Building for the future – today

How commercial real estate is embracing sustainability
In recent years, sustainability in property development has moved from nice-to-have to need-to-have status. Among developers, investors, owners and users alike, consensus is growing about its vital importance.

Collectively there’s a need to ensure new developments and refurbishments are designed and constructed with sustainability principles in mind, to provide a healthy and comfortable environment for people to work, rest and play.

A case study from one of our clients, The Ethical Property Company, illustrates how overlapping interests are driving a greater understanding of the importance of developing sustainable businesses, and communities around them. Through the application and deployment of environmentally responsible and resource-efficient processes and technologies, sustainable buildings are attracting sustainably-focused businesses as tenants. You can find out more about the Ethical Property Company’s approach as part of this report.
The sustainable mindset can inform every phase of a building’s life-cycle – from planning and design, to construction, to operation and maintenance, to renovation, and even to eventual demolition.

At Lloyds Bank, we believe that a sustainable investment and development strategy will deliver tangible benefits both to local communities and the wider society. As part of our Helping Britain Prosper Plan,¹ we are committed to supporting sustainable commercial property development.

“By halving the energy use of new buildings – both commercial and residential – we could reduce the energy bills for their occupants by as much as 50 per cent. And we will aim to halve the costs of reaching the same standard in existing buildings too.

Meeting this challenge will drive innovation and standards in the construction sector [and] will be a catalyst for new technologies and more productive methods, which can be exported to a large and growing global market for clean technologies.”

Theresa May on the Clean Growth Strategy,² May 2018
Why focus on sustainability?

There are a wide range of factors that support the argument for a sustainability-first approach to building design, construction and use.

Technological advances, regulation, environmental concerns, operational cost reductions, wellbeing and community engagement are coming together to drive real change in real estate thinking and practice.

**Technological advances**

As businesses focus on improving energy efficiency, reducing emissions and cutting costs, we’ve seen a growing adoption of ‘smart’ or Intelligent Building Management systems. These so-called ‘IBM’ systems analyse energy consumption and occupier demands to control and improve energy usage. They have been shown to reduce operating costs, reduce the need for inspections and avoid errors and failures.3

Many Lloyds Bank clients are implementing other tools and smart solutions – replacing inefficient lighting, fitting smart meters, and introducing centralised waste management policies.
Technologies deployed as part of refurbishments and developments need careful consideration, to ensure a balance between the needs of occupiers and investors, and legislative requirements. Investors and developers are increasingly engaging with occupiers on smart solutions and working in partnership to meet shared goals.

**Regulatory change**

As of April 2018, it’s unlawful to let commercial buildings with Energy Performance Certificates (EPC) as low as F or G in England and Wales. In Scotland, as well as preparing EPC’s, with effect from September 2016 owners of commercial buildings with an area of more than 1,000 sq m are obliged to prepare an action plan on sale or lease, showing how the energy performance can be improved and emissions of greenhouse gases reduced. While it’s probably too early to assess the full impact of both legislations, it’s clear investors will want to react positively and make proactive improvements to building stock and occupational efficiency ahead of any enforcement.

Regulation is backed by political will too. In May 2018, Prime Minister Theresa May launched a Government pledge to halve energy use of new buildings by 2030, challenging the construction industry to embrace innovation and deliver higher standards. “By making our buildings more energy efficient and embracing smart technologies, we can slash household energy bills, reduce demand for energy, and meet our targets for carbon reduction,” she said.

As part of its Industrial Strategy, the Government had already forged an agreement with the construction industry in 2017 to halve emissions in the built environment by 2025 and reduce the cost of construction by a third.

**The renewable challenge**

There’s no doubt that electricity generated from renewable energy rather than fossil fuels offers significant public health, environmental and economic benefits. With various forms of on-site and off-site renewable energy generation available, the challenge for commercial property players is to determine the most cost-effective technologies to deliver benefits to landlords and tenants over the long term.
Energy supply delivered the largest reduction in emissions from 2015 to 2016, dropping 17% in one year alone, according to Government data. This shows the significant impact renewable energy sources can have on sustainability targets set by individual businesses, and collectively as part of the UK’s commitment to the Paris Climate Accord.

Renewable energy supply and generation can reduce exposure to the Climate Change Levy for business tenants. Energy taxes and rate reliefs are changing from April 2019, placing even more of a focus on the switch to renewables.

Waste management efficiencies
Developers are taking steps to minimise the waste produced in construction, building refurbishment, and the day-to-day use of properties. There are many strands to this, including more sustainable transportation of waste, reduction in the use of landfill, and recycling and upcycling initiatives.

Engaging communities
Sustainability provides a core goal for all property stakeholders to focus on and get behind. Increasingly, developers and investors are working hard to understand how buildings and the people who use them interact, and how to align those interactions with the needs and wellbeing of the local community. This is especially the case with mixed-use developments, where care must be given to different demands and more complex interactions.

Occupier demands will continue to evolve as business practices and workplace trends emerge and develop. The rise of agile and home-working, technological developments, changing corporate responsibilities, and an increasingly transient working population mean that the tenants of the future could look very different from those occupying buildings today.

Changes in the retail sector are also driving a need for investors and developers to focus on creating vibrant sustainable communities to draw people back into town and city centres.
Health and wellbeing benefits

Poorly constructed and managed buildings can cause illness and have adverse effects on users in lots of ways – among them lower morale, reduced productivity levels and increased stress and sickness absence. Poor indoor air quality, for example, has a proven negative impact on user health. Air quality indicators in buildings can rise to dangerous levels as a result of chemicals in cleaning products, ingress of unfiltered and polluted outdoor air, and poor ventilation.

A pilot scheme called the The WELL Community Standard aims to address such issues by providing a global standard for supporting the health and wellbeing of humans in buildings. While adoption is in its infancy, the standard has widespread expert and peer approval and is verified by the same organisation behind Leadership in Energy and Environmental Design (LEED). LEED is one of the most widely used green building rating system in the world, run by the US Green Building Council.

Measures designed to support health and wellbeing in buildings could typically include:

- Supporting active modes of transport such as cycling, for example, through cycle storage and showers
- Provision of on-site exercise facilities
- Optimised access to natural daylight
- Living green walls which can help to improve air quality, employee alertness and noise levels
- Support for healthy nutrition through the provision of kitchen facilities and shared eating spaces
- Provision of multi-purpose rooms for specific requirements, such as prayer or breastfeeding
- Access to outdoor green space
- Reduction of sound pollution which can help reduce impaired performance and social behaviour
Impacting wider society

Beyond the challenges of an individual building, developers and investors can raise awareness of sustainability issues more widely, with a view to encouraging alternative, sustainable consumption patterns and triggering behavioural change.

Together developers, investors and end-users can work collaboratively on such universally desirable goals as: promoting wellbeing, reducing crime, improving people’s physical and mental health, and deterring and combatting anti-social behaviour.

The goal should be to create, through consultation and engagement, vibrant and inclusive developments that are aligned with demographic needs and priorities, and are fit to empower the communities that use them and the cities they live in – now and into the future.
The City of London Corporation, governing body of the Square Mile, has agreed to plans to source 100% renewable electricity from October 2018 onwards.\textsuperscript{16}
Sustainability in action: The Ethical Property Company

The Ethical Property Company is a successful example of sustainability in commercial real estate.

The company is one of the largest social businesses in the UK, owning or managing some 23 serviced office centres across England, Scotland and Wales. It provides office, meeting, event and retail space to over 1,000 organisations every year. Since its launch in 1998, the Company has assembled a sizeable pan-UK property portfolio, and sustainable principles are core to its values.

The majority of tenants are environmentally and ethically minded small businesses, social enterprises and charities. These organisations benefit from practical, well-designed facilities, flexible contracts and proximity to other like-minded companies – who can provide mutual support, partnership opportunities and a sense of community.

Each office centre is managed with the environment in mind, and financial, environmental and social performance are audited externally on an annual basis.

Earlier in 2018, the Oxford based company secured a development loan via Lloyds Bank’s green lending initiative to develop The Green House in East London’s Bethnal Green. It will provide 47,000 sq ft of offices and will be built with a target of achieving a BREEAM* Excellent rating.

The new building was designed by Waugh Thistleton Architects, sustainable building designers who specialise in engineered, cross-laminated timber construction. This form of construction significantly reduces carbon footprint, compared to traditional forms of construction.

“Our view is that all buildings should be made of timber,” says architect Andrew Waugh, co-founder of Waugh Thistleton Architects. “We think we should be looking at concrete and steel like we look at petrol and diesel.”

*BREEAM (Building Research Establishment Environmental Assessment Method), first published by the Building Research Establishment (BRE) in 1990, is the world’s longest established method of assessing, rating, and certifying the sustainability of buildings.
Concrete and steel are expensive to manufacture and transport, whereas wood is lighter than concrete and can be grown sustainably. Coupled with the fact that, as trees grow they absorb carbon dioxide from the air, it’s clear that building a high-rise using sustainably-grown timber could significantly reduce a building’s carbon footprint.

Cross-laminated timber uses layers of timber glued together at 90-degree angles. It’s of similar strength to concrete and steel, and is not flammable like regular timber. Experts believe that a wooden skyscraper is a very real possibility in the near future.

Conrad Peberdy, Interim Managing Director, from Ethical Property, said: “Our commitment to environmental sustainability is a core part of our DNA. To be rewarded for doing so through bank funding is a major boost to our business and our long-term goals.”

“For twenty years we have proven that it is possible to work ethically as a successful company. With plans for long term growth, finding a bank who could offer us the facilities we need as well as one who understands our values was paramount.”
The Green House

The Green House in Bethnal Green, East London is an example of a truly sustainable building. Some of its features include:

- Low wastage during construction process
- Low carbon emissions e.g. from reduced use of construction vehicles, cement mixer lorries
- Sustainable building materials
- Cross-ventilation ensuring fresh air distribution
- Solar panels
- 50% of electricity self-generated
- Remaining electricity and all gas on a 100% renewable tariff
- Target of achieving BREEAM* rating of Excellent (or Outstanding)

- PIR LED lighting system (movement-activated)
- Sustainable lime render to exterior
- Building management system to monitor energy usage
- Green roof with grass and wild flowers
- Waste management plan during and post-completion
- Water preservation/conservation systems
- Natural light harnessing

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THE LIFE CYCLE OF A SUSTAINABLE BUILDING

1. Design and construction
   - **Site**: Choose a sustainable site or remediate land and include new green space where possible
   - **Architects**: Experts who maximise sustainability options
   - **Standards**: Aim for Excellent or outstanding BREEAM rating or LEED equivalent
   - **Materials**: Pick sustainable materials and avoid waste
   - **Emissions**: Minimise carbon emissions during construction
   - **Wellness**: Ensure design supports a healthier, happier, more productive workplace
   - **Future-proof**: Ensure built in flexibility and design for end of life
   - **Collaboration**: Work with potential tenants, specialists and contractors to get best result

2. Building in use
   - **Maintain standards**: Ensure everyday use of the building continues to promote a sustainable ethic – e.g. avoiding high ‘Volatile Organic Compounds’ (VOC) materials
   - **Monitor**: Optimise key metrics such as power and water use and adjust and adapt to maximise efficiency. Evaluate and support staff wellbeing
   - **Inspire**: Encourage staff to make use of health-promoting facilities and to ‘reduce, reuse and recycle’ where possible

3. Building change of use
   - **Build in adaptability**: Plan flexible spaces that allow for changing needs – enabling refits to increase building’s lifespan and permitting easy change of use if necessary

4. Building end of life
   - **Demolition**: Plan maximisation of waste recovery, reclamation and recycling into original design
   - **Waste**: Effectively manage carbon footprint of demolished materials and disposal
   - **Expertise**: Collaborate with specialists to maximise sustainability

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KEY FEATURES OF A SUSTAINABLE BUILDING

Maximise natural light to cut costs, consider movement-activated lighting and LED lights to reduce energy use

Consider acoustics for staff wellbeing

Use low VOC materials to improve indoor air quality

Monitor, measure and optimise key metrics and adapt strategy as needed

Maximise water efficiency and grey water recycling

Choose efficient heating

Encourage reuse/recycling by building occupants

Roof space
- Create green habitat
- Generate green power with solar panels
- Harvest and recycle water

Improve internal air quality with living walls

Use smart airflows with natural ventilation systems for fresh air distribution

Offer cycle racks and showers

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The view from Lloyds Bank

At Lloyds Bank, we believe a sustainable investment and development strategy will deliver tangible benefits to local communities and wider society. It’s all part of our commitment to Helping Britain Prosper.

We work hard to understand the impact of sustainability issues and aim to be at the forefront of innovation by supporting our clients to develop opportunities, grow resilience and reduce exposure to material risks.

We are committed to the continual improvement and protection of the real estate environment, including best-practice prevention of pollution, sustainable resource use, and climate change mitigation and adaptation. And we work alongside our clients to offer occupiers resource-efficient real estate that is fit for purpose and sustainable.

As a lender, we want to support our clients by helping to reduce running costs for our occupiers, increase employee productivity and wellbeing, and contribute to the prosperity of a location through building design and management.

Madeleine McDougall,  
Managing Director, Head of Real Estate and Housing
How we can help you

Real Estate and Housing clients can access discounted Green Loans to improve the energy efficiency of their estates.

We can help support our clients’ sustainability plans, whether those are for the design of new buildings, the refurbishment or reconfiguration of existing buildings, or to invest in or pursue other efficiency initiatives to drive sustainability performance.

We welcome early discussions to see how we can help. This may be by providing funding at discounted margins using our green lending initiative or sharing best practice through our real estate communities. Other incentives, such as reimbursing technical design or energy audit costs leading to impactful energy efficiency investment, may be available.

Want to know more?

If you would like more information on green funding, or to discuss sustainability strategy, please contact your Relationship Manager or:

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All lending is subject to status
Sources

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15. The Well Community Standard, International Well Building Institute
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