In June 2013 we held a week-long online discussion between UK-GBC members and BSRIA about the Soft Landings Framework.

Want to add to the conversation? The comments that came out of the discussion have been added to Pinpoint and can be read here. [http://pinpoint.ukgbc.org/resource/7520](http://pinpoint.ukgbc.org/resource/7520)

This document is a summary of the wide ranging debate on the framework.

# Introduction - What is Soft Landings?

Soft Landings is a process involving a series of steps and activities that aim to help clients and project teams focus on achieving positive operational outcomes during a building project (from inception through to use of the built asset).

It starts by raising awareness of performance in the early stages of briefing and feasibility, and helps to set realistic targets and assigns responsibilities. Soft Landings can help manage expectations through the design, construction and commissioning stages, and then into initial operation, with particular attention to detail in the weeks immediately before and after handover. Continual monitoring and feedback from occupants helps ensure clients, designers, contractors and managers gain a better understanding of lessons learned for future projects. Soft Landings can run alongside any procurement process, for any building type, and potentially in any country. It also provides a natural route for Post Occupancy Evaluation (POE) and feedback from building users.

Following increasing interest in scaling-up the application of Soft Landings into projects, BSRIA supported an industry group to prepare a publication and an implementation plan which became the Soft Landings Framework. The Framework was authored by Mark Way of the Darwin Consultancy and Bill Bordass of the Usable Buildings Trust, with assistance from Adrian Leaman of Arup and Building Use Studies and Roderic Bunn of BSRIA. There was also considerable input from industry organisations.

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1 See contributors end the end of this document.
Applying Soft Landings Framework

Soft Landings is seen as an important approach for successful projects. However, applying just the Soft Landings Framework has some limitations. For those who have no experience of Soft Landings, the Framework is just a starting point, and the more digestible Soft Landings Core Principles might be a better place to start. The Principles were developed by the members of the BSRIA Soft Landings User Group and published in March 2012. This is a simple and helpful starting point for people new to Soft Landings and outlines the benefits and the bigger picture with a view to then applying the Framework throughout a project.

The success of Soft Landings and its intended outcomes depend on two major factors:

1. **Client Commitment**
   Bridging the gap between the customer (occupier) and the design team is becoming ever more important and the client can ensure they play their part by specifying Soft Landings as a critical part of the project’s success.

2. **Early implementation of Soft Landings**
   There is a pervasive misconception throughout industry that Soft Landings is about enhanced handover and aftercare. In fact, the success of applying Soft Landings requires it to be implemented at the very start of the project at the briefing and design stages. If Soft Landings is only initiated at handover, the benefits can be limited in that you can fine-tune the building and support the occupants as they settle in, but you cannot ensure the design really meets their needs or manage expectations.

It is worth noting BSRIA are launching a procurement guide later this year to assist those looking to include Soft Landings requirements in tenders which will be extremely useful for those interested in making this approach work in practice.

**Lessons Learned**

For Soft Landings to work successfully it must address the following principles:
- Learn lessons from previous projects, in relation to design, procurement and operation;
- Involve the occupants and building managers in the briefing and design review stage. Their views and experience are essential to deliver a building that operates successfully;
- Carry out effective communication with all occupiers of the finished building and manage their expectations of building performance;
- Embed Soft Landings requirements into contract documents prior to tender.

**Take up by industry and benefits**

Some forward thinking architects, engineers and contractors within the UK-GBC membership are routinely applying Soft Landings to projects. If the principles of Soft Landings are adopted at the early stage of a project’s life, project teams can help reduce or at least mitigate performance gaps in both energy performance and other broader project expectations. Teams have also recognised it places them in a stronger position for winning future projects with clients.

The Soft Landings approach is also being applied by house developers to ensure customers can live in a house that performs as they would expect.

“Having done several post occupancy evaluations recently I can see that broader stakeholder engagement, better anticipation of operational issues, and better hand-over planning would reduce performance gaps,” says Ashley Bateson, Partner, Hoare Lea. “Better engagement, planning and pre-
handover reviews are part of the Soft Landings framework.”
Those who have applied Soft Landings recognise there is potentially a lot of synergy between adopting the Framework and adopting Passivhaus, BREEAM targets or a certain EPC target on projects. Soft Landings provides a framework for agreeing environmental objectives and sets out a methodology that aims to meet agreed outcomes. Project teams that adopt the Soft Landings approach might therefore more easily and affordably meet environmental objectives such as Passivhaus standards, BREEAM ratings or EPC targets.

In order for the Soft Landings Framework to support design teams it would help if the key tasks and processes were set out in succinct points that can easily be applied in every day practice.

**Can Soft Landings solve the Performance Gap and improve occupant satisfaction?**

The performance gap is an issue at many levels: construction faults, maintenance and management issues (including building handover and commissioning), technology specification and performance, energy use, comfort, health and satisfaction, and usability and control. Experience from users of Soft Landings shows that the process can help involve and manage stakeholders’ expectations at each stage of the building lifecycle which makes it more likely that the building will be used as per the design.

However, the role of occupants in a widening performance gap is unknown. Occupants’ behaviour in buildings can vary depending on the perception of how it meets users’ needs. If a building is perceived by its users as well-performing in multiple areas, any transgressions on comfort can be forgiven and users do not act inappropriately. However, if this perception changes and the building is then perceived as not meeting user needs, for example through changes in density or an unresponsive facilities manager (FM), then improvements will go unnoticed and users will start to manage their buildings in a compromising way, which will impact on performance.

Occupant satisfaction can vary even when buildings maintain performance. A re-appraisal of the Elizabeth Fry building at the University of East Anglia showed no degradation of air tightness over 14 years but occupant satisfaction had declined due to changes in use and subsequent comfort problems. The Building User Study (BUS) occupant survey can prove to be a sensitive analysis method. FMs are therefore crucial to the success of Soft Landings where it exists. However, in buildings where there is no FM department, or in the residential sector, the focus on commissioning stages and simplicity of systems will have more impact.

**Case studies of Soft Landings application**

The following case studies provide examples of where Soft landings has been applied successfully:

https://www.bsria.co.uk/information-membership/bookshop/publication/soft-landings-for-schools-case-studies/
http://www.maxfordham.com/services/soft-landings/case-studies/15

**Thank you to the following who contributed to this discussion:**

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