Soft Landings – An Introduction

2013
Capital Projects - Context

- Capital projects have responsibility for all new “major” build and refurbishment projects
- A “major” project is a project with a gross value in excess of £100K
- On average over 75 major capital projects are live at any one time
- The estate has grown by approx 25% in last 10 years
- Value of projects for ‘12-’13 is £157M
Capital Projects
Quality Objectives for 2013

• Improve project delivery
• Improve project handover
• Improve level of aftercare
• Improve performance of project delivery team
• Improve client satisfaction
• Facilitate continuous improvement and learning
• Facilitate timely rectification of issues (in project rather than post project)
• Facilitate a “no surprises” culture
Capital Projects
Quality Initiatives for 2013

- Benchmarking
- Use of Key Performance Indicators
- Project Quality Review Process
- Soft Landings
Soft Landings - Why

- Post Occupancy and Post project evaluations have confirmed we could do things better
- Anecdotal stories have confirmed we could do things better
- Cost and time pressures can sometimes take precedent over quality
- Soft Landings is one solution to the issues we feel we need to address
Observed Issues

• Gap between client requirements, design intent expectations and actual building performance
• End users accepting buildings that work but not necessarily optimally
• End users and occupants not knowing how to use their buildings
• Successes are not being recorded and reproduced
• Problems go unresolved to detriment of:
  • Energy use/environmental impact
  • End user satisfaction
  • Teaching and Research
Examples of Lessons Learnt from Post Occupancy and Project Evaluations

- Gaps between client requirements, design intent and actual building performance
- Lack of client project ownership or Client Representative
- Misunderstanding of the meaning of “Practical Completion” and works outstanding
- Poor training, or attendance at training poor
- Rushed commissioning
- Single point commissioning not maximising efficiency
- Lack of clarity regarding maintenance responsibilities
- Higher than expected energy consumption
- Unacceptable timely resolution of defects
PRINCE2 – Definition of a Project

• “A temporary organization that is created for the purpose of delivering one or more business products according to an agreed business case”

• “Spitfire pilots”? 
• Relationship needs to be longer term
Supporting the need for a slightly longer relationship

Laboratory Building, 17,000 m\(^2\) GIA

- Design cost: £9 million \[5\%\]
- Construction cost: £56 million \[31\%\]
- Running costs (30 years): £114 million \[64\%\]
  - Services maintenance cost: £17 million \[9\%\]
  - Utilities cost: £37 million \[21\%\]
Soft Landings - What

- A process which:
  
  - Is a whole life process from initiation to 5+ years post occupancy
  - Raises awareness of performance from early stages of briefing and feasibility
  - Assists management of expectations through design, construction and commissioning and into initial operation
  - Improves attention to detail immediately before and for much longer periods after handover
  - Facilitates continuous improvement and learning
  - Adds a further quality control process
  - Formal bringing together of actions we already undertake but not consistently and not all of the time
  - Contributes to sustainability and controls running costs
Soft Landings - Sustainability

• Buildings designed to be sustainable but do not live up to expectations:
  • Over-ambitious design calculations, targets and incorrect assumptions
  • Over complicated systems and reliance on automation
  • Lack of training for managers and users
  • Lack of design carry through and continual commissioning
Soft Landings - How

• Philosophy:
  • A small change in the way we do things
  • A big change in the way we think, behave and interact
  • Focuses the definition of project success on operational outcomes, not design specifications
  • Makes Practical Completion (PC) an intermediate stage in an extended handover period
  • Engenders ownership of building performance in everyone in the project team

“An evolution in the way projects are delivered”
Soft Landings - How

- Design and introduction of a defined Soft Landings process
- Clear definition and involvement of stakeholders
- A start point which is at project initiation
- A finish point which is 5+ years post practical completion
# Stakeholders in Soft Landings

## Client Team Membership

- Project Manager
- Chairman, Senior Academic or Principal Investigator
- Department Facilities Manager
- End User Representatives
- Area Safety Officer
- Disability Advisory Service
- Equality & Diversity Unit
- Insurance Office
- Estates Services Asset and Space Management
- Estates Services Direct Labour Organisation
- Estates Services Director of Capital Projects and Property Maintenance
- Estates Services Electrical Maintenance Manager
- Estates Services Estates Strategy Manager
- Estates Services Facilities Manager
- Estates Services Head of Capital Projects
- Estates Services Head of Conservation
- Estates Services Mechanical Maintenance Manager
- Estates Services Project Support Officers
- Estates Services Sustainability Manager
- Safety Office
- Telecommunications & Data
- VAT Office
- PSG Membership

**Further Participants and Contributors**

- End Users and Occupants

## Project Team Membership

- Project Manager
- Architect
- Cost Consultant
- Structural Engineer
- Mechanical Engineer
- Electrical Engineer
- Civil Engineer
- Sustainability Engineer
- Fire Engineer
- Landscape Architect
- Ecologist
- Security Advisor
- BREEAM Advisor
- Planning Consultant
- CDM Coordinator
- Acoustic Consultant
- Client Team Members as appropriate

**Further Participants and Contributors**

- Main Contractor
- Principal Subcontractors
Adopted Principles (BSRIA)

- Adopt the entire process
- Provide leadership
- Set roles and responsibilities
- Ensure continuity
- Commit to aftercare
- Share risk and responsibility
- Use feedback to inform design
- Focus on operational outcomes
- Involve the building managers
- Involve the end users
- Set performance objectives
- Communicate and inform
Proposed Structure/Framework

- Stage 1: Briefing
- Stage 2: Design Development
- Stage 3: Pre-handover
- Stage 4: Aftercare (initial period)
- Stage 5: Aftercare (years 1, 3 and beyond…)

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Soft Landings Stage 1: Briefing

- Define roles and responsibilities
- Review past experience
- Schedule intermediate evaluations
- Set environmental and performance targets
- Confirm sign off gateways
Soft Landings Stage 2: Design Development

- Review past experience
- Peer group and stakeholder design reviews
- Incorporate Soft Landings requirements into tender documentation and evaluate
Soft Landings Stage 3: Pre-Handover

- Agree environmental and energy logging
- Prepare building readiness programme
- Check commissioning records
- Schedule post-completion commissioning and tuning
- Place maintenance contracts
- Schedule training
- Demonstrate BMS and confirm understanding
- Plan decant, including design team
- Allocate aftercare team home
- Compile occupant and user guide
- Compile technical guide for FM team
- Review O&Ms
Soft Landings Stage 4: Aftercare

- Confirm resident on-site attendance, who, when
- Introduce aftercare team to occupants and users
- Schedule user and occupant induction sessions
- Provide further technical guidance
- Provide newsletter type communications
- Undertake building inspections including informal interview of building users
Soft Landings Stage 5: Extended Aftercare Years 1, 3, 5...

- Aftercare review meetings
- Logging of environmental and energy performance
- Systems and energy review
- Undertake continual commissioning where beneficial recording any changes and effect
- Continue communication
- Undertake building inspections including informal interview of building users
- Undertake end of year post occupancy evaluation (PQRP) at year 1, 3 and 5...
What does it offer you?

- Improved project delivery
- Buildings delivered to operational rather than design requirements
- Easier handover and occupation
- Increased control and ownership
- Optimised running costs
- Happy building users
- Opportunity for continual learning
Next Stages

• Training of key stakeholders to BSRIA Level 1 Soft Landings
• Continue Post occupancy and Post Project evaluations to continue capture of lessons
• Reality check to ensure process has captured and addressed lessons learnt
• Preparation of an outline draft of proposed University Soft Landings process
• Workshops to interrogate and test proposed process