback, opportunities arise for collaboration and better communication across the project team to enable the delivery of the desired outputs.
- Ensuring continuous knowledge exchange across stakeholders requires a cultural shift. Defining roles and responsibilities at early stages of a project can help overcome this.
- Soft Landings is less straightforward for speculative developments when the occupier is unknown. In these instances, the project team would benefit from input from end users and property/facilities management teams of other, similar buildings.
- Engendering a strong sense of ownership across the team can be challenging. However, a Soft Landings Champion who coordinates Soft Landings activities and ensures traceability of process can help with this.
- The late outsourcing of Facilities Management (FM) can create additional complexities – the FM team may not be known at project inception and therefore involvement throughout the development process is not possible. It is important to consider how an FM representative can provide input into the team to incorporate FM perspectives, even if that company may not end up managing the building.
- There is sometimes a perception that adopting the Soft Landings approach will result in increased development costs. Soft Landings can actually result in cost savings made by delivering better outcomes in operation, however, this is difficult to evidence as it would involve assessing the cost of the project with and without Soft Landings applied.
- Post-occupancy evaluation (POE) is dependent upon the engagement of the end user. For the speculative building this may be challenging post-handover depending upon the level of access available to owners. Buildings might be occupied by a single tenant or might have been sold after development, limiting possible access. Proceeding with the assumption that a POE will be undertaken is still a useful exercise, with information being able to be passed on to the customer or new owner for them to take responsibility for.

# Conclusions

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To prepare buildings for the world of tomorrow, we must ensure that we are meeting the needs of clients today. This document has outlined ways in which property owners can benefit from the Soft Landings Framework by receiving buildings that deliver on their design intent. It is hoped that this guide can be used by clients, customers and their supply chains to support conversations in why projects should want to implement Soft Landings as standard practice. Although there are some challenges that may arise when applying Soft Landings into existing project management processes, the potential for creating better buildings is significant, with the benefits by far outweighing the costs.



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# Acknowledgements

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