savills investment management

Charities Property Fund

Tenant Fit Out Guide

A guide for fit out and refurbishment

Savills Investment Management

Introduction and Purpose

Tenant Fit Out Guide

Savills Investment Management is committed to meeting its financial objectives whilst at the same time delivering market leading Environmental, Social & Governance (ESG) standards at asset and fund level. We aim to encourage, promote and enforce good corporate governance and awareness of ESG issues across our property investment decision-making and ownership practices.

We recognise that our tenants are key stakeholders in helping us achieve our aim. To support our tenants, we have created this Fit-Out Guide to help our tenants improve their understanding of the environmental and social impacts of fit-out works that they may be undertaking.

Our standard leases require tenants to comply with all statutes and laws. When applied to the fit-out process, this includes meeting performance levels set out in Building Regulations as a minimum.

In particular, we require tenants not to impact on the current energy rating of their building as this may negatively affect the future value of the asset.

A building can be designed and constructed to be the most sustainable building possible. However, uncoordinated tenant fit-outs can significantly impact performance. This guide aims to ensure tenant fit-outs align with the building. Achievement will improve environmental performance and reduce operational costs. Reducing the environmental footprint of both the construction works and ongoing operation not only reduces costs but also helps demonstrate best practice in sustainability.

This document is not a comprehensive design manual/guide and does not replace requirements incumbent on a project from local or national building or planning regulations.

Contents

This guide covers legislative, recommended, best practice and exemplary measures that should be considered during the design and execution phases of any new fit out or refurbishment. It covers the following areas:

- Energy
- Waste, Materials and Procurement
- Water
- Health and Wellbeing
- Biodiversity and Green Infrastructure
- Operational Practices

This guide looks at the various factors to consider during fit-outs and establishes a series of measures:

- **Mandatory Measures** – these measures are legal requirements in most European countries
- **Best Practice Measures** – these are Savills Investment Management recommended best practice measures which help minimise operational environmental impacts and associated costs
- **Exemplary Measures** – these measures include the introduction of innovative technologies and processes to go beyond best practice

Energy

Considering energy efficiency and decreasing operational costs

Best Practice

Fit out requirement	Justification	Action
Automatic Metering	Installation of automatic meter reading (AMR) devices allows data to be captured and reported automatically and at a granular interval, for example, half hourly. This allows in depth analysis of energy consumption to be undertaken to identify improvement recommendations to reduce energy and carbon emissions.	Any new main meters installed during fit-outs should be AMR devices (or half hourly meters). All plant over 10KW should have a sub-meter installed to monitor energy consumption. Any renewable systems installed should have its own sub-meter to monitor the amount of energy generated.
Lighting Controls	Lighting is a significant energy cost in commercial assets, and according to the Carbon Trust, effective lighting controls can reduce energy consumption by up to 30%. Motion control sensors installed in low occupancy areas ensure lighting is only used when an area is occupied.	Motion control sensors should be installed in areas which are not occupied for the majority of the day, such as lift lobbies, reception areas, toilets, stairwells and kitchens.
BMS Controls	Building Management Systems (BMS) are intended to help property managers, asset managers, and facilities managers understand how assets are operating, allowing control and adjustment of systems to optimise their performance. Alongside collating data, and allowing system control, a BMS can help to visualise data, generate performance reports, and create alerts where equipment is failing, or falling short of optimal performance. This automatic control system helps to ensure equipment performs optimally thereby reducing energy use.	Building Management System controls should have the following features as a minimum: ▪ Space temperature sensors at appropriate heights to measure occupant comfort, these should never be located in ceiling voids ▪ On demand controls so plant only operates when there is a demand from a space sensor for either heating or cooling ▪ Time schedules should be in place as a backstop where necessary

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Energy Efficient HVAC systems	Better practice recommends that where energy demand cannot be reduced further, remaining demand should be achieved through the use of energy efficient systems. The use of new efficient equipment not only reduces energy consumption and emissions, it also reduces repair and maintenance costs during the lifespan of the system.	Utilise the Energy Technology List for information of the most energy efficient HVAC equipment on the market, including automatic monitoring and targeting equipment, boiler retrofit equipment, heat pumps, and motors. Where assets are located in the UK there financial support is available from the Government to help with CAPEX.
Thermostatic Radiator Valves (TRVs) – where boilers already installed	The installation of TRV's is a low cost option for improving the efficiency of heating systems by controlling the flow of hot water into radiators. Controlling their use centrally within an asset can reduce the common issue of overheating areas, and takes responsibility away from the occupants to manage temperature.	Lockable TRV valves should be installed on all radiators. This allows for management control (i.e. to prevent tampering with settings) but also allows for radiators to be turned up/down to align with heating demand. NOTE: As part of the building logbook and O&M manuals given at handover post fit out, information should be included about the importance of ongoing maintenance of TRVs, especially intelligent TRV's as allowing them to become blocked over time can reduce their efficiency.
BMS Controls	Energy and carbon savings from the use of equipment and pipework insulation can be acheived on both heated and cooler pipework. The majority of materials used for the pipework need to be conductive; heat losses/gains are a common problem. Both national and international standards for insulation quality and thickness have been developed to help ensure optimal efficiency (e.g. UK standard BS5422:2009)	All pipes, valves, boilers, calorifiers and water heaters should be lagged to prevent unnecessary escape of heat. Lagging can influence the end heating energy temperature delivered. NOTE: This insulation should be checked as part of ongoing operational maintenance once fit out is complete to ensure efficiency is maintained.

Energy

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Fit out requirement	Justification	Action
LED Lighting	LED lighting has significant energy and lifespan benefits over fluorescent / incandescent lighting. However, lighting should be designed specifically for the space to ensure it meets end user requirements. LED lighting uses typically less than half the amount of electricity as alternatives with lifespans of 50,000 hours+ which is often three times longer than non-LED lighting. This leads to reduced replacement and maintenance requirements. Additionally, in areas of high heating load (i.e. densely populated IT equipment) LED lighting gives off virtually no heat in comparison to candescent/fluorescents. This can reduce heating demand and improve comfort.	LED lighting should be incorporated into all new fit out specifications. Where a full first fit out is completed, LED lighting should be fully incorporated into lighting designs. Where a fit out forms part of a major refurbishment/retrofit LED lighting should be implemented on a replacement basis as a minimum.
Window Film/Treatment	Windows in a commercial asset should balance natural light with heat gain. Window/Solar films allow natural light to enter the space, which reduces the need for artificial lighting, and therefore reducing energy demand; they also reflect heat to minimise solar heat gain, which is accentuated by the urban heat island effect. By reflecting heat, there is a reduced need for air conditioning to cool the indoor environment which reduces energy usage.	It is recognised that installation of blinds (which can act as major barriers to significant heating gains) are often not feasible in a retail environment. However, consideration should be given to installation of solar film on windows. Whilst glare should be reduced to appropriate levels, natural light should be allowed to enter the space to reduce artificial lighting demand. Natural lighting is preferable to artificial as it has positive health and wellbeing impacts and helps to reduce energy consumption.

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Fan Coil Unit (FCU) Zoning	Different areas of commercial assets may have different heating/cooling requirements during the day due to orientation (solar gains), zone activities, or irregular occupancy periods. Zoning of HVAC equipment allows for systems to only be used locally, when required, as opposed to centrally controlled. This can help to reduce energy use and allow systems to operate at optimum efficiency.	Where in place, FCUs should be zoned to correspond with each area of the building that has different potential requirements such as areas of the building with different levels of solar gains or irregular occupancy periods (i.e. through the night).
Space Sensors	Indoor air quality has been linked directly to the health and wellbeing and productivity of occupants. Particularly during and following the Covid-19 pandemic, ensuring good air quality is important. Space sensors provide automatic and regular reporting of air quality, helping to identify any issues, or areas for improvement.	Space sensors, where in place, should be appropriately located in order to report accurate temperature or air quality data. Sensors should not be located within ceiling voids or near equipment which may adversely affect recordings such as major IT equipment or lighting.
Variable Speed Driven Fans and Pumps	Variable speed drives and pumps control the speed of motors, fans and pumps – matching speeds to the requirement of an application. Slowing the speed of a fan/pump can reduce energy use by up to 50%, contributing to energy reduction and carbon reduction targets.	Pumps and fans over 5KW should be variable speed driven. The lifespan of these fans and pumps is extended in comparison to standard fans and pumps as they are not constantly operating at full capacity.

Energy

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Fit out requirement	Justification	Action
Layout and End User Control	The layout of the interior space of an asset can impact on how HVAC is used within an asset. The installation of internal wall partitions, equipment and lighting can all impact on the flow of air, or heating/cooling distribution in a space so careful consideration is essential at design stage.	Any new fit-out elements should not compromise the ability of the building to regulate thermal comfort levels. This includes planning the location of new internal partitions which could impact on air circulation. Consideration should be given to identifying areas which may suffer from draughts or cold spots and potential mitigating actions to reduce these issues. End users should be made aware of how the heating and cooling system is controlled (if end control is available). They should be trained to use the HVAC system in an energy efficient manner where applicable.

Exemplary

Fit out requirement	Justification	Action
Use of Low and Zero Carbon Technologies	Low and Zero Carbon technologies are increasingly required to align to carbon reduction targets, and ultimately achieve net zero operational carbon. Using the energy hierarchy, the first step in reducing emissions should always be to reduce and minimise energy use, which can be achieved following many of the steps above. Any remaining energy demand should then be met with the use of low or zero carbon technologies wherever possible.	Where feasible, low or zero carbon technologies should be utilised. The most appropriate technology for commercial real estate is typically solar PV but other options include solar thermal (hot water), ground source heat pumps or biomass boilers. The applicability of each will depend upon the type of property. Permission would need to be sought from the landlord to install these options.

Waste and Materials

Preserve and protect our limited natural resources

Best Practice

Fit out requirement	Justification	Action
Provision of recycling facilities	Managing construction waste during fit-out is important; however of even greater importance are the operational waste management facilities put in place. Segregation of wastes at source will lead to higher recycling and lower contamination rates.	Facilities should be user friendly, in convenient locations and with clear signage with training provided to building occupants. Recycling rates achieved should be reported back to occupants in order to drive performance improvements.
Prioritisation of the waste hierarchy	The waste hierarchy specifies that priority should be given to reducing/reusing waste at the source, over recycling, recovery and landfill. Consideration of this hierarchy is important in procurement decisions; for example, minimising packaging and prioritising the use of recycled content in material choices. This is considered to be more cost effective than recycling/waste collections and disposal so is a proactive step to reduce costs and minimise negative environmental impacts.	Consideration should always be given to the application of the waste hierarchy when disposing of waste. As a priority projects should be designed to eliminate the generation of waste. If waste generation is unavoidable, consideration should be given first to reuse, then recycling (reprocessing of materials) before energy recovery. Landfilling, if not illegal in your jurisdiction, should be considered as a final resort as it has a high environmental impact and is becoming increasingly expensive.

Waste and Materials

Preserve and protect our limited natural resources

Best Practice

Fit out requirement	Justification	Action
High recycled content in materials	Using materials/products in any fit out that are either partly or wholly made from recycled content will improve resource efficiency. Recycled materials usually have lower environmental impacts compared to raw materials and so they will contribute to the fit out having a lower carbon impact.	Fitouts should specify materials which contain recycled content. A number of fit-out materials generally have recycled content such as plasterboard, MDF and carpet tiles. Suppliers should be asked to provide details of the recycled content of their materials so informed decisions can be made. NOTE: Information on recycled content of materials is available through The Waste Resources Action Programme (WRAP).
Use of FSC Timber	Timber products can enhance the design of fit-outs with potential positive impacts on the health and wellbeing of building users. Sustainably managed timbers represents a low-impact, long lasting, recyclable material resource.	Implement a timber procurement policy to ensure any stakeholders involved in the fit out specification understand the requirements for any timber products. Use the FSC.org website to check if the supplier stocks FSC timber. NOTE: Timber may not always carry the FSC trademark. Proof of assurance will be found on product invoices as only FSC certified organisations can make FSC claims on their invoices and delivery notes.
Consider the environmental impact of selected materials	Selection of materials during a fit out is crucial to minimising 'embodied carbon'. This refers to the amount of carbon used to produce and transport a material, and considers, extraction, manufacture, transport to site, and disposal at the end of the lifecycle.	Consideration should be given to the whole life impacts associated with the materials specified in the fit-out. Many construction materials have Environmental Product Declarations (EPDs) that rate the materials' environmental performance. These can be accessed via the BRE's GreenBookLive website.

Water

Consider water efficiency and reuse to minimise water consumption

Best Practice

Fit out requirement	Justification	Action
Water leak prevention	Flow control devices control the amount of water which can flow to an area, helping to minimise potential water loss from leaks. Various systems are in place from simple volume controllers to centrally controlled units.	Flow control devices should be installed in areas with a water supply such as toilets and kitchens.
Dual flush mechanisms	Dual flush mechanisms on toilets use half the amount of water than single flush cisterns. This is a low cost option to reduce water use.	Dual flush toilets should be installed as standard. If single flush toilets are retained during fit-out, water displacement devices should be installed (at very low cost) to reduce the volume of water used per flush.
Waterless urinals	Depending on asset type and use, toilet facilities can account for up to 50% of asset water consumption. In conjunction with reducing water use, waterless urinals generally require little maintenance, reducing ongoing costs.	If new urinals are installed, consideration should be made to installing waterless versions. Good cleaning and maintenance regimes are required to ensure there are no issues with odour.
Low flow taps	Low flow taps / aerators reduce the volume of water used, and automatic controls/ push mechanisms reduce the length of time taps operate, further reduce the water usage.	Taps with reduced flow / aerated water should be installed in toilet fit-outs. These should be combined with technologies such as automatic sensors or ‘push’ taps.

Water

Consider water efficiency and reuse to minimise water consumption

Best Practice

Fit out requirement	Justification	Action
Automatic Metering	Installation of automatic meter reading (AMR) devices allows data to be captured and reported automatically and at a granular interval. This allows in depth analysis of water consumption to be undertaken to identify improvement recommendations to reduce consumption.	Any new main meters installed during fit-outs should be automatic meter reading devices (or half hourly meters).
Rainwater harvesting	Where there are large areas of external landscaping, rainwater harvesting can support irrigation and maintenance requirements.	If external space allows, consideration could be made to installing rainwater harvesting equipment. This requires installation of external storage tanks and associated pipework to deliver either irrigation or supply to toilets. No treatment is made to the water.
Greywater harvesting	This technology focusses on re-using internal wastewater from sinks and basins. The water is mildly treated (i.e. filtered) and used for toilet flushing or irrigation. This reduces the environmental impact of the asset, reduces water costs, and decreases wastewater volume thereby lowering sewerage charges.	Consider how greywater treatment and recycling can be integrated into water systems. This should ideally be designed into plans rather than retrofitting. Note: Grey water systems may not be applicable in some countries due to local and national laws on re-use of water. Where applicable, grey water systems should be aligned to standards such as UK BS8525-1:2010: Code Of Practise.

Health and Wellbeing

Provide inclusive and productive workplaces

Best Practice

Fit out requirement	Justification	Action
Cycle racks, showers and lockers	The provision of bicycle facilities and 'end of trip' facilities such as showers and lockers is key to fostering a cycle-to-work culture. Promoting the use of bicycles for commuting also encourages occupants/visitors to consider their wellbeing which has been linked to better health and more productivity.	Install covered cycle storage areas or cycle loops as a minimum. Where feasibility, consideration should be given to the provision of showers and / or lockers to promote cycle use.
Inclusive Design	Inclusive design, when incorporated in the initial planning and design stages of any initial fit out or refurbishment, can create multifunctioning spaces which cater for collaborative working.	Consideration should be given in the design phase to provide flexible, inclusive and collaborative work spaces; for example, break out spaces, lunch areas and active spaces such as stair cases and sit/stand desks.

Biodiversity and Green Infrastructure

Increase biodiversity and access to green space

Best Practice

Fit out requirement	Justification	Action
Biodiversity Improvements	It is important to recognise the value of biodiversity in our assets. Designing spaces that promote biodiversity helps to create a positive environmental impact and provides aesthetically pleasing areas for occupants to use.	Whilst the opportunity to provide benefits to local biodiversity may be limited, any external works such as landscaping or green space for occupants to use should be designed with consideration for local flora and fauna. Plants which require low levels of hydration / slow growing should be used where possible to reduce the need for watering and maintenance. Consideration should be given to the installation of bird boxes, insect houses and bee hives.
Landscaping	Landscaping at an asset can impact on the physical and climate risks at the site. Physical risk assessments, including climate resilience and flood risk due diligence should have been conducted at acquisition stage and any potential risks highlighted. If landscaping activities take into account these potential implications, then asset risk may be minimised.	Landscaping activities should take account of potential climate change implications particularly in high risk areas. For example, slow growing, low hydration plants are preferable in areas subject to future water stress. Large areas of artificial paving should be avoided and where possible sustainable urban drainage systems (SUDS) should be considered to reduce the risk of flooding.

Operational

Reducing the performance gap between design and operation of assets

Mandatory

Fit out requirement	Justification	Action
Consider building regulations as a minimum and aim to exceed wherever possible	Building regulations are intended to ensure the safety and performance of new developments and major refurbishments. In the UK, regular updates to Part L (energy) and Part F (ventilation) of the regulations intend to ensure sustained and consistent improvements to energy efficiency overtime. Meeting and exceeding local regulations help the transition to net zero carbon.	Local Building Regulation requirements must be adhered to at all times, and fund/asset managers should be cognisant of all EU building regulations, and any consultations/updates.
Ensure any fit out plans do not negatively impact the EPC rating of the asset	To promote energy performance, the EU has established a legislative framework that includes the Energy Performance of Buildings Directive 2010/31/EU (EPBD) and the Energy Efficiency Directive 2012/27/EU. Together, the directives promote policies that will help achieve a highly energy efficient and decarbonised building stock by 2050, create a stable environment for investment decisions and enable consumers and businesses to make more informed choices to save energy and money. Energy Performance Certificates (EPCs) are a legal requirement when an asset is built, sold, or rented and is derived from the above directives. Minimum Energy Efficiency Standards now apply to EPCs, making it unlawful in some countries to complete asset transactions unless a certain EPC rating is achieved. The standards are designed to encourage a sustained improvement in the energy efficiency of building stock. Failure to comply with the standards, can lead to regulatory risk at fund/corporate level.	Any works to areas which could affect the EPC must have a draft EPC 'modelled' to determine the potential EPC grade post fit-out.

Operational

Reducing the performance gap between design and operation of assets

Mandatory

Fit out requirement	Justification	Action
Undertake commissioning	Commissioning ensures that installed equipment is calibrated, tested and functioning as intended by both the designer and manufacturer and therefore running at optimum efficiency. Equipment operating at optimum efficiency minimises energy use, reduces maintenance requirements, and reduces operating costs.	Conduct a commissioning assessment on all equipment installed to optimise efficiency. Records must be retained to demonstrate compliance.
Building Logbooks	Building Logbooks are often a legal requirement in new buildings and in existing buildings where services are changed. They will improve access to information for Facilities Managers (FMs) or others responsible for managing buildings, enabling them to improve the operation of their building. Retaining logbooks, alongside O&M manuals also helps the accuracy of building certifications, assessments and audits because more information is available for modelling and evidence.	Ensure building logbook is updated with details of all building equipment installed and stored where information is easily accessed for any assessments, audits or certifications.

Operational

Reducing the performance gap between design and operation of assets

Best Practise

Fit out requirement	Justification	Action
Soft landings	Soft landings refer to strategies aimed at bridging the transition between construction and operation phases of a project with an overriding objective of maximising optimal operational performance. The Soft Landings Framework (2009), further updated in 2014 to align with the project stages of the RIBA 2013 plan of work and guidance documents. Similarly to a post occupancy evaluation, the concept of soft landing is designed to minimise the performance gap of an asset.	Apply a soft landing approach to the fit-out. This requires collaboration between building designers/contractors and operators during design, construction and into early operation. This approach leads to improved briefing, design, handover, aftercare and, ultimately, performance in use.
Post occupancy evaluation	One of the biggest challenges we face in the decarbonisation of building stock is addressing the 'performance gap' – the gap between how an asset was designed and how it performs when in operation. Many EU assets have been designed for compliance, and do not achieve intended performance once in operation. This can increase the "stranding" risk of assets and increase asset running costs.	Evaluate building operational efficiency post occupancy (e.g. energy and water use) via comparison of actual performance levels against design predictions and kit specification. Following review, develop an action plan to close any 'performance gap' and improve building operational efficiency.

Disclaimer

This report has been prepared by EVORA Global Limited for Savills Investment Management for the purpose of providing tenants of Savills Investment Management managed assets with guidance on sustainability considerations during the fit out and refurbishment of the tenant spaces. The guidance does not affect any legal and / or contractual / lease obligations that may be in place.

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