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The Role of Maintenance in Commercial Building Handover: A Comprehensive Guide By SFG20

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Commercial building handover marks a critical milestone in a building's lifecycle, signifying the transition from design and construction to operation and occupancy. This process involves transferring control and responsibility of the facility from the project team to the building owner or manager, ensuring that all systems and components are fully functional, compliant, and ready for use. The significance of a successful handover cannot be overstated, as it sets the foundation for the building's long-term performance and occupant satisfaction. A crucial yet often overlooked aspect of this process is the role of maintenance. By incorporating maintenance considerations from the early stages of design and construction, stakeholders can ensure a smooth handover process that optimises building performance, reduces operational costs, and enhances the overall value of the asset. In this guide, we will delve into the critical aspects of commercial building handover and maintenance, providing insights and best practice for navigating this process successfully.

1 Best Practice from Design to Operation and Maintenance

In today's competitive commercial property market, adopting best practice from design to operation and maintenance has become crucial for optimising building performance and ensuring long-term value. By integrating maintenance considerations early in the design phase, stakeholders can create a more efficient and sustainable facility that meets both current and future needs and can also be properly maintained within the available budget. Here are some key aspects to consider:

Integrating maintenance considerations during the design phase

Considering maintenance requirements from the outset of a project allows designers to create spaces that are not only visually appealing but also functional and practical to maintain. This involves selecting materials, systems, and layouts that facilitate access, minimise downtime, and reduce the need for frequent or costly repairs. Early integration of maintenance considerations enables cost savings and enhances the overall building performance throughout its lifecycle.

Collaboration between designers, contractors, and facility managers

Effective collaboration between designers, contractors, and facility managers is essential for ensuring that maintenance requirements are considered at every stage of the project. This collaborative approach encourages open communication, fosters a shared understanding of goals and objectives, and allows for the identification and resolution of potential issues before they escalate. By working together, these professionals can develop a comprehensive maintenance plan that aligns with the building's design intent and operational needs.

Incorporating maintenance-friendly materials and systems

Selecting maintenance-friendly materials and systems is an essential aspect of creating a high-performing commercial building. These materials should be durable, easy to clean, resistant to wear and tear and, wherever possible, contain low embodied carbon. Additionally, systems such as HVAC, plumbing, and electrical should be designed with ease of access and maintenance in mind, allowing for efficient inspections and repairs with minimal disruption to occupants. By incorporating maintenance-friendly materials and systems into the design, building owners can reduce long-term operational costs and improve overall building performance.

Best practice from design to operation, including integrating maintenance considerations during the design phase, fostering collaboration between stakeholders, and incorporating maintenance-friendly materials and systems, is essential for creating a commercial building that performs optimally and delivers long-term value to its occupants and owners.

2 Operation and Maintenance Manuals (OMM)

Creating an Operation and Maintenance (O&M) Manual is essential for commercial building handovers. An OMM provides detailed information on how to operate and maintain a building, ensuring the proper functioning of all systems within the building. It is important to understand the importance of having a comprehensive OMM as it serves as a communication tool between the construction company, client, and any other stakeholders.

When creating an OMM, it is important to include key elements such as manuals, warranties, drawings, specifications, and as-built information. Additionally, operating procedures, maintenance schedules, and safety guidelines should be included to ensure the proper functioning of all systems within the building. The SFG20 library of over 2000 maintenance schedules is an essential tool for all facilities professionals and can be tailored to suit a user's unique situation e.g., according to level of risk, to incorporate condition-based or predictive maintenance etc.

For an OMM to be user-friendly and accessible to all stakeholders involved in the project, certain guidelines should be followed when creating one. These include using simple language that can be easily understood by everyone involved in the project; providing clear instructions with diagrams or illustrations where necessary; including contact information for any questions or concerns; and making sure that all relevant information is up to date.

3 The Importance of a Good Maintenance Approach

A successful commercial building handover relies heavily on adopting a well-defined and effective maintenance approach. By establishing a maintenance strategy that aligns with the company's objectives, stakeholders can ensure optimal performance, longevity, and occupant satisfaction. Here's a closer look at the importance of a good maintenance approach during the handover of a commercial building:

Defining a maintenance approach that aligns with building objectives

A comprehensive maintenance approach should be tailored to the specific needs and objectives of the building. This includes considerations such as the purpose the building serves for the business, energy efficiency, sustainability, cost management, and occupant comfort. By defining a maintenance strategy that aligns with these objectives, stakeholders can ensure that the building operates at peak performance while minimising disruptions and maximising value.

Balancing preventive, reactive (corrective), and predictive maintenance

An effective maintenance approach entails striking the right balance between preventive, corrective, and predictive maintenance strategies. Preventive maintenance focuses on routine tasks and inspections to reduce the likelihood of system failures, while reactive maintenance addresses issues as they arise. Predictive maintenance, on the other hand, leverages advanced technologies and data analytics to anticipate potential problems before they escalate. By balancing these three approaches, stakeholders can optimise resource allocation, minimise downtime, and ensure the long-term reliability and performance of their building systems.

Implementing proactive maintenance strategies for optimal performance

Proactive maintenance strategies play a crucial role in achieving optimal building performance. These strategies involve identifying potential issues before they become critical, enabling timely interventions and reducing the risk of costly repairs or system failures. Examples of proactive maintenance strategies include regular equipment inspections, condition monitoring, and performance benchmarking. By implementing these approaches, building owners and managers can ensure that their facilities are well-maintained and operating efficiently throughout their lifecycle.

Adopting a good maintenance approach during the handover of a commercial building is essential for ensuring the facility's long-term success. By defining a maintenance strategy that aligns with building objectives, balancing different types of maintenance, and implementing proactive strategies, stakeholders can optimise building performance, enhance occupant satisfaction, and maximise the value of their commercial property investment. Learn more about how to optimise your maintenance regime with this E-Guide from SFG20.

4 Industry Best practice in Commercial Building Maintenance

When it comes to commercial building maintenance, adhering to industry best practice is crucial for ensuring optimal performance, compliance, and occupant satisfaction. As you prepare for the handover of a commercial building, it's essential to familiarise yourself with this best practice to maximise the value of your investment. Here's what you need to know:

Highlighting industry standards and guidelines

The industry standard for building maintenance specification is SFG20, it provides a comprehensive framework for planned maintenance schedules and procedures. Developed by the Building Engineering Services Association (BESA), SFG20 offers clear guidance on maintaining building fabric, systems and assets to ensure compliance, efficiency, and longevity. By adhering to the SFG20 standard, building owners and managers can streamline their maintenance processes and optimise overall building performance.

Key regulatory requirements for commercial building maintenance

Compliance with regulatory requirements is a critical aspect of commercial building maintenance. These requirements may vary depending on factors such as location, building type, and use. However, some common regulatory areas to consider include health and safety, fire protection, accessibility, energy efficiency, and environmental impact. Ensuring that your building meets all applicable regulations is essential for avoiding potential penalties, protecting occupants, and preserving the reputation of your property.

Industry certifications and accreditations for maintenance professionals

Working with certified and accredited maintenance professionals is a key component of following industry best practice. These certifications and accreditations demonstrate that maintenance personnel have the necessary knowledge, skills, and expertise to effectively manage and maintain commercial buildings. Examples of relevant certifications include IWFM Award, Certificate, Diploma and Extended Diploma in Facilities Management.

It is advisable to always use contractors who have current membership or a relevant trade body such as BESA for mechanical engineering services or ECA for electrical works or Vent Hygiene Register for maintenance of kitchen extract systems. It is a legal requirement for any contractors fitting, maintaining, and servicing air conditioning or refrigeration systems to have the relevant F-Gas certification, such as REFCOM. The advantage of specifying these sorts of membership is that these companies will have been audited by the trade body so you can have the reassurance they can do the work to the proper standards and have the relevant competencies.

Another important area is to ensure that individuals carrying out work can demonstrate their individual competency. Schemes such as SKILLcard operate the personal registration scheme for occupations such as Building Engineering Service & Maintenance Engineer. By checking engineers have the relevant SKILLcard or other relevant CSCS alliance card, you are helping to meet your obligations as an Accountable Person. It also has the advantage that you know cardholders have taken a relevant Health & Safety test.

If you make any modifications or changes which are notifiable under Building Regulations, you can save time and money by using a contractor who is part of a Competent Person Scheme which is authorised by the DLUHC (Department for Levelling Up, Housing & Communities). This means the competent person is authorised to self-certify these works meet Building Regulations avoiding delays and additional costs created by having to notify Building Control for inspections.

Adhering to industry best practice in commercial building maintenance is essential for a successful handover and ongoing building performance. By utilising the industry standard for building maintenance - SFG20 - to comply with regulatory requirements and working with certified maintenance professionals, you can ensure that your commercial property operates efficiently, complies with all relevant regulations, and provides a safe and comfortable environment for occupants.

5 Soft Landing Approach

The Soft Landings Approach has emerged as a highly effective strategy in commercial building maintenance, particularly during the handover process. This approach focuses on bridging the gap between design, construction, and operation to ensure a smooth and efficient transition that minimises disruptions and maximises building performance. Here's what you need to know about the Soft Landings Approach in commercial building maintenance:

An explanation of the concept of soft landings in commercial building handover

Soft Landings is a collaborative process that aims to ensure seamless integration of design intent, construction quality, and operational performance. It involves a gradual handover, with project teams working alongside facility managers and occupants during the initial post-construction period. This approach allows for fine-tuning and optimisation of building systems, addressing any performance issues, and providing comprehensive training and support to building operators and occupants.

Benefits of adopting a soft landings approach

Adopting a Soft Landings Approach offers numerous benefits for commercial building stakeholders, including:

- **Improved building performance:** With a focus on optimising systems and addressing potential issues early, the Soft Landings Approach ensures that the building operates at peak efficiency from day one.
- **Enhanced occupant satisfaction:** By engaging occupants throughout the process and providing comprehensive training and support, Soft Landings helps create a comfortable and productive environment tailored to their needs.
- **Reduced operational costs:** By identifying and resolving issues early, Soft Landings minimises the likelihood of costly repairs and system failures down the line, resulting in lower long-term maintenance expenses.
- **Greater sustainability:** Soft Landings supports the achievement of environmental targets by ensuring that systems operate efficiently and sustainably from the outset.
- **Collaboration** between project teams, occupants, and facility managers

The success of the Soft Landings Approach relies heavily on effective collaboration between project teams, occupants, and facility managers. This collaborative effort enables open communication, knowledge sharing, and shared ownership of project outcomes, ensuring all parties are aligned and working towards the same goals. By engaging all stakeholders in the process, Soft Landings fosters a culture of continuous improvement, driving better building performance and long-term value.

The Soft Landings Approach in commercial building maintenance offers a highly effective strategy for ensuring a smooth handover and optimal building performance. By adopting this collaborative approach, stakeholders can reap the benefits of improved efficiency, occupant satisfaction, and long-term cost savings.

SFG20 can be used effectively at building design stage to identify and cost up maintenance requirements, using its Resource Modeller software solution. In addition, SFG20 can be used to facilitate soft landings by using the guidance contained within its standard to plan, execute and audit building maintenance works.

6 Auditing Maintenance Work

A critical aspect of the commercial building handover process is ensuring that maintenance work is up to par and aligned with the building's performance goals. Auditing maintenance activities plays a vital role in achieving this objective and provides stakeholders with valuable insights into the quality and effectiveness of maintenance efforts. Let's explore the key elements of auditing maintenance work during the handover of a commercial building:

Importance of auditing maintenance activities

Auditing maintenance activities is essential for several reasons:

- Ensures that maintenance work meets statutory requirements and best practice guidelines
- Verifies that systems and components are functioning optimally and efficiently
- Identifies potential issues or deficiencies that may impact building performance or occupant satisfaction
- Provides valuable data to inform future maintenance planning and resource allocation
- Establishing performance metrics and benchmarks

To effectively audit maintenance activities, it is crucial to establish clear performance metrics and benchmarks. These may include key performance indicators (KPIs) related to % levels of building compliance, system efficiency, energy consumption, response times for repairs, and occupant satisfaction, among others. By setting appropriate benchmarks, stakeholders can objectively assess the performance of maintenance efforts and identify areas for improvement.

Conducting regular inspections and assessments

Regular inspections and assessments are integral to the auditing process, as they provide ongoing insights into the state of the building and its systems. These evaluations should be conducted by qualified professionals who can accurately assess the condition of various components, identify potential issues, and recommend appropriate corrective actions. Regular inspections also help to ensure that maintenance activities remain aligned with established performance goals, statutory requirements and industry best practice.

Auditing maintenance work during the handover of a commercial building is an essential step in ensuring optimal building performance and occupant satisfaction. By emphasising the importance of auditing maintenance activities, establishing performance metrics and benchmarks, and conducting regular inspections and assessments, stakeholders can effectively evaluate the quality of maintenance efforts and make informed decisions to enhance the long-term value of their commercial property.

7 Accessing SFG20 Codes for BIM Models

In the realm of commercial building maintenance, SFG20 codes play a crucial role in streamlining processes and ensuring adherence to industry best practice. With the growing adoption of Building Information Modeling (BIM) in facility management, integrating SFG20 codes into BIM models has become increasingly important. Here's what you need to know about the benefits of this integration:

Understanding the relevance of SFG20 codes in maintenance

SFG20 is the industry standard for building maintenance specification, developed by the Building Engineering Services Association (BESA). It provides a comprehensive, cloud-based library of planned maintenance schedules across a wide range of building systems and assets. Each maintenance schedule has an associated code and, by referencing SFG20 codes, facility managers can ensure that their maintenance activities align with industry best practice, resulting in improved efficiency, compliance, and asset longevity.

Accessing SFG20 codes for incorporation into BIM models

To access and incorporate SFG20 codes into your BIM models, you will need a subscription to the SFG20 online platform. This subscription provides access to an extensive library of maintenance schedules and tasks, and the SFG20 Asset Mapping software tool automates the mapping of Uniclass and NRM 3 coding to the SFG20 Schedules. By incorporating SFG20 codes into your BIM models, you can create a seamless and fully coordinated maintenance workflow, allowing for more effective planning and execution of maintenance tasks.

Benefits of integrating SFG20 codes in building maintenance workflows

Integrating SFG20 codes into your building maintenance workflows offers several key advantages, including:

- **Streamlined processes:** By following standardised guidelines for maintenance tasks, facility managers can reduce the complexities associated with managing diverse building systems and components.
- **Enhanced compliance:** By following SFG20 guidance your maintenance activities will adhere to regulatory requirements and industry best practice, minimising the risk of non-compliance and potential penalties.
- **Improved efficiency:** Incorporating SFG20 codes into your BIM models enables you to optimise resource allocation, reduce downtime, and ensure timely completion of maintenance tasks, ultimately resulting in greater building efficiency and performance.
- **Data-driven decision-making:** SFG20 codes, when integrated with BIM models, can provide valuable insights and analytics that help inform strategic decisions related to facility management and maintenance planning.

Accessing and integrating SFG20 codes into your BIM models is a valuable step in optimising commercial building maintenance during the handover process. By leveraging this integration, you can streamline maintenance workflows, enhance compliance, improve efficiency, and make more informed decisions, ultimately maximising the value of your commercial property investment.

8 Technology and Tools for Commercial Building Maintenance

The rapid advancements in technology have revolutionised the way commercial building maintenance is managed and executed. As you prepare for the handover of a commercial building, it's essential to be aware of the various tools and technologies that can help streamline maintenance processes and improve overall building performance.

Here's a look at some key technologies and their benefits:

Utilising building management systems (BMS) for efficient maintenance

Building Management Systems (BMS), also known as Building Automation Systems (BAS), are sophisticated control systems that monitor and manage various building systems, such as HVAC, lighting, and security. By utilising a BMS, facility managers can:

- Optimise energy consumption and reduce operational costs
- Enhance occupant comfort and satisfaction
- Simplify maintenance scheduling and resource allocation
- Monitor system performance and identify potential issues

Benefits of Facilities Management Software, such as computerised maintenance management systems (CMMS) and Integrated Workplace Management System (IWMS)

Facilities Management Software can help facility managers plan, track, and optimise maintenance activities. Some of the key benefits of CMMS and IWMS include:

- Centralised record-keeping for all maintenance tasks, assets, and resources
- Streamlined work order management and tracking
- Improved preventive and predictive maintenance planning
- Enhanced inventory management and cost control
- Data-driven decision-making based on historical performance data
- Space planning

Leveraging IoT, data analytics, and predictive maintenance technologies

The Internet of Things (IoT), data analytics, and predictive maintenance technologies are transforming the way commercial building maintenance is approached. These cutting-edge solutions enable facility managers to:

- Collect real-time data from sensors and devices installed throughout the building
- Analyse data to identify trends, patterns, and anomalies in system performance
- Predict potential maintenance issues before they escalate, reducing downtime and repair costs
- Optimise maintenance schedules and resource allocation based on data-driven insights
- Improve overall building performance, efficiency, and sustainability

SFG20 can be used in conjunction with condition-based technologies and tools to augment a planned maintenance schedule i.e., for non-statutory tasks, task frequencies can be reduced if the asset condition is deemed to be good and the risk of failure to the business is low. Taking it a step further, technologies can also provide added intelligence into a visit. For example, the BMS will know if a filter needs changing and the engineer can be advised of this beforehand, eliminating unnecessary return visits because the required parts weren't available on site during the initial visit.

For CMMS/IWMS, SFG20 provides the start point for a maintenance plan, followed by regular task instruction updates, in line with changing legislation and regulation, that are fed to the engineers to ensure that all is maintained to a safe optimum and compliant basis.

Embracing technology and tools for commercial building maintenance during the handover process is crucial for ensuring optimal building performance and longevity. By leveraging building management systems, computerised maintenance management systems, and advanced IoT and data analytics technologies, facility managers can streamline maintenance processes, enhance efficiency, and make more informed decisions that contribute to the long-term success of their commercial property investment.

9 Training and Development for Maintenance Personnel

In the competitive and ever-evolving landscape of commercial building maintenance, investing in the continuous training and development of maintenance personnel is essential for ensuring long-term success. As you prepare for the handover of a commercial building, it's crucial to prioritise the growth and upskilling of your maintenance team. Here's an overview of the importance of training and development in this field:

Importance of continuous training and upskilling

Continuous training and upskilling are vital for maintenance personnel in order to:

- Stay up to date with the latest industry trends, technologies, and best practice
- Enhance their technical competencies and problem-solving abilities
- Improve efficiency, productivity, and overall performance in their roles
- Increase job satisfaction and employee retention
- Ensure optimal building performance, compliance, and occupant satisfaction

Training programs for commercial building maintenance professionals

Several organisations and institutions offer specialised training programs designed for commercial building maintenance professionals. Some examples of these programs include:

- HVAC System Air Filtration for Clean Healthy Indoor Air Quality
- Firestopping Of Service Penetrations
- Understanding Mechanical Ventilation With Heat Recovery For Commercial Applications
- How to use SFG20 - best practice

Enhancing technical competencies and industry knowledge

By participating in ongoing training and development programs, maintenance personnel can enhance their technical competencies and industry knowledge in areas such as:

- Building information modelling (BIM) and building management systems (BMS)
- Energy efficiency and sustainability best practice
- Preventive, corrective, and predictive maintenance techniques
- Regulatory compliance and safety standards
- Advanced diagnostic tools and IoT technologies

Prioritising the training and development of maintenance personnel during the handover of a commercial building is key to ensuring the long-term success of your property investment. By investing in continuous training and upskilling, you can equip your team with the knowledge and skills needed to optimise building performance, enhance efficiency, and deliver exceptional occupant satisfaction.

In summary, maintenance plays a pivotal role in the successful handover of a commercial building, ensuring optimal performance, compliance, and occupant satisfaction. By adhering to industry best practice, leveraging cutting-edge technologies, and investing in continuous training and development, facility managers can effectively manage and optimise their building assets. Emphasising the importance of best practice and continuous improvement not only safeguards the long-term operational efficiency of your building but also fosters a culture of excellence and innovation within your maintenance team, ultimately elevating the value and performance of your commercial building.

What is SFG20 and how should it be used effectively in Commercial Building Handover?

SFG20 was developed by BESA, the Building Engineering Services Association, in response to a need for a best practice standard for maintenance. The SFG20 system has been designed and developed over three decades to keep pace with the changing maintenance profession, and it provides a technically robust standard that is also highly customisable to individual building needs.

To make smart decisions that will affect the cost of maintenance throughout a building's lifecycle, SFG20 should be integrated at design stage. This can be done by using the SFG20 Asset Mapping tool, which maps the appropriate SFG20 maintenance schedules to your BIM model or asset list. When combined with the SFG20 Resource Modeller tool, various scenarios can be created based upon different design options that use different quantities or types of assets. The software will generate the costs of maintenance for each scenario, along with the number of hours and skillsets required. These powerful tools help teams make the right decisions that impact the cost of running and maintaining the building throughout its life. And with 80% of a building's cost coming from its operational phase, there's a lot to be gained by taking this approach.

For more details on SFG20 or to request a demonstration with one of our experts, visit: SFG20.co.uk

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