

Green buildings pay

Investors and developers are using sustainability to drive value



PriceWaterhouseCooper's BREEM Outstanding refurbishment of its corporate HQ, **One Embankment Place**, London



Østensjøveien 27, Oslo, a BREEM NOR Excellent multi-tenanted, six-storey 17,000m² development by NCC



Wereldhave's **Carré Vert**, an 18,609m² BREEM Outstanding office occupied by EDF in Levallois-Perret, Paris



BREEM certified retail and residential development at **Ankarparken** in the Western Harbour, Malmö

Sustainability values 'part of everyday business'

Scandinavian construction leader NCC uses BREEAM to help develop buildings with superior environmental performance, lower operating costs, reduced risk and greater appeal for investors and tenants.



Torsplan, Stockholm:
One of dozens of NCC developments that have been BREEAM certified in Sweden, Norway, Finland and Denmark

According to Peter Wågström, the president and CEO of the multinational NCC Group, "Sustainability issues must be part of everyday business. Companies that fail to recognise this will not survive in the long term."

NCC is one of the leading construction and property development companies in the Nordic region, with a turnover of more than €6 bn (2013) and 18,000 employees. Scandinavia is well known for its high sustainability ambitions and this issue is high on NCC's agenda. "Our strategy is to lead the way in sustainable development and construction," says Carola Lavén, business area manager for NCC Property Development.

BREEAM raises property values

A vital element of this strategy is the use of recognised third-party certification schemes to measure and demonstrate the sustainability of NCC's building assets. For example, NCC Property Development is the largest developer of certificated BREEAM assessed buildings in Scandinavia. Since 2009, NCC has aimed to have all of its commercial property developments BREEAM assessed to at least a Very Good level.

In recent years, environmental certification of buildings has become increasingly popular in Northern Europe and NCC has played a leading role in driving advances in this area. The Group believes that third-party assessment and certification of building sustainability leads to a superior environmental performance, lower operating costs, reduced risk and greater appeal for investors, tenants and residents.

"Third party certification with BREEAM creates incentives for all parties involved in a building

project to strive in the same direction and focus on sustainability issues," says Carola Lavén. "We are convinced that our high ambitions in this respect pay off in terms of better returns on our investments. This is particularly true at a time of financial insecurity, which has increased the investor demand for high quality properties with low risks. Certificated buildings are definitely higher valued and create safer long-term investments." There are several examples from the NCC portfolio that demonstrate the attraction to investors



Koggen 2, Västra Hamnen in Malmö: The first BREEAM Excellent building in Scandinavia



Triangeln: The largest shopping centre in downtown Malmö

of buildings that have certificated sustainability credentials. Among these is Koggen 2 in Västra Hamnen in Malmö, the first BREEAM Excellent building in Scandinavia. Koggen 2 was bought by Vasakronan, the largest property owner in Sweden. Vasakronan only invests in certificated buildings. The company takes the view that it can be more flexible when negotiating investments in these buildings because the risks are lower. Experience has shown Vasakronan that environmentally certificated buildings are easier to let, and that the tenants in these buildings are more loyal, resulting in lower vacancies. Another example is Torsplan, an office and retail development in Stockholm's Hagastaden district. The first phase of Torsplan 1 was a BREEAM Excellent office development completed in 2013. It has been sold to KLP, a Norwegian investor and pension fund that invests in high quality properties and for whom the BREEAM certification was a prerequisite. Scheduled for completion in late 2016, the 26,000 m² Torsplan 2 is especially significant in the company's history because NCC aims to secure a BREEAM Outstanding certificate for



Carola Lavén: Business area manager for NCC Property Development

the project, which will make it the first Swedish building to achieve what is the highest possible BREEAM rating.

NCC has also successfully employed BREEAM outside of Sweden. For instance, Øststensjøveien 27, Oslo – or Ø27 – is a multi-tenanted, six-storey 17,000 m² commercial passive house building that was completed in December 2013. The building, whose occupiers include NCC itself, was recently sold to a syndicate. It was nominated as one of four buildings in the 2014 MIPIM Green Innovation Award and was identified as one of the world's top 100 most sustainable buildings by the global environmental organisation Sustainia in 2012. NCC's vice president of environmental affairs Veronica Koutny Sochman says that going the extra mile from Excellent to Outstanding is a demanding and more costly, "you can't just pick the low hanging fruit". Despite this, the project is mainly a case of BREEAM optimisation, Koutny Sochman says: "In this project we are using the manual as a guideline trying to reach Outstanding by applying BREEAM ideas in a Swedish context, rather than by adding new solutions."

Applicable to any commercial building

Use of BREEAM is by no means limited to office buildings such as Koggen 2. The standard can be applied to virtually any building and location, with versions for new and existing buildings, refurbishments and large developments. For example, NCC is using BREEAM in its development of the new Triangeln shopping mall in the centre of Malmö. New blocks being constructed comprise a mix of offices, retail premises and housing units. All of the commercial space will be certificated in accordance with BREEAM Very Good. Triangeln is just one of the latest of dozens of BREEAM assessed NCC developments across Scandinavia. The group's objective is to have all proprietary produced buildings environmentally certificated.

Environmental certification of buildings has taken the sustainability work of the property industry to a new level. "To us, the use of BREEAM has been a powerful tool to ensure that we develop products with high sustainability performance," says Koutny Sochman. "An increasing share of our customers view BREEAM as a quality seal, and some investors are also starting to value it financially." For more information on NCC's activities go to www.ncc.se.

Making a mark with BREEAM

BREEAM is used in over 60 countries worldwide. Several European BREEAM clients have recently celebrated their award success.



Unibail-Rodamco celebrate BREEAM certification for the Toison d'Or shopping centre in Dijon. An Excellent (78%) rating for part 1, and Outstanding (90%) for Part 2 – the highest score achieved to date under BREEAM In-Use International.



Rosa Lopez of Neinver receives BREEAM certificates from Gavin Dunn of BRE. Neinver have achieved certification for retail developments in Spain, Portugal and Poland.



Van Gogh Museum, Amsterdam has been awarded a BREEAM NL certificate



Ghelamco's BREEAM Europe (new construction) certificate for Warsaw Spire

Legal engines purr under BREEAM's shining hood

Using green contracts to drive and improve sustainability

When a sustainable building is being planned the natural emphasis is usually on the physical design. The focus is on finding the solutions that ensure that the building will perform well in energy terms and that materials are sourced sustainably. Design solutions will also incorporate other objectives such as renewable energy procurement or water saving plans, both of which will determine the use of resources in the long term.

Developing a BREEAM building will inevitably challenge the initial design and construction teams to look for state-of-the-art solutions. But they are involved from the beginning and are party to the initial development, design and building contracts at the heart of which lie the building's green credentials. Ensuring their commitment to BREEAM principles is relatively straightforward and, for instance, a green construction contract is similar to an ordinary construction contract.

However, sustainable buildings need to perform to the same high standard throughout their lifetime in order to retain their BREEAM certification and maintain the value of the building.

The challenge here then is to ensure consistent, compliant behaviour from companies and individuals that may not have been there at the start.

Get it in writing

Tenants, facilities managers, property managers and lenders may all come and go during a building's life cycle. Ownership too may pass from investor to investor and tenants may need assurance that the building's sustainable status will persist, regardless.

"During a building's lifetime a multiplicity of contracts will determine its use and performance and if sustainability is not written in to all of these documents, standards can slip which puts a building's green credentials at risk," says Christiane Conrads, Cologne-based senior associate at law firm DLA Piper.



Martin Townsend of BRE with Christiane Conrads, DLA Piper, at the launch of Towards a Greener Future

"... A multiplicity of contracts will determine [a building's] use and performance and if sustainability is not written in to all of these documents, standards can slip" *Conrads*

Leases are perhaps the main green legal instruments available and are the landlord's main means of control over how a building is used. Conrads says that additional "green" clauses in leases should, for example, govern the fixtures and fittings. But lease terms should be flexible too in order to allow buildings to adapt to green technological advances.

"The industry has made a lot of progress which is not always reflected by some buildings because of the rigidity of lease agreements. Qualitative aspects of buildings should always

be reflected in leases because sustainability can be a benefit for all of a building's stakeholders," Conrads says.

Ensuring the flow of building performance data between landlord and tenant is another green requirement that may need to be enshrined in the lease. Data sharing is a two-way street. Not only do building owners need to know how their building is performing but also many tenants have strict sustainability requirements due to their corporate social responsibility (CSR) policies and this requires building performance to be measured.

Sustaining information

"By giving the tenants all the information that they need to use buildings in a sustainable way, they can act accordingly and reduce energy use and operational cost for the mutual benefit of both landlords and tenants," Conrads adds.

Green leases are usually standard lease agreements to which green provisions have been added. Conrads says that these green provisions can range from simple guidelines for action to complex requirements and prohibitions that apply to both landlord and tenant. Green finance agreements are increasingly important too. The label "green building" can attract financiers and also increase expectations regarding cash flow and rate of return. This can lead to better financing terms, such as lower interest rates or loan-to-value ratios. As green building certificates move from being a bonus to being a standard financing requirement, Conrads foresees that tailor-made provisions will be incorporated in finance documents more often and will eventually become a market standard.

"Loan agreements should, for example, include a requirement that the borrower complies with the appropriate standards in order to qualify for certificates and maintain the green building label throughout the term of the loan and that any renewal or extension of the

certificate is obtained,” Conrads points out. “In the worst case, a bank could recall a loan if the sustainability clauses were being breached, or if certification was not renewed,” she adds. Day to day, many of these issues fall within the domain of the property manager, often an external firm. A landlord’s contractual relationship with its property manager will therefore also need to reflect the green principles being applied. The document should ensure that there is a common understanding of sustainability and the landlord’s obligations, sustainability certification requirements and the need, always, to issue only green leases. Obligations such as data collection to enhance sustain-

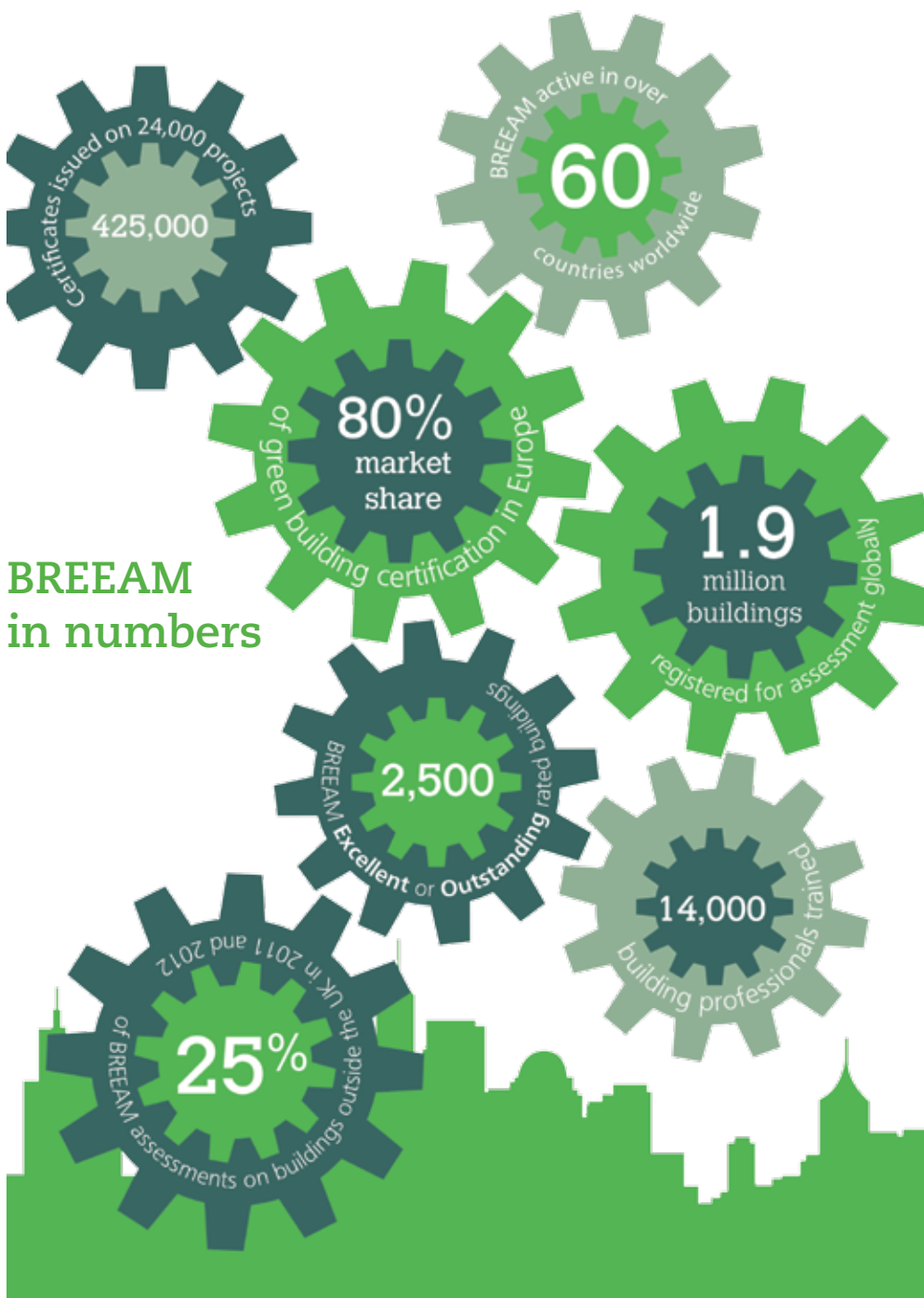
“In the worst case, a bank could recall a loan if the sustainability clauses were being breached, or if certification was not renewed” *Conrads*

ability should be understood and it often falls on the building manager to create a sustainability manual in cooperation with tenants with whom a sustainability committee may also need to be established. All this needs to be wrapped up a modern “green” property management contract.

Recommendations

The significance of the property manager in maintaining a building’s sustainability certification is under the spotlight. DLA Piper is part of a working group based in Germany that is looking in more detail at the role along with Cushman & Wakefield and the German BREEAM national scheme operator Deutsches Privates Institut für Nachhaltige Immobilienwirtschaft (DIFNI). The working group was established in 2012 and its brief is to make recommendations on sustainability and property management. In mid-2013 the working group produced a catalogue of recommended clauses and actions to help implement sustainable property management and maintain it in the long term.

The collection of building performance data is an important element according to Cushman & Wakefield partner Tina Reuter, EMEA head of property and asset management business development. “At the end of the day, it is how you make it measurable and understandable,” she says.



Future gazing

In March 2014, DLA Piper published *Towards A Greener Future* which provides an insight into investors’ preferences for sustainable building certification. The report (whose launch is pictured opposite) is based on a survey of over 100 investors across Europe. Its key findings are:

- BREEAM is the preferred certification body across Europe, with 60% of survey respondents ranking it as their number one choice.
- 71% would accept higher costs for sustainable real estate.
- 80% would prefer a single certification body.
- 88% are in favour of certification schemes that recognise green property/facility management service.

Wereldhave's four pillars of wisdom

Certification helps secure tenant commitment

Carré Vert: Upgraded to BREEAM Outstanding



Sustainability is an important part of Netherlands-based property company Wereldhave's business model.

Wereldhave, the Amsterdam-listed company, which had about €2.3bn in assets by mid-2014, adopted sustainability early on among the new developments that it was building and extended the objective to the rest of its portfolio in 2013, during which year it established its group sustainability committee. Wereldhave's first sustainability report was published in April 2014. The company's chief executive officer Dirk Anbeek says that it is common sense that companies should embrace sustainability for the sake of the environment but there are clear business benefits too, he adds. "We are working on sustainability as an integrated part of the business but it should give some payback," Anbeek says. "Sustainability, particularly energy efficiency, is natural and logical but it also helps to lower service costs to tenants."

Anbeek explains that the group's sustainability strategy has four pillars: The assets, human resources, partnerships and society. The assets are of course the bricks and mortar

"We are working on sustainability as an integrated part of the business ...natural and logical but it also helps to lower service costs to tenants" *Anbeek*

in Wereldhave's portfolio and Anbeek says the strategy established a clear target that all office buildings in the French portfolio need to achieve a BREEAM Outstanding level of certification while shopping centres need to be Very Good.

Wereldhave can afford to set the bar higher for office buildings because the French office portfolio is comparatively young, and, since the disposal of its Spanish operation in early September 2014, Paris is the only core office market for the company. "There are advantages of operating in a niche market and offering outstanding buildings to tenants," Anbeek explains. "It is a beautiful city centre in which to buy office buildings, but these are generally not very efficient in terms of space division and floor plates and the energy bills are usually extremely high. So, big firms will go further out in the search for what are more sustainable buildings."

Sustainable benefits

The business benefits of a sustainable approach to development were clearly demonstrated by Wereldhave's 22,100 m² Noda office scheme in the Issy les Moulineaux district of Paris, on the banks of the river Seine.

The development achieved a BREEAM score of

92.07% during the design phase, a score which represents an Outstanding certificate, a factor that was instrumental in achieving a letting to Coca-Cola which signed leases for 65% of the building. Anbeek is naturally proud of the achievement, but prouder still of the refurbishment of Wereldhave's Carré Vert office building in Levallois-Perret, Paris. Carré Vert was originally developed by Wereldhave in 1999, reaching BREEAM Good in April 2010 following a refurbishment. Then, in 2012, after fitting out tenant EDF's space in the building in partnership with the French electricity supplier, BREEAM awarded the scheme with an Outstanding rating after it achieved a post-construction score of 87.07%. Taking the building from nothing to BREEAM Outstanding was an achievement in itself, says

Anbeek, but the real business benefit was doing this in partnership with EDF which was keen to demonstrate its environmental credentials as France's main energy provider. "They invested a lot of money which indicates long-term commitment if they are prepared to invest in a building midway through their lease," Anbeek said.

Good business case

"There's a good business case for securing a single tenant long term but making a building more energy efficient and thus reducing service cost for tenants long term, never has a negative impact on the rent," Anbeek says. Furthermore, while the investment is substantial Anbeek reckons to achieve a 7% yield on cost. "It is not extreme but is well doable," he says.

Achieving Very Good ratings on the retail portfolio is no less an achievement. The shopping centres that Wereldhave owns are generally older, some between 30 and 40 years old. "Taking these from nothing to [BREEAM] Outstanding would be a hell of a job and quite counterproductive in terms of return on investment," Anbeek explains. But the imperative to improve them is still there and there are business benefits both in attracting retailers, who are increasingly environmentally aware, and consumers. "Among shopping centres there is a diverse picture. But while some shoppers are not interested at all and are only looking for a nice place for kids and clean toilets, others appreciate sustainability efforts and appreciate seeing good progress," Anbeek says.

Green buildings pay

New research from BRE and Sweett Group has challenged the perception that sustainable buildings are necessarily more costly to construct.

Delivering Sustainable Buildings: Savings & Payback (published August 2014) applies cost data from actual construction projects to three case study buildings – an office, a school and a community healthcare centre – to produce detailed capital and operational cost information.

The report presents the actual costs of a range of individual sustainability strategies, and the additional costs (if any) of achieving various levels of overall building sustainability. In addition it reveals the associated payback to be gained from reduced utility costs.

The study investigates the:

- capital costs of measures to improve sustainability, including readily usable no- or low-cost measures, along with those that must be built into the project early on to minimise their costs,
- capital costs of achieving overall levels of building sustainability, using the costs associated with gaining BREEAM Pass, Good, Very Good and Excellent ratings,
- life cycle costs of operating buildings, focusing on energy and water consumption. The study found that specifying sustainability measures during the design and procurement stages can bring cost

savings without adding significantly, or at all, to upfront costs.

The researchers concluded that achieving the lower BREEAM sustainability ratings can incur little or no additional cost. Targeting higher

BREEAM ratings, and so more challenging levels of sustainability, incurs some additional cost but this is typically less than 2%. The investigation of life cycle operational costs showed that any additional cost can be paid back within 2–5 years through utility savings. "This study adds to a growing body of work on the costs and value of sustainability," says Yetunde Abdul of BRE, one of the report's authors. "It provides further strong evidence that a sustainable approach need not add significantly to building costs. And, where there are additional capital costs, these can be repaid relatively quickly through the reduced costs of operating the building." "This report provides a practical resource to help developers and their project teams target and then deliver buildings that meet high standards of environmental performance" says Adam Mactavish, operations director – management consulting, for Sweett Group.



Savings and payback: research challenges the perception that sustainable buildings always cost more to build

Delivering Sustainable Buildings: Savings and Payback (Ref FB63) is available at www.brebookshop.com. Additionally, a free summary of the document is available at www.breem.com/value

Chinese Franshion's Outstanding award a Chinese first

One of China's leading developers, Franshion, has been awarded the country's first BREEAM Outstanding design certification for its £20m (€25.5m) sustainable building exhibition centre in Changsha, Hunan Province.

The Living Lattice is the flagship building of the new £6bn Meixi Lake Eco City, one of eight new exemplar eco cities in China, comprising almost 15 million m² of development. Designed by a multidisciplinary team featuring Feilden Clegg Bradley Studios, BRE and the Shanghai Research Institute of Building Science (SRIBS), the building meets the highest standards both in BREEAM and China's Three Star green building assessment.

The building, named for its multi-level matrix of floorplates, courtyards and gardens, is designed



The Living Lattice wins China's first BREEAM Outstanding design certification for developer Franshion.

to harmonise with the local climate, culture and landscape enabling it to benefit from passive daylighting and ventilation.

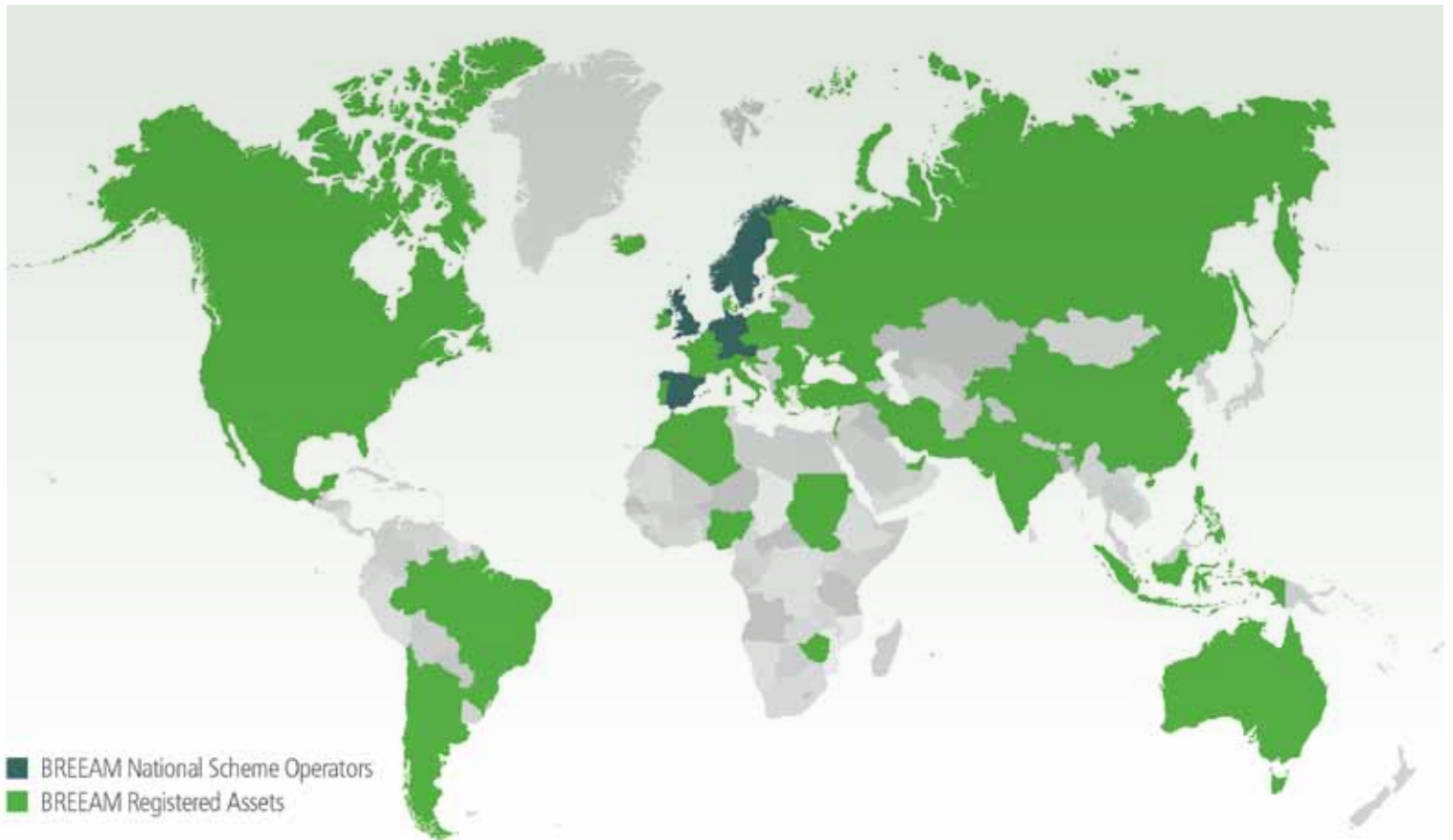
Sustainable features include:

- Solar PV and solar hot water heating
- Green wall; integrated planting on each floor
- Mixed mode ventilation and heat recovery
- Ground source borehole heating and cooling
- Chilled beams
- Displacement ventilation and radiant floor heating
- Rainwater harvesting

Materials to be used in the construction of the Living Lattice have been selected using BRE's life cycle analysis (LCA) tool, IMPACT.

BRE Group chief executive, Peter Bonfield, said:

"The Living Lattice is the first BREEAM Outstanding for China and it is the first time that life cycle analysis of building materials has contributed to BREEAM certification in the country. This is a real game changer for the Chinese construction market as LCA is currently not a recognised practice in China."



Contact the BREEAM family

If you would like any further information on BREEAM, or to discuss how the BREEAM teams can help with your projects, please phone or email us and visit our websites:

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