



CARBON BITES

From the CIBSE ENERGY PERFORMANCE GROUP

Soft Landings

Energy efficiency and occupant satisfaction are important considerations during the design process of the majority of buildings, but evidence from post-occupancy evaluations (POEs) suggest that completed projects often fail to deliver these aspects in operation. There are a range of well-established factors which can contribute to this problem, key amongst these are insufficient focus on operational outcomes during design, and inadequate commissioning and assistance during the handover period. From this perspective, at the point of completion, buildings can be seen to “crash land” on their new occupants while the designer and constructors move on to new projects. Consequently, there is little feedback to the project team about the successful aspects, and potential problems, of the design.

These are key problems that the Usable Buildings Trust and BSRIA’s Soft Landings framework seeks to rectify. Essentially the framework aims to optimise the performance, usability, and occupant satisfaction of the completed building. This is achieved by encouraging the project delivery team to shift their focus from regulatory compliance and handover as the point of project completion, to consider how the building is likely to be used, managed, and maintained in practice. Additionally, it attempts to close the loop between design expectation and reality by feeding back continually to all stakeholders. The Soft Landings process consists of five main interdependent stages which are briefly outlined below:

Stage 1 – Inception and briefing

Establish energy and user satisfaction expectations and performance targets.

Stage 2 – Design development and review

Consider usability and manageability for users of the completed project during periodic design reviews.

Stage 3 – Pre-handover

Ensure that the FM team and building users gain an understanding of the installed controls and systems prior to occupation.

Stage 4 – Initial aftercare

Members of the project team should remain on-site for initial occupation to oversee the fine tuning of the building’s services and to enable them to react to any emerging issues.

Stage 5 – Extended aftercare and POE

Monitor operational performance for a three year period. Typically includes seasonal tuning of building services, energy and internal environment monitoring, and occupant satisfaction surveys

Although an appreciation of Soft Landing’s potential benefits have been recognised for the best part of a decade it has arguably struggled for traction within the construction industry mainly due to uncertainties around costs and who should bear them. However, Soft Landings is beginning to be more regularly stipulated in client requirements as the benefits of applying the framework become clear with evidence from case studies such as University of East Anglia’s new Enterprise Centre.

Richard Tetlow, AECOM, May 2017

Key Issues

- Encourages the project team to focus on the usability and manageability of the completed building throughout design and construction process
- The handover period is critical and is when many problems with performance can first develop
- Highlights the benefits of carrying out a POE for up to 3 years after occupation
- From 2016 all Government construction projects will require Government Soft Landings

Links

- BSRIA Soft Landings online resource - <https://www.bsria.co.uk/services/design/soft-landings/free-guidance/>
- UEA Enterprise Centre case study - <http://www.fca-magazine.com/component/k2/item/2703-morgan-sindall-discusses-the-changing-approach-to-long-term-sustainability>

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