

BRIEFING NOTE

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SUSTAINABLE RETROFIT IN THE INDUSTRIAL SECTOR



Challenge

Climate change is one of the biggest challenges facing humanity. With the built environment accounting for around 40% of the world's carbon footprint, the real estate industry has a key role to play in the reduction of emissions. This is something that the industrial sector is devoting significant energy and resource into doing.

In the last decade sustainability has moved to the forefront of the industrial agenda, with occupiers demanding sustainable space, investors targeting sustainable assets and developers building high specification units that align with the strictest environmental standards.

However, the opportunity to occupy, purchase or build new industrial buildings is clearly limited, therefore there is increasing focus on existing stock. Bearing in mind 87% of buildings that will be in existence in 2050 have already been built, improving their sustainability is key if the UK is to meet its net zero commitment by then. Further still, with stricter MEEs regulations due to come into force in April 2023 building owners must act now or be faced with unlettable assets.

Energy Efficiency

We are often asked to identify 'quick wins' with respect to energy efficiency. Of course, these will vary depending on the building, however there are a few upgrades that seem to offer consistently short payback periods.

Lighting is one of the biggest energy burdens in industrial units – especially those occupied 24 hours a day. Replacing the typical warehouse high level halogen lights with an LED equivalent can dramatically reduce energy consumption with the potential of achieving energy savings of c.50%. Incorporating daylight saving, PIR sensors and upgrading lighting controls will further drive down energy usage.

Heating is another significant contributor to energy usage. Many industrial units have old, inefficient gas fired heaters which require a lot of energy to produce heat; most of which is lost through the building fabric. Upgrading to a modern heating system can generate significant energy savings and often has a surprisingly short payback period. Many occupiers are also restricting heating to certain areas in a warehouse, for example ancillary office space, which can be made airtight and insulated, resulting in significant energy (and cost) savings for the occupier.

Further savings can be achieved by upgrading existing Mechanical Ventilation systems with those that incorporate Heat Recovery capabilities. Such installations have the added benefit of improving air quality within the building.

The above solutions are relatively straightforward to undertake and need not incur considerable capital outlay.

The Wider Asset

We are seeing more and more occupiers demanding space which meets strict ESG criteria. Retrofitting existing stock to achieve these requirements can be costly and often unsuccessful. When improving the wider asset, it is important to split the focus into several categories – following the general approach of BREEM.

1. Improve the energy performance of the building.
2. Promote sustainable travel.
3. Improve biodiversity across the estate.

In addition to our quick wins, more substantial works can be undertaken to improve a building's energy performance, including replacement of the cladding/insulation system, introduction of curtain walling, Photovoltaic Cells (PV's) and rainwater harvesting.

Promoting sustainable travel can be achieved through basic provisions such as shower facilities and secure bike stores to promote walking / running / cycling to work. With the Government banning new petrol / diesel cars from 2030 it is fundamental that any refurbished asset includes provision for Electrical Vehicle (EV) charging points – uptake in commercial and private EV's is on the rise and point to point infrastructure should feature high on all developers, occupiers and investors agendas.

Finally, owing to their size, industrial units and estates are often built on greenfield sites. Promoting biodiversity across the site is vital to mitigate the impact of the development on local wildlife. Introduction of landscaped areas with the inclusion of pollinator plants, bird boxes and beetle bumps will help in replacing the habitat taken up by a development.

Issues

One of the key issues we see in sustainable premises is the 'performance gap.' You can design the most energy, resource efficient premises, however without tenant engagement, its actual performance will not reflect this. Different occupiers have very different occupation requirements and therefore engagement between the building designer, owner and occupier is essential to closing the gap between intended, and actual performance.

Another issue that we are seeing in the industrial sector concerns tertiary stock. It is now well documented that retrofit generates substantial energy savings compared to demolition and new build. From a resource preservation perspective, of course it makes sense to utilise a building for its full lifecycle. However, certain industrial units may present too bigger retrofit challenges – or may have become economically obsolete (a low eaves height being a good example of this). If this is the case, dropping and rebuilding can be made more sustainable via reusing and recycling materials – preserving their embodied carbon.

There remains a significant amount of poor quality industrial stock in the market, and this will need to be addressed, not only to ensure compliance with ever tightening legislation, but also to avoid a 'brown discount' in both rental and capital values. We are already seeing the gap between new, sustainable buildings and secondary stock widen, creating a strong business case for retrofit.

If you would like to discuss any of the above then please do not hesitate to contact Cordelia Batt or James Yarham at Gerald Eve.