Introba BENOY PRAGMA

2030 EPC Deadline –
Is Your Asset Fit For Purpose?

Contents

The Scale of the Challenge

Generating consistent financial returns from investment in physical retail space in the UK increasingly presents a significant challenge. The Government's requirement for all commercial non-domestic buildings to achieve an EPC B rating by 2030 adds a further hurdle for investors to negotiate.

Over 80% of commercial space in the UK needs intervention to achieve the Government's 2030 EPC B rating requirement. This amounts to 1.4 billion sq. ft of retail space and includes 93% of shopping centres and 66% of retail park assets.

And 2030 is not the end game. Nearly all commercial property needs attention to meet the Government's 2050 net zero greenhouse gas emissions requirement, affecting both existing and new-build property.

Costs for these upgrades are borne by the landlord, not the tenant, and penalties of up to £150,000 per breach can be enforced. And although 2030 may seem far off, it will take some assets many years to achieve the necessary standard.

This pressure point creates a decision-point for landlords and investors. Does the future income my asset will generate in its current use substantiate the necessary costs to become compliant? Or, rather than just upgrading, should a more comprehensive change be carried out to maximise future value, potentially comprising change of use, extension or rebuild?

The combination of Introba, Pragma and Benoy is unique in the market, combining Introba's expertise in engineering and sustainability, Pragma's specialism in consumer and occupier research and analysis and Benoy's design skills.

The combination of these three companies working in tandem enables clients to efficiently and comprehensively answer the question about how to derive maximum value from an asset by determining:

EPC Rating: is your asset currently compliant? What level of change is needed to ensure compliance? How can you create a pathway to show how compliance will be achieved by 2050?

Building Uses: Is the current asset use profitable? Will it be in the future? Are there alternative uses that could prove more profitable and/or robust?

Building Fabric: Is your building capable of responding to the changes required to deliver long-term value? Which changes are most feasible/cost-effective/could create most value?

What are EPCs?

Energy Performance Certificates (EPCs) were first introduced by the UK government on 1st August 2007 in England and Wales.

A Commercial Energy Certificate is required if you are selling or leasing a commercial property. They are also required if you've recently had construction done on your property, which you must have completed before the property is advertised.

EPCs are documents that provide information about the energy efficiency of a building. The primary purpose of the EPC rating is to give property owners and tenants an idea as to how that building performs when it comes to energy consumption.

EPCs are required for a range of commercial properties, including offices and shops, and the purpose of requiring EPCs for these types of commercial properties is to make sure that a building's owners and its tenants have access to that information, so they can identify areas for improvement. Some of the exceptions not needing a Commercial EPC include: if it is a place of worship, temporary structures which will not be used for more than two years, stand-alone buildings with a total floor space of less than 50m², properties which already have a demolition order in place and properties with a low demand for energy such as agricultural buildings.

A commercial building which does not have an EPC when it is required could be fined between £500 and £5000.

EPC ratings are typically calculated based on the overall energy performance of a building. It is a science in and of itself, but, the calculation takes into account things like the building's construction and condition, heating, ventilation, and lighting systems, and the materials used in the building's fabric. The energy efficiency of the building is then rated based on these elements, using a scale that runs from A to G.

But not all EPCs are created equal! Depending on the type of property and the purpose of the assessment, there are a few different EPCs to be mindful of. The most common types are Non-Domestic EPCs and Display Energy Certificates (DECs).

Non-Domestic EPCs are required for all commercial buildings when they are constructed, sold or leased. DECs, on the other hand, are required for public buildings that are frequently visited. This includes things like schools and hospitals. DECs are designed to provide an energy rating that is visible to the public, encouraging building owners and managers to improve energy performance.

EPC is part of the government's package of measures to reduce carbon emissions as it has committed to support businesses in reducing their energy use by at least 20% by 2030. It is part of the UK's commitment to bring all greenhouse gas emissions to net zero by 2050. EPC rating B is the best in terms of energy efficiency and a low environmental impact.

Intervention Timeline

Scale of Intervention

JOURNEY TO NET-ZERO

< 2030 - EPC B Compliance

2050 - Net Zero >

2023

Immediate
Management of Asset - Non Structural
- EPC Compliance Plan

2025-2028

4 Years
Minor Works to Upgrade EPC B Compliance+
- Decarbonisation Pathways
- Scenario Analysis

2028-2030

5-7 Years
Adaptive Re-Use EPC B Compliance+
- Decarbonisation Pathways
- Scenario Analysis - Energy
- Modelling Carbon Calculations
- Sustainability Modelling

2031+

8-10 Years
Full Scale Redevelopment
- Scenario Analysis
- Carbon Calculations
- Sustainability Modelling

CO_2

30 Years
Net-Zero Requirement

2050

Does Your Building Achieve the 2030 EPC B Rating?

Introba's aim is to drive down the energy consumption of buildings and their carbon impact. Our work combines sustainability and engineering and includes the design of specialist systems such as lighting and fire. We help our clients convert their ambitions into practical implementable processes, and then try and help them to match their budget to the most efficient way of achieving their goals.

Hugh Dugdale, Associate Principal, Introba

With EPC, we can analyse existing buildings and assess how they are performing. The EPC provides a standard way of assessing one building against another, however there isn't a strong link between the EPC rating and the actual energy performance. To help a client advance towards Net Zero Carbon and meet their wider ESG targets, whilst maintaining a marketable asset, we need to understand how we can improve the EPC rating, and in parallel how we can deliver tangible reductions in carbon emissions.

There are also newer assessments to consider such as CRREM which is the Carbon Risk Real Estate Monitor to assess carbon emissions trajectory of your building. CRREM introduces the concept of assets becoming 'stranded', this is when they deviate from your carbon reduction pathway. This is a useful concept to overlap with looking at EPC improvement process, where a building is likely to 'strand' or become unviable if it cannot achieve an EPC B rating by 2030.

There are other metrics entering the UK market. In the commercial sector, the Australian standard NABERS has been launched, which bases a star rating system on actual measured energy data, as well as design metrics. In Australia, NABERS has started to impact on the rent you can charge for a space, so if has a financial impact as well as a purely energy related one.

Our Approach

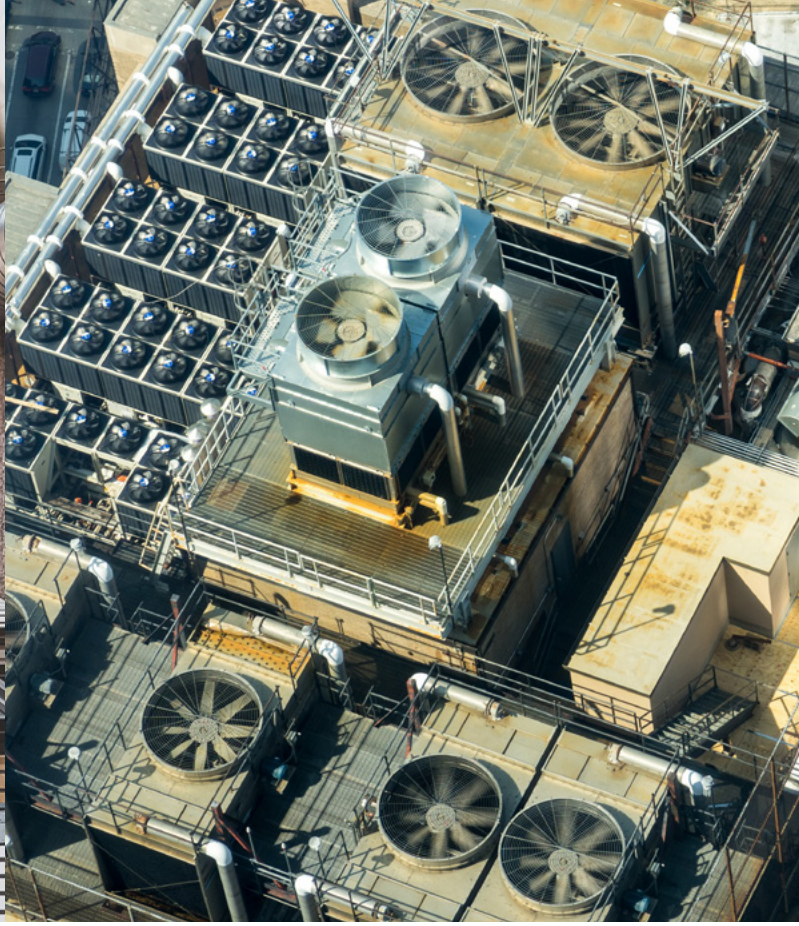
We help clients understand how their buildings are performing, and how to improve. We put together a suite of options which outline how we could deliver a desired EPC rating, and also how they can decarbonise their building and work towards net zero. It's very much about building a roadmap and helping our clients understand where to get to. We usually do not advise our clients to spend huge amounts immediately. They may have planned preventative maintenance that's imminent, for example, if the boilers are going to reach end of their life in five years' time, so that's an appropriate time to switch to heat pumps because then there is money already in the budget to replace the boilers, increase that slightly and you can replace them with heat pumps.

Does Introba Have a Point of View About EPC?

We see EPC as a tool, but a relatively blunt one. EPC alone is not going to deliver net zero carbon for the country or for the building sector. It will help get rid of the worst performing buildings but because it's an estimating tool and isn't based on real performance data, it doesn't necessarily deliver the improvement. You can still have the performance gap between modelled and actual, which means we don't think it's going to get us to the solution, although it can help get us towards it.

The first step is to understand your actual performance. Quite often there needs to be additional metering, whether that's a temporary measure to get some data or permanent additional meters to give you subdivision of spaces or uses so that you can focus on the areas that matter. It isn't necessarily intuitive, the solution isn't the same for every building.

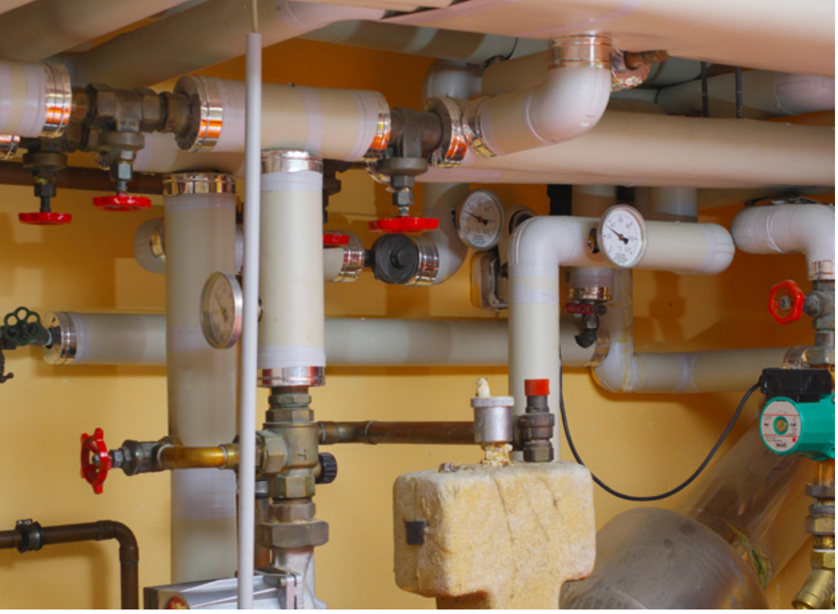
For example, you don't want to spend a lot of money replacing an old system that's very efficient when the problem lies somewhere else in the building.



The key initially is to look at the energy profile, with ideally half hourly data, so you can assess the daily profile as well as the annual numbers, and you can look at peaks and troughs and pick out any anomalies. For example, a building may have a re-occurring peak at 04:00am, this could be for a justified reason, but may sit outside standard operating hours and be indicative of a time-clock error and equipment malfunction.

From a decarbonisation perspective, removing combustion is a very early target through electrification. We aim to move towards an electric powered building as soon as we can to enable decarbonisation. Part of what we do with clients is try and help them understand what suite of measures they may need when they switch over to a heat pump, to make sure they can keep their operating costs to at least parity, if not better. Switching to a heat pump in isolation may lead to an increase in utility costs, so is often paired with other interventions such as adding heat recovery on the ventilation system.

And once a client has made that switch, the total contribution of their energy use per year of the heating system becomes quite small. Then the focus moves onto other elements, looking at lighting and power and how these loads can be reduced. It's a process of working through the biggest impact points and then moving onto the lower impact



points. We've worked through this with various clients buildings roadmaps where we look at their portfolio potential and say which buildings are worst performing. Occasionally you find that you've got an existing building that's operating almost net zero anyway just because of the way a client uses the building. It doesn't need to be the perfect energy use, it's that combination of how systems are performing, how they're used and how the space is utilised. Then you can start to project overall carbon performance across a portfolio and show how that will improve over time and where a client will need to invest year on year to get the improvements they desire.

Who do you typically work with? Do you work with investors or developers or tenants?

We work with developers, building owners, and owner occupiers with large estates. We've also recently worked with county councils who've got large building portfolios including commercial buildings, schools, libraries etc.

We've seen an uptake from the education sector who have funding connections with their energy performance and are keen to make sure their estate is performing well.

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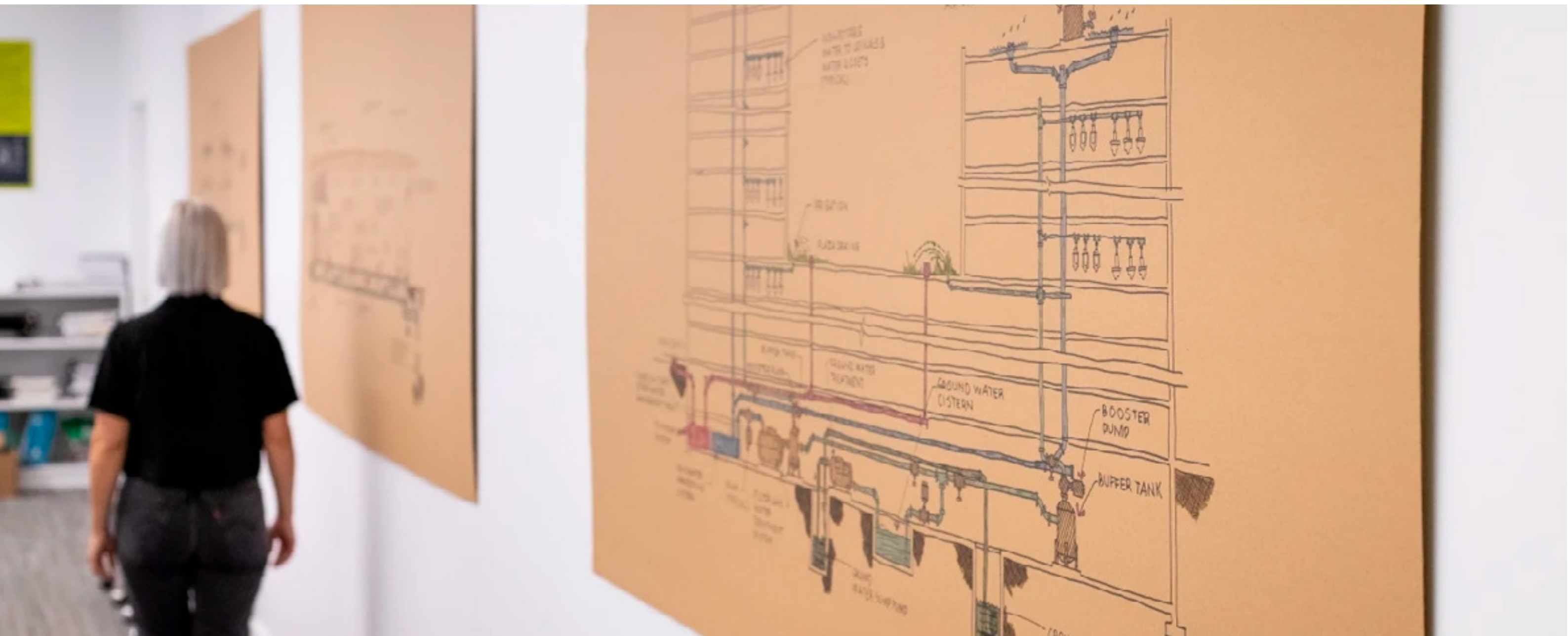
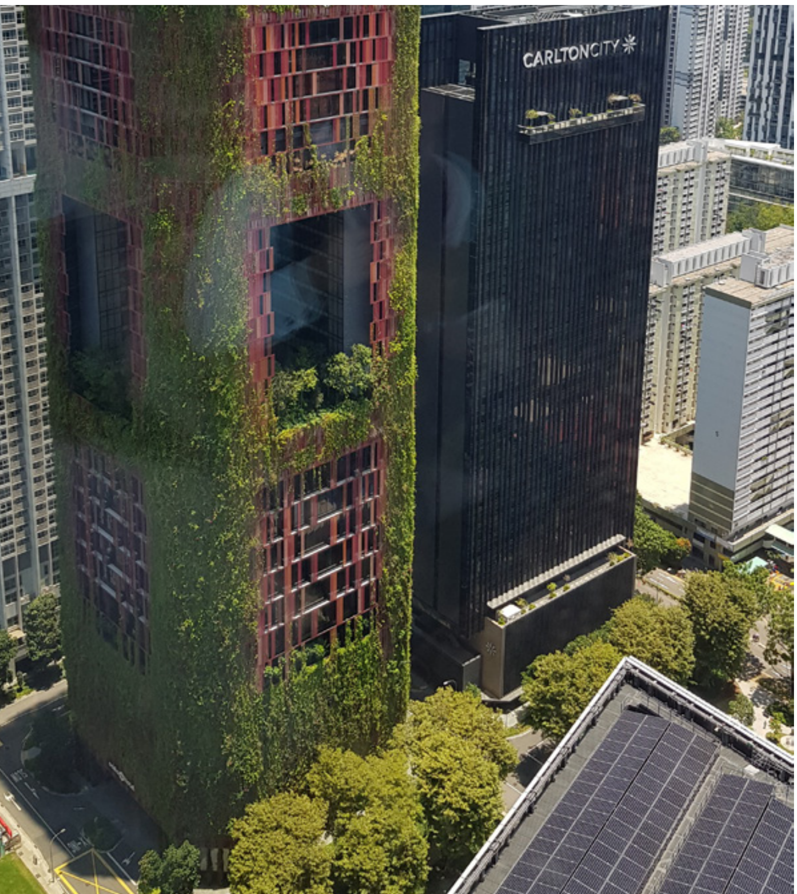


Is Your Current Asset Class Profitable?

The UK has far too much physical retail space, particularly when you look outside of the two extremes – prime regional retail assets and ultra-convenient local assets – at the middle ground in smaller regional towns and cities.

This means there are a number of investors with decisions to be made about the long-term future of their assets.

Some investors may be highly engaged with their assets and understand what the retail opportunities and challenges are, but others are likely unaware of the scale challenge facing their investments.



Andrew McVicker, Director, Pragma Consulting

The introduction of the EPC requirements adds a critical juncture in terms of decision-making. Current proposals state that all retail units need to be of EPC Standard of B by 2030, and if that isn't in place then it won't be possible for these units to trade as retail units any longer. So, an assessment of what needs to be done in terms of EPC rating to make each of these assets compliant is required. Clearly there's going to be a cost involved. And the last thing investors will wish to do is invest further funds to upgrade assets to be compliant but find market and location and dynamics deliver diminished future returns. So clearly, a wider review of asset purpose needs to be in place. Some investors will clearly hope

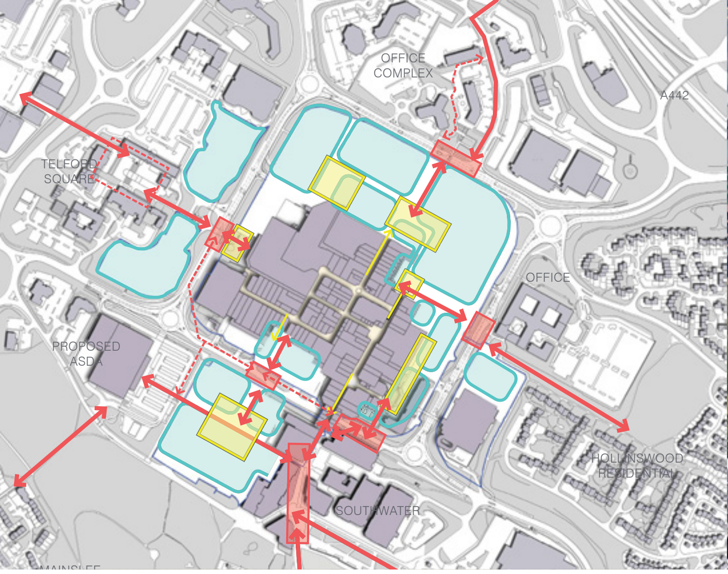
for the best, that their asset is the one that can buck the trend and return to prominence, or that the market will continue to recover from the nadir for physical retailing that was lockdown. Or failing this, that they will be smart enough to create a narrative and time their sale at just the right point, where a new buyer comes to the market and is by chance looking for that very asset.

And it's not just retail. The office market offers a similar challenge, with changing workplace practices creating a general oversupply, a flight to quality raising standards across the board and a need for landlords to invest to remain relevant. But is the ongoing cost of investment merited by future returns?

We think this looming deadline increasingly means investors need to look at the viability of their assets. Whether this is to perform the necessary upgrade to ensure compliance with EPC ratings, whether it is to create an implementable strategy to maximise performance or whether it is to create a robust narrative to maximise value for sale, the processes involved require thought, skill and time. And whilst the changes that will be implemented will ultimately be around the physical asset, the value of the asset is created in its suitability to deliver a proposition that is in demand. And for that, a detailed understand of wider and local market supply and demand dynamics is required

Our Approach

Pragma's approach is consumer-led, understanding how people think, feel and behave, and how this translates into commercial opportunity. A lot of Pragma's work is directly for occupiers, and that provides us with key insight into how they are reacting to consumer behaviour and shaping their businesses accordingly. We are then apply to apply some of this thought process on behalf of landlords and investors to say how an individual asset or store is



performing in terms of not only its sales but its profitability and the return on investment. And we can use that information to provide an accurate forecast as to the longevity of each occupier in each location and asset. When we look at the whole town centre, we can do similar a sort of analysis to assess how healthy the retail offer is in this location versus what the customer is looking for, and ultimately give a steer as to either how much space is viable in terms of retail or certainly how viable our client's particular retail offer is within the wider retail offer. That then helps us give a strong read as to what the likely future income is going to be from an asset and that can be set against the cost of the EPC assessment and improvement. We can then say how much will have to be spent to enable this asset to continue as retail and what likely returns are possible.

Our Work

Pragma have a long history of conducting this sort of work, for landlords and investors of single use assets and we've recently been doing a lot of work with clients who are trying to understand what to do with their retail assets.

For a convenience-based shopping centre in the North East of England, the client wanted to understand which elements of the retail offer were robust versus which weren't and how the individual location within a shopping centre of those elements impacted the ability to create change. Pragma carried out its analysis and essentially created a traffic light

view of the centre: which units were green and needed to remain in place because they were driving value, and which were red because they were offering no long term value. What Benoy were able to do by picking up on this analysis was to assess whether this centre could be divided up into different ownerships and sell the centre in different development pieces? What became apparent through this was how interlinked the existing centre was in terms of services, service yards and accessibility. We were able to give the client a clear steer on exiting this investment, whether they would need to sell the scheme as a whole, or whether they could subdivide it into different developments and what the costs and benefits associated with each option would be.

On a different opportunity, but with the same challenge, in one of the top shopping cities in the UK, we were looking at a retail asset where some of the retail was working and some of it wasn't and it had several vacancies across different floors. The client wanted to know what retail could fill the vacancies, and if it wasn't retail, what other uses could be more valuable? We were able to quantify what the retail element would be able to provide, but then also advise as to other elements that could add value and that included assessment for co-working space, office space and the potential for bringing a hotel into the scheme. Again, we assessed the commercial viability and Benoy were able to find out what the building could allow for those sorts of mix of uses.

So, we can provide a very comprehensive assessment both in terms of commercial viability and the physical ability for the building to be able to sustain the sort of changes envisaged.

Andrew McVicker,

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Is Your Building Capable of Responding?

Robert Bentley, Architect Director, Benoy

Upgrading a unit and/or asset – so it achieves both EPC rating B and is set on a path to helping deliver the 2050 Net Zero requirement – is no mean feat.

The increase in the cost of energy over the last two years makes investment in sustainability measures a wise long-term investment but many landlords have been hard hit by the impact of lockdown and changing consumer habits, are cash-strapped and may be looking to exit an asset before 2030.

Furthermore, with the UK overprovided for in terms of physical retail space, the last thing landlords wish to do is invest further capital into commercial assets to make them compliant but find there is little or no tenant demand.

In determining the most appropriate future strategy for an asset, the value of the existing building, its materiality, structure and the shape must be considered, and ideally utilised to deliver an improved solution, rather than straight rebuild. The M&S in Oxford Street is the most high-profile example where rebuild, rather than redevelopment was proposed; passions relating to the removal of a well-loved building, plus concerns over the release of embodied carbon led to a lengthy, and costly, public inquiry and ultimately a precedent setting, Government refusal of the planning application. In 2022, we completed the Queensgate Shopping Centre project in Peterborough, where we managed to retain a significant part of the existing building to deliver a reduced John Lewis and create, in the excess space released, a cinema, retail and leisure hub. This was supported by an additional rooftop extension, utilising the existing structure to deliver supportive F&B units.

This strategic thinking now needs to apply to every building that will come under scrutiny as a result of a need to improve its EPC performance.

For non-compliant assets, every day which goes by potentially sees it lose value, as 2030 – and the risk of stranding – moves nearer. We are now six and half years away from 2030 and the processes to deliver the level of change potentially required are unlikely to be swift.

A data driven design process, planning and technical design, construction and fit out can easily take five years for a straight-forward project.

That means investors and landlords need to have thorough analysis and strategies for their assets in order to optimise both values and resources – if the asset is going to be retained, then the purpose of the asset needs to be confirmed and the asset needs to be made compliant, if the asset is to be sold, the buyer will need to know what the strategy is for making it a usable, leasable asset, whether it is to retain the current use, demolish it or retrofit it into something new.

Robert Bentley,

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Our Approach

Pragma, Benoy and Introba come as a team of three companies, each with complimentary skills and specialties, to help the landlords and investors understand how to get best value from their assets and avoid them becoming stranded.

Introba

Introba inspect and audit the current building fabric and the way the building functions from an energy point of view, to understand how and where the best value can be achieved in bringing existing provision up to spec. Sequencing and phasing the response alongside current equipment maintenance cycles allows for the cost-effective introduction of measures, rather than a large, one-off cost.

PRAGMA

Pragma assess the asset's current commercial performance, determining the viability of current occupiers and uses given changing consumer behaviours, catchment supply and demand. Carrying out detailed market assessment allows for the viability of change of use to be tested, to determine the optimal use of space, scheme positioning, layout and design and to quantify what future performance can be achieved.

BENOY

Benoy provide an architectural audit to understand the nature of the asset's frame and the flexibility of the spaces between, to understand key infrastructure and its flexibility to change its formal function. Understanding the building's potential from a high-level planning position - whether it's limited in height , whether there is limited precedent for more height, what's the precedent for other uses – allows for the feasibility of changing the building envelope to be determined.

All three companies coordinate constantly, ensuring clients benefit from evolving evaluation and strategies, rather than 3 disparate recommendations. Upon resolution of an optimal strategy for future use and upgrades, Benoy start sketching options, delivering design solutions that address EPC requirements, optimal use strategy and an asset that with long-lasting value enhancement opportunities.

3 parallel assessments to understand the environmental and commercial sustainability of your asset

Environmental Value

Energy Consumption and Loss

Introba

Does your building achieve 2030 EPC B rating or 2050 net zero?

Yes

Operational Centre

1: are energy costs sustainable?

2: is it profitable?

3: is it ready for 2050

No

2030 - Centre is not allowed to trade

What changes are required to achieve EPC Grade B?

CapEx input required

Updated EPC

Menu of opportunities to improve rating and avoid stranded and un-leasable asset

Commercial Value

Building Uses

PRAGMA

Is your current asset class profitable?

Yes

No

What is the future projection for profitable use?

Sustainable Design

Building Fabric

BENOY

Is your building capable of responding to deliver long term value?

Pre-demolition audit:

1: Flexible use

2: Embodied Carbon

3: Adaptable facade

4: Ability to take additional structural or MEP load EPC Grade B?

High level capacity studies for uses to protect value

Robust Brief to sustain asset to 2050

Energy, Use and Building Route to achieve

Delivering a 2050 vision for protecting the value of your investment

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