



FIRST Q
NETWORK

ESG Performance with Sustainability Certifications

EXECUTIVE SUMMARY

Sustainability certifications have evolved from market recognition tools into strategic instruments for implementing, measuring and communicating ESG performance across the built environment. By translating broad environmental, social and governance objectives into verifiable criteria, frameworks such as LEED, BREEAM, WELL, DGNB, NABERS and local certification schemes provide building owners, investors and occupiers with a common language for assessing performance, managing risk and demonstrating progress. Their value lies not only in certifying individual assets, but also in generating reliable asset-level evidence that supports portfolio reporting, regulatory compliance and investor confidence.

This white paper will show that certified buildings can make a substantial contribution to environmental performance by improving energy efficiency, reducing operational carbon emissions, managing water consumption, limiting waste, promoting circularity and embedding life cycle thinking into design, construction and operation. Decarbonisation emerges as a particularly important priority, requiring phased and data-driven strategies based on energy modelling, CRREM pathways, EU Taxonomy screening, sub-metering, BMS optimisation, electrification, heat pumps, photovoltaics and continuous operational monitoring. Refurbishment and adaptive reuse are also highlighted as essential strategies, as retaining existing structures and reusing materials can significantly reduce embodied carbon while preserving asset value.

At the same time, the strongest certification outcomes are those that integrate human health, well-being and user experience alongside environmental performance. Indoor air quality, daylight, thermal comfort, acoustics, accessibility, active mobility and occupant engagement are shown to be central components of ESG

value creation, particularly within the social pillar. Certifications such as WELL, LEED, BREEAM and DGNB demonstrate that high-performing buildings are not only more efficient, but also healthier, more inclusive and better aligned with the expectations of occupiers, employers and communities.

From a governance perspective, the white paper underlines the importance of third-party verification, transparent data and structured reporting. Certification processes strengthen the credibility of ESG disclosures by providing auditable evidence that can support frameworks such as CSRD, EU Taxonomy, SFDR, GRESB and CRREM. At portfolio level, this asset-level evidence becomes especially valuable, as it enables owners and investors to benchmark performance, prioritise investments, reduce regulatory and transition risks, and communicate progress with greater confidence.

The real-life case studies put together by the First Q Network members show that the most effective ESG results are achieved when sustainability is integrated from the earliest project stages and managed through operation. Whether through AI-based energy audits, decarbonisation roadmaps, certification crosswalks, circular refurbishment strategies or health-focused workplace design, the common lesson is that sustainability must be treated as a strategic decision-making framework rather than a late-stage compliance exercise. Overall, the document concludes that sustainability certifications help future-proof real estate assets by reducing environmental and financial risk, improving transparency, supporting sustainable finance, enhancing occupant value and strengthening long-term ESG performance.

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1. INTRODUCTION

1.1 Purpose of the White Paper:

This White Paper has been developed to share knowledge, promote best practices, and demonstrate the concrete value of ESG driven strategies in the built environment.

Its primary objective is to explain how sustainability certifications, performance frameworks, and ESG methodologies can be effectively applied to buildings across their entire life cycle, helping organisations meet regulatory requirements, investor expectations, and climate commitments. Providing practical insights, the document aims to support building owners, developers, investors, and public authorities in making informed decisions that improve environmental performance, social outcomes, and governance transparency.

In addition to outlining key concepts and certification systems, this White Paper places strong emphasis on real world application. It presents project case studies showing how ESG principles and sustainability certifications have been implemented in actual projects, and how these approaches have directly contributed to improved ESG reporting, measurable performance metrics, and long term asset value. By bridging theory and practice, the document seeks to demonstrate that sustainable building strategies are not only environmentally responsible, but also economically and strategically beneficial.

1.2 Overview of Participating Companies:

This initiative brings together the members of the First Q Network to share with our stakeholders the expertise we have developed over the years in ESG strategy, sustainable real estate, building performance assessment, and certification systems. The First Q

Network members are actively engaged in supporting our clients across the full spectrum of sustainability challenges, from early stage design and certification strategy to operational performance, ESG data reporting, and regulatory alignment.

Each company contributes specialist knowledge in areas such as sustainability certifications, life cycle assessment, energy and carbon performance, health and well-being, and ESG disclosure frameworks. This White Paper includes case studies of eleven member companies, that highlight projects where we have applied ESG methodologies and certification schemes in practice, demonstrating clear benefits for their clients in terms of improved performance metrics, compliance with European and international standards, and strengthened ESG reporting. Together, the contributors share a common objective: advancing credible, data driven sustainability in the built environment and accelerating the transition toward more resilient, transparent, and future proof buildings.

The participating companies are Ethos Engineering, MEPCO, Ingenium, MorgenGrün (ZWP Ingenieur-AG), Granlund Oy, LMSI, Bengt Dahlgren, Smits van Burgst, JG Ingenieros, Chapmanbdsp, Søren Jensen.



The First Q Network.

Members from 15 different European countries with a total workforce of 4,400 people.



2. UNDERSTANDING ESG

2.1 What is ESG?

Environmental, Social, and Governance (ESG) criteria represent a framework that evaluates a company's operations and performance based on its environmental impact, social responsibility, and governance practices. The significance of ESG in today's business landscape is profound, as it provides stakeholders with a holistic view of a company's ethical impact and sustainability practices. ESG criteria allow investors to assess how companies manage risks and opportunities related to environmental challenges, social justice, and corporate governance, thereby influencing investment decisions and corporate strategies (Barbosa et al., 2023; Battisti, 2023; Holderegger, 2024).

The environmental aspect of ESG focuses on how a company interacts with the natural environment, including its carbon footprint, waste management, and resource conservation efforts. The social dimension examines a company's relationships with employees, suppliers, customers, and the communities in which it operates, emphasizing labour practices, diversity, and community engagement. Governance pertains to the leadership structure, ethical conduct, and transparency of a company, including board diversity and executive compensation (Barbosa et al., 2023; Sierdovski et al., 2022; Torres et al., 2018). Collectively, these criteria serve as indicators of a company's long-term viability and ethical standing, which are increasingly important to investors and consumers alike (Shahrin, 2023).

2.2. Importance of ESG:

The importance of ESG criteria extends beyond ethical considerations; it has become a critical factor for companies, investors, and stakeholders. For companies, integrating ESG principles can lead to enhanced operational efficiencies, risk management, and brand loyalty. By adopting sustainable practices, businesses can reduce costs associated with waste and energy consumption while improving their reputation among consumers who prioritise corporate responsibility (Peiris & Evans, 2010; Battisti, 2023; Holderegger, 2024). Furthermore, companies that actively engage in ESG initiatives often experience better financial performance, as they are viewed favourably by investors who are increasingly focused on sustainability (Friede et al., 2015).

For investors, ESG criteria are essential for making informed investment decisions. Research indicates that companies with strong ESG performance tend to have lower capital costs and better stock performance over time, as they are perceived as lower risk (Deng & Xiang, 2019). Investors are increasingly recognising that ESG factors can significantly impact a company's financial health and long-term profitability, leading to a growing trend in sustainable and responsible investing (SRI) (Badía et al., 2019; Mavlutova et al., 2021). Stakeholders, including customers and employees, are also demanding greater transparency and accountability regarding corporate practices, making ESG adherence a vital component of modern business strategy (Holderegger, 2024; Torres et al., 2018).

To sum up, ESG factors are not just a trend; they are a big change in how businesses work and are judged. Using ESG principles can improve a company's image, its earnings, and the environment. Because of this, companies must put these standards at the top of their lists when running their businesses and writing their reports (Barbosa et al., 2023; Battisti, 2023; Holderegger, 2024).

3. ROLE OF SUSTAINABILITY CERTIFICATIONS IN ESG PERFORMANCE

3.1 Sustainability Certifications and ESG Link:

Building sustainability certifications play a crucial role in enhancing a company's Environmental, Social, and Governance (ESG) performance. These certifications provide a structured framework for assessing and improving a building's sustainability attributes, which directly correlate with the environmental and social dimensions of ESG criteria. By adhering to recognized sustainability standards, companies can demonstrate their commitment to reducing environmental impact, promoting social equity, and ensuring robust governance practices (Kocmanová & Šimberová, 2014; Gebhardt et al., 2022).

The process of obtaining sustainability certifications often involves rigorous assessments that evaluate a building's energy efficiency, resource management, and overall environmental footprint. This not only helps organisations identify areas for improvement but also aligns their operational practices with ESG principles. For instance, by implementing energy-efficient technologies and sustainable materials, companies can significantly reduce their carbon emissions, thereby enhancing their environmental performance under the ESG framework (Clementino & Perkins, 2020; Mammadova, 2023). Furthermore, these certifications often require transparency in reporting and stakeholder engagement, which are essential components of good governance (Ahmad et al., 2023; Tamimi & Sebastianelli, 2017).

3.2 Benefits of Sustainability Certifications:

The advantages of obtaining building sustainability certifications extend beyond mere compliance; they encompass a range of benefits that can significantly impact a company's reputation,

operational efficiency, and regulatory compliance. Firstly, achieving recognised sustainability certifications enhances a company's reputation among consumers and investors. In an era where stakeholders increasingly prioritise sustainability, certified buildings signal a commitment to responsible practices, thereby attracting environmentally conscious clients and investors (Švajlenka & Kozlovská, 2018; Jain et al., 2019).

Secondly, sustainability certifications often facilitate compliance with local and international regulations regarding environmental standards. As governments and regulatory bodies impose stricter sustainability requirements, having certifications can ensure that companies meet these obligations, thereby avoiding potential fines and legal issues (Tamimi & Sebastianelli, 2017; Jorgji, 2024). This proactive approach not only mitigates risks but also positions companies favourably in the eyes of regulators and the public.

Lastly, building sustainability certifications contribute to improved operational efficiency. By adopting sustainable practices, companies can reduce energy consumption, lower operational costs, and enhance overall productivity. For example, energy-efficient buildings typically incur lower utility costs, which can lead to significant savings over time (Mammadova, 2023; Silva et al., 2022). Additionally, the emphasis on sustainable supply chain management associated with these certifications can foster better relationships with suppliers and stakeholders, further enhancing operational effectiveness (Silva et al., 2022).

In conclusion, building sustainability certifications improve ESG performance by fostering environmental stewardship, company reputation, regulatory compliance, and operational efficiency. Certifications play a crucial role in creating responsible corporate practices as organisations prioritise sustainability (Kocmanová & Šimberová, 2014; Clementino & Perkins, 2020; Ahmad et al., 2023).

4. OVERVIEW OF SUSTAINABILITY CERTIFICATIONS

4.1 Definition and scope:

Sustainability certifications are formal recognitions awarded to organisations, products, or buildings that meet specific environmental, social, and governance (ESG) criteria. The primary purpose of these certifications is to validate and promote sustainable practices, thereby encouraging businesses to adopt environmentally friendly operations and socially responsible behaviours. These certifications serve as a benchmark for sustainability, providing assurance to stakeholders, including consumers, investors, and regulatory bodies, that the certified entity adheres to recognized standards of sustainability (Moosmann et al., 2020; Andresen, 2019).

The certifications typically encompass a wide range of criteria, which may include energy efficiency, waste management, resource conservation, and social equity. By achieving these certifications, organisations can enhance their credibility and demonstrate their commitment to sustainability, which is increasingly important in today's market where consumers and investors are more environmentally conscious (Mota-Gutierrez, 2024).

4.2 Certification process:

The process of obtaining sustainability certifications generally involves several key steps. Initially, organisations must conduct a self-assessment to identify their current sustainability practices and areas for improvement. This self-assessment is often guided by the specific criteria outlined by the certification body (Oelze et al., 2020).

Once the self-assessment is complete, organisations typically engage in a series of actions to align their practices with the

certification requirements. This may include implementing energy-efficient technologies, improving waste management systems, and enhancing social responsibility initiatives. After these changes are made, the organisation applies for certification, which is then reviewed by an independent certifying body (Rosner, 2023).

A critical component of the certification process is the evaluation of credits. Credits are specific measurable actions or achievements that contribute to the overall sustainability performance of the organisation. Each certification system has its own set of credits, which are often categorized into various categories such as energy, water, materials, and indoor environmental quality. Organisations must accumulate a certain number of credits across these categories to achieve certification (Berardi, 2011).

The certification process may also involve multiple generations or levels, allowing organisations to pursue higher standards over time. For example, some certifications may have basic, intermediate, and advanced levels, each requiring progressively more stringent criteria to be met (Haselsteiner et al., 2021). Additionally, the evaluation can take different forms, including on-site inspections, documentation reviews, and stakeholder feedback, ensuring a comprehensive assessment of the organisation's sustainability efforts (Grapentin & Ayikoru, 2019).

In summary, sustainability certifications are vital tools that help organisations demonstrate their commitment to sustainable practices. By undergoing a structured evaluation process and earning credits based on specific criteria, organisations can achieve certification, thereby enhance their reputation and contributing positively to ESG performance (Moosmann et al., 2020; Andresen, 2019).

5. KEY CONCEPTS IN SUSTAINABILITY CERTIFICATIONS

Sustainability certifications typically encompass a variety of criteria that assess the environmental, social, and governance aspects of a project or organisation. Common criteria include energy efficiency, water conservation, waste management, materials sourcing, and indoor environmental quality. These criteria are designed to evaluate how well a building or product minimises its environmental impact while promoting social responsibility and ethical governance practices (Corbo et al., 2014; Straka & Layton, 2010).

For example, energy efficiency criteria may require the use of renewable energy sources or energy-efficient appliances, while water conservation criteria may focus on reducing water usage through efficient plumbing fixtures and rainwater harvesting systems. Waste management criteria often emphasize recycling and composting practices, while materials sourcing criteria encourage the use of sustainable or recycled materials. By meeting these criteria, organisations can demonstrate their commitment to sustainability and improve their overall ESG performance (Heinonen et al., 2016; Parkinson et al., 2019).

5.1 Life Cycle Assessment (LCA):

Life Cycle Assessment (LCA) is a critical tool in evaluating the environmental impact of products and processes throughout their entire lifecycle, from raw material extraction to disposal. LCA provides a comprehensive analysis of the environmental effects associated with each stage of a product's life, allowing organisations to identify opportunities for improvement and make informed decisions (Li et al., 2018; Roh & Tae, 2016).

The importance of LCA lies in its ability to quantify various environmental impacts, such as greenhouse gas emissions, energy consumption, and resource depletion. By understanding these impacts, organisations can develop strategies to reduce their environmental footprint and enhance sustainability. For instance, LCA can reveal that a significant portion of a product's emissions occurs during its use phase, prompting companies to focus on improving energy efficiency during that stage (Nikolić et al., 2019; Backes & Traverso, 2022). Furthermore, LCA can support compliance with sustainability certifications by providing the necessary data to demonstrate adherence to environmental criteria (Bottero et al., 2021).

5.2 IAQ Monitoring:

Monitoring and awareness are essential components of sustainability certifications, particularly in assessing Indoor Environmental Quality (IEQ). Technologies such as sensors and monitoring systems play a vital role in tracking various indoor environmental parameters, including air quality, temperature, humidity, and lighting (Bosco et al., 2011; Brand et al., 2022).

These monitoring systems provide real-time data that can help organisations maintain optimal indoor conditions for occupants, thereby enhancing health, comfort, and productivity. For example, continuous monitoring of Indoor Air Quality (IAQ) can identify pollutants or allergens, allowing for timely interventions to improve air quality (Martucci et al., 2019; Biró & Csete, 2023). Additionally, the integration of sensor technology into sustainability practices fosters greater awareness among employees and stakeholders about the importance of maintaining a healthy indoor environment, which is increasingly recognized as a critical aspect of overall sustainability (Bhyan, 2024; Struhala & Ostrý, 2021).

As a result, LCA is an essential instrument for assessing environmental consequences, and sustainability certifications depend on a set of clearly stated criteria. Better ESG performance is a result of these initiatives, and monitoring technology helps make sure that companies keep their indoor environments clean (Corbo et al., 2014; Straka & Layton, 2010; Heinonen et al., 2016).

5.3 Energy Modelling:

Energy modelling is a central pillar of building sustainability certification. It provides a quantitative basis for evaluating design choices, benchmarking performance against baselines, and communicating potential savings to owners and occupiers. Through dynamic simulations, teams test energy conservation measures across key systems, envelope, lighting, HVAC, and service water heating, and quantify the resulting impacts on energy use and emissions. When paired with life-cycle cost analysis, modelling justifies capital investments and supports compliance with certification criteria by demonstrating expected performance beyond code minima.

Modelling follows a structured workflow: set a measurable goal (e.g., whole-building EUI), benchmark against a BAU reference, develop a climate-specific prototype, and refine design decisions through final design, as-built, and operation phases. The process relies on representative weather data, validated software, and transparency around inputs, assumptions, and limitations. Independent design reviews and robust metering/monitoring, core elements in frameworks like NABERS UK, ensure the model remains aligned with actual performance during construction and occupancy, underpinning certification credits and ongoing performance disclosure.

5.4 Waste Planning and Management:

Proactive waste planning and management is an essential component of ESG implementation in buildings, ensuring that both construction and operational phases minimize environmental impact while enhancing resource efficiency. A robust waste strategy begins with a clear Waste Management Plan (WMP) that prioritises prevention, reuse, and recycling, supported by procurement policies that reduce material intensity and favor circular products.

During construction, systematic tracking of waste generation (kg/m² GFA) enables teams to measure performance against ESG KPIs, identify inefficiencies, and improve sorting practices onsite. Digital waste tracking tools and certified waste haulers are necessary tools for transparency and compliance.

In the operational phase, buildings benefit from well designed storage, signage, and occupant engagement programs that promote correct segregation and reduce contamination rates. KPIs such as recycling ratios, total waste per occupant, and percentage of materials diverted from landfill provide quantifiable metrics for continuous improvement and ESG reporting. Integrating waste considerations into building design, facility management, and tenant behaviour programs not only reduces environmental footprint but also supports cost savings, regulatory compliance, and alignment with ESG benchmarks and international sustainability frameworks such as LEED, BREEAM, and EU Taxonomy.

5.5 Energy and Water Metering:

Energy and water metering is a fundamental component of sustainable building design, that is even widely considered a mandatory provision in most certification systems. Accurate, granular metering enables building owners and operators to measure real consumption and

identify anomalies. By providing reliable, auditable data, metering directly supports the Environmental pillar of ESG, enabling transparent reporting on energy use, water consumption, carbon emissions, and progress toward decarbonisation and resource efficiency goals.

Energy and water metering also strengthen the Social dimension of ESG. Clear consumption data allows occupants to be provided with healthier, more efficient buildings through improved system control and fault detection, while also supporting fair cost allocation and responsible resource use. From a Governance perspective, metering reinforces credible ESG reporting, third party verification, and compliance with frameworks such as the EU Taxonomy, CSRD, and leading sustainability certifications.

Therefore, robust metering systems are not just technical tools, but strategic enablers of performance improvement, risk reduction, and long term asset value in sustainable real estate.

5.6 Thermal Comfort Design and Control:

Thermal comfort is an important aspect of building sustainability. In most certification systems, it is mandatory to perform dynamic simulations of several critical spaces, both for winter and summer comfort. The standards EN ISO 7730:2005 and EN 16798-1:2019 are typically applied. Key indicators are PPD (Predicted Percentage of Dissatisfied) and PMV (Predicted Mean Vote), which are used to determine the comfort classes (class A - high quality, class B - average quality, class C - moderate quality). Generally, a certain percentage of exceedance of the limits is permitted, e.g., 5% for office buildings and 3% for healthcare facilities. The simulations are an important tool in the design phase. In summer, for example, there is often a tension between sufficient daylight entry and sun protection.

6. KEY SUSTAINABILITY CERTIFICATIONS

6.1 LEED:

LEED (Leadership in Energy and Environmental Design) is a globally recognised green building certification system that provides a concise framework for identifying and implementing practical and measurable strategies across design, construction, operations and maintenance. Developed by the U.S. Green Building Council (USGBC) and independently verified by Green Business Certification Inc. (GBCI), LEED is a voluntary, consensus-based tool that serves as both a guideline and assessment mechanism for creating sustainable buildings. Since its launch in 1998 with LEED for New Construction v1.0, the system has continuously evolved to address new markets, building types and advances in practice and technology, culminating in LEED v5, which was developed around three central areas of impact: decarbonisation, quality of life, and ecological conservation and restoration.

What distinguishes LEED v5 is its integration of these three impact areas throughout the rating system, with every credit and prerequisite connected to at least one of these core goals, enabling project teams to easily shape and communicate their sustainability stories. The system offers rating systems designed for specific project types, including Building Design and Construction, Interior Design and Construction, and Building Operations and Maintenance, with certification awarded at four levels - LEED Certified, Silver, Gold and Platinum - to incentivise higher achievement. LEED v5 introduces enhanced decarbonisation requirements for achieving Platinum certification, mandating specific achievements in electrification, enhanced energy efficiency, renewable energy and embodied carbon reduction. The rating system is organised into eight credit categories spanning integrative process, location and transportation, sustainable sites, water efficiency, energy and

atmosphere, materials and resources, indoor environmental quality and project priorities.

The benefits of LEED certification include lower operating costs and increased asset value, reduced waste sent to landfills, energy and water conservation, healthier and more productive environments for occupants, and significant reductions in greenhouse gas emissions. Projects often qualify for tax rebates, zoning allowances and other incentives, whilst GBCI's independent verification strengthens market confidence in sustainability investment and innovation. By participating in LEED, project teams contribute to a growing body of knowledge that advances research and brings innovations to market, whilst demonstrating measurable environmental and social performance that aligns with broader ESG objectives.

6.2 BREEAM:

BREEAM (Building Research Establishment Environmental Assessment Method) is one of the world's leading sustainability assessment and certification systems for the built environment. Originating in the United Kingdom in 1990, it was the first formal building sustainability certification and has since evolved into a comprehensive, science based framework used across the entire building life cycle, from planning and design to construction, operation, refurbishment, and in use performance. BREEAM evaluates buildings across a broad set of categories, typically including management, energy, health and well-being, transport, water, materials, waste, land use and ecology, pollution, and innovation, resulting in ratings from Pass to Outstanding.

At its core sits BREEAM UK, which is tailored to the British regulatory and climatic context. It includes schemes for new construction, refurbishment, fit out, and buildings in use, and is closely aligned with UK building regulations and planning policy. BREEAM UK has played a significant role in shaping sustainability standards in the

UK property market, particularly for offices, retail, healthcare, and education assets.

To enable global adoption, BREEAM International (BREEAMINT) was developed as a flexible framework that can be applied in countries without a national BREEAM scheme. BREEAM INT establishes a consistent methodology while allowing local adaptation through national annexes, particularly in areas such as climate data, energy benchmarks, and legislation. This makes it suitable for multinational developers and investors seeking comparable sustainability metrics across portfolios.

Several countries have developed their own National Scheme Operators (NSOs) that customize BREEAM to local conditions. BREEAM NL (Netherlands) places strong emphasis on energy performance, circularity, biodiversity, and data transparency, and is widely used by developers and institutional investors. BREEAM ES adapts the system to Spanish regulations and climate zones, integrating lifecycle assessment and alignment with European frameworks such as the EU Taxonomy. In the Nordic region, BREEAM SE (Sweden) and BREEAM NO (Norway) reflect high baseline environmental standards, cold climate performance, and strong operational energy requirements. BREEAM LUX is tailored to Luxembourg's regulatory environment and financial sector driven demand for high quality ESG reporting.

Together, these variants form a coherent yet adaptable family of certification schemes. This structure allows BREEAM to deliver consistent sustainability principles globally while remaining locally relevant, supporting regulatory compliance, ESG reporting, and long term asset value across diverse real estate markets.

6.3 DGNB:

The DGNB System (Deutsche Gesellschaft für Nachhaltiges Bauen – German Sustainable Building Council) is one of the world's leading certification systems for sustainable construction. The DGNB is a non-profit organisation that has been providing its certification system since 2009. It was developed to make sustainability practicable, measurable, and comparable, providing a holistic framework for planning, constructing, and operating buildings and districts.

The DGNB System is designed not just as a final seal of approval, but as a management and optimization tool to be used throughout the entire life cycle of a building project. It focuses on the three core pillars of sustainability: ecology, economy, and socio-cultural aspects, while also placing high value on technical and process quality.

Unlike systems that solely focus on energy efficiency or ecological footprint, the DGNB promotes a balanced and holistic approach where high quality in one area does not sacrifice another. The system evaluates a building or district across six main quality areas

- Environmental Quality: Resource consumption, emissions, and impact on the local environment.
- Economic Quality: Life cycle costs, value stability, and flexibility of use.
- Socio-Cultural and Functional Quality: User comfort (thermal, acoustic, visual), health, and accessibility.
- Technical Quality: Quality of construction and technical building equipment, and ease of maintenance.
- Process Quality: Quality of planning, construction site management, and handover.
- Location Quality: Integration into the urban environment, transport connections, and local amenities.

The DGNB System is often considered a “second-generation” sustainability certification due to its holistic approach. It assesses the entire life cycle of a building, from planning and construction to operation and deconstruction, while giving equal importance to economic and ecological performance. It also places strong emphasis on user health and comfort, offers flexibility for different building types and project phases, and recognizes high architectural and design quality.

DGNB certification provides clear benefits for all stakeholders. For owners and investors, it enhances investment security, long-term value, and access to sustainable financing. For users, it improves quality of life and reduces energy-related costs. For planners and architects, it serves as a structured quality management framework that supports integrated planning and encourages innovative, sustainable solutions.

6.4 WELL

The WELL Building Standard is a performance-based certification system that focuses exclusively on how buildings and their operational practices can enhance human health and well-being.

Launched in 2014 after six years of rigorous research and development, WELL integrates scientific and medical research on environmental health, behavioural factors, and health outcomes with leading practices in design, operations, and management. It serves as a vehicle for buildings and organisations to deliver more thoughtful spaces that support occupant wellness whilst addressing broader environmental sustainability goals.

What sets WELL apart is its evidence-based approach combining mandatory preconditions with flexible optimisations across ten

core concepts. All projects must meet universal preconditions that establish the foundation of a healthy building, then select from weighted optimisations to achieve Bronze, Silver, Gold, or Platinum certification levels.

Unlike purely design-based certifications, WELL requires performance verification through on-site testing conducted by authorised agents who measure air and water quality parameters, as well as sound and light levels, ensuring the building performs as intended according to WELL requirements. This third-party verification process, administered through collaboration with Green Business Certification Inc., provides technical robustness and market confidence in the outcomes achieved.

The benefits of WELL certification extend across environmental, social, and governance dimensions. By prioritising occupant health through measurable interventions, WELL strengthens the social pillar of ESG performance, demonstrating tangible commitment to employee well-being and productivity. The standard's recognition of projects that achieve leading green building certifications acknowledges that balancing environmental sustainability with human health allows both people and planet to thrive. For organisations, WELL certification provides competitive advantage through improved occupant satisfaction, reduced absenteeism, enhanced recruitment and retention, and demonstrated corporate responsibility. The continuous evolution of the standard ensures it remains resilient and responsive to emerging research, technology advances, and evolving public health priorities.

6.5 REGIONAL CERTIFICATIONS:

6.5.1 RTS – Finland

YL-certification (former RTS) is a Finnish building certification

scheme created by Building Information foundation focusing on energy efficiency and climate change, indoor environment quality and safety. The scheme relies on Finnish legislation and methodologies and is aimed for the local market. The certification includes different schemes for new construction, major renovation and existing buildings. Link to the scheme: <https://ymparisto.rakennustieto.fi/rakennustiedon-ymparistoluokitus>

6.5.2 HPI – Ireland

The Home Performance Index (HPI) is a voluntary Irish residential certification system developed by the Irish Green Building Council that assesses new homes and renovations using a whole life sustainability approach. Aligned with Irish climate goals, EU frameworks, and global commitments, HPI considers environmental, health, economic, and quality aspects across a building's full lifecycle, supporting green finance, informed procurement, and measurable performance standards for housing projects.

HPI uses a clear, percentage based scoring system across four categories and awards Certified, Silver, or Gold ratings, with tailored thresholds for renovations. Its comprehensive structure goes beyond minimum regulations, rewarding exemplary performance in areas such as whole life carbon, indoor environmental quality, and biodiversity, while delivering environmental benefits, healthier homes, regulatory confidence, and stronger ESG credentials for developers, investors, and public authorities.

6.5.3 GRO – Belgium

The GRO Sustainability Meter is a comprehensive assessment tool developed by the Belgian government as a voluntary framework to evaluate building construction and renovation projects on three main pillars: People (social aspects like health, comfort, and social impact), Planet (environmental criteria including energy efficiency,

materials, water management, and biodiversity), and Profit (economic factors such as life-cycle costs and long-term value). The tool uses a three-tier performance scoring system where projects are rated as 'Good' (meeting basic sustainability requirements), 'Better' (demonstrating enhanced sustainable practices), or 'Excellent' (achieving the highest standards of sustainability), enabling stakeholders to benchmark their projects, identify improvement opportunities, and communicate their environmental and social commitment transparently.

6.5.4 Miljöbyggnad – Sweden

Miljöbyggnad is the most widely used building certification system in Sweden. It is owned, managed, and developed by Sweden Green Building Council (SGBC) and can be applied to most types of buildings, from single-family homes and apartment buildings to schools and offices, for both new construction and renovation.

The system is closely aligned with Swedish regulations, which means that Swedish projects often find it more directly integrated into the design process than many international certification systems. Miljöbyggnad assesses buildings in areas such as energy use, climate impact, indoor and outdoor environment, and circularity. The assessment is based on fifteen indicators, and depending on the building's performance, it can achieve Bronze, Silver, or Gold.

Unlike broad scoring systems, Miljöbyggnad is based on verifiable indicators that are assessed individually rather than through points. This means that strong performance in one area cannot compensate for weaker performance in another, a single low indicator can affect the overall certification level. The latest version also includes alignment with the EU taxonomy.

6.5.5 NABERS UK – United Kingdom

NABERS UK is a performance based energy rating system that measures the actual operational energy consumption of commercial office buildings using verified metered data over a 12 month period. Launched in 2020, it is adapted from the Australian NABERS scheme and differs from design led certifications by focusing on real, in use performance rather than predicted energy models, providing a more transparent and reliable assessment of how buildings truly perform once occupied.

By using real consumption data, NABERS UK addresses the long standing performance gap between design intent and operational reality. Buildings are rated from one to six stars, encouraging continuous improvement and giving confidence to owners, investors, and tenants. The scheme also includes a Design for Performance pathway to better align design decisions with future operation, supporting accurate energy reporting, informed investment, and genuine progress toward operational decarbonisation.

6.5.6 Svanen: Nordic Ecolabel - Sweden, Denmark, Norway, Finland

The Nordic Swan Ecolabel has a holistic perspective and considers climate, chemicals, resource efficiency and biodiversity. The Nordic Swan Ecolabel looks at all relevant aspects throughout the product's life cycle; from raw materials, production and use, to recycling and re-use.

It is a strong tool for constructing buildings that are better choices for the environment, the climate, and the occupants. The requirements promote resource efficiency, reduced climate impact, circular economy and conservation of biodiversity. They also promote buildings with a good indoor climate and of high quality. A Nordic Swan Ecolabel building achieves very high energy efficiency, with energy use at least 10% better than the NZEB standard and

compliance with EU Taxonomy Annex 1 requirements, including climate impact calculations. It ensures a healthy indoor environment through stringent criteria on moisture control, daylight availability, and the use of low emission materials, as well as strict chemical requirements that protect both human health and the environment. In addition, Nordic Swan-certified buildings actively support the circular economy and biodiversity by requiring a material logbook, high levels of waste sorting and recycling, and the use of certified timber from responsibly managed forests, all underpinned by high standards of construction quality.

6.5.7 GPR Gebouw – The Netherlands

GPR Gebouw is a Dutch, software based tool used to measure and improve the environmental performance and circularity of buildings across their entire life cycle. Developed in 1995, it has evolved from a residential focus to cover offices, schools, retail, and healthcare, and is aligned with EU and Dutch frameworks such as EPBD and MPG. Widely used by municipalities, housing associations, and developers, it supports new construction, asset benchmarking, and renovation planning, with growing emphasis on circularity, climate adaptation, and life cycle assessment.

Operating as a SaaS platform, GPR Gebouw scores buildings from 1 to 10 across five themes, Energy, Environment, Health, User Quality, and Future Value, providing a clear visual overview of performance. For international investors, it serves as a strong ESG data source, supporting EU Taxonomy and CSRD reporting, documenting social and user focused qualities, and demonstrating good governance through a validated, third party methodology that strengthens transparency and access to green finance.

6.5.8 HQE – France

HQE is a French environmental quality certification for tertiary buildings that applies a holistic, management focused approach to

sustainability across the entire building life cycle. Delivered through Certivéa, it combines environmental performance with occupant health and comfort, aiming to reduce environmental impacts while ensuring high architectural and technical quality from design to operation and deconstruction.

Its distinctive dual framework addresses both project management (SMO) and building environmental quality (QEB), assessing performance across energy, environment, comfort, and health through progressive levels and verified audits. HQE certification supports lower lifecycle impacts, healthier spaces, reduced risks and costs, and long term asset resilience, offering a credible and adaptable sustainability framework widely recognized in French speaking European markets.

6.5.9 VERDE – Spain

VERDE Buildings 2030 is Spain's building sustainability certification system developed by Green Building Council Spain (GBCe), based on a holistic whole life cycle approach.

Applicable to both new construction and renovation projects, it jointly evaluates environmental, social, and economic performance and is fully aligned with the UN Sustainable Development Goals, the European Level(s) framework, and the EU Taxonomy, making it a key tool for decarbonizing the built environment and accessing sustainable finance.

The 2030 version reorganizes the methodology into eight assessment areas - energy, water, materials, health, inclusion, economics, construction quality, and site and context management - using measurable criteria that go beyond regulatory compliance. VERDE 2030 enables transparent demonstration of ESG performance, reduces environmental impacts, improves occupant health and comfort, and provides regulatory certainty and long term value for developers, investors, and public authorities within the Spanish and European context.

7. CONCLUSIONS

7.1 Summary of Key Points:

This document has outlined the strategic relevance of Environmental, Social, and Governance (ESG) criteria in the built environment and highlighted the essential role that sustainability certifications play in translating ESG principles into measurable and verifiable outcomes. From establishing a shared understanding of ESG and its growing importance for companies, investors, and stakeholders, to explaining how sustainability certifications function and the key concepts they embed, such as life cycle assessment, energy modelling, indoor environmental quality, metering, and waste management, the introductory sections demonstrate how certified buildings can systematically improve environmental performance, social well-being, and governance transparency. Collectively, these frameworks provide a common language and robust methodology for aligning building performance with regulatory requirements, investor expectations, and long term value creation.

7.2 Transition to Completed Projects:

In the next section each participating member of the First Q Network will showcase their expertise in the ESG and certification field by presenting a project or work regarding ESG in Real Estate Assets and the use of Sustainability Certifications as benchmarks for enhanced building and portfolio ESG performance.



Driving ESG Performance at The Freight Building with LEED & WELL Gold
ETHOS, IRELAND

8. FIRST Q NETWORK - CASE STUDIES

8.1 ETHOS ENGINEERING: The Freight Building - Driving ESG Performance with LEED & WELL Gold, Dublin, Ireland

The Freight Building by Glenveagh Properties Plc comprises 9,742 sq m of Grade A office space across ten floors in Dublin's North Docklands. Achieving LEED Gold (v4 BD+C: Core & Shell, 65/110 pts) and WELL Gold (WELL v2 Core, 62.5/77 pts), alongside an A3 BER rating and EU Taxonomy compliance, the building demonstrates how asset-level certifications directly advance portfolio-wide ESG ambitions. All three certifications, LEED, WELL and BREEAM, were led by the Ethos Sustainability Team. As a Core & Shell development, every future tenant inherits this certified performance infrastructure from day one, creating a multiplier effect for Glenveagh's ESG reporting across Scopes 1, 2, and 3.

E, Environmental: Glenveagh's Net Zero Transition Plan, published in March 2023 and validated by the Science Based Targets initiative (SBTi), targets a 90% absolute reduction in Scope 1 & 2 emissions and 55% reduction in Scope 3 emissions intensity by 2050 vs. a 2021 baseline, with 46.2% Scope 1 & 2 already achieved by 2024. The Freight Building directly contributes to these portfolio-level targets through its certified performance.

Glenveagh ESG Goal	Certification Achievement	Verified Metric	Tenant Benefit
Net Zero: 46.2% absolute Scope 1 & 2 reduction achieved (2024 vs. 2021 baseline); 90% by 2050, SBTi-validated	LEED: Optimize Energy Performance, 10/18 pts; Enhanced Commissioning (Monitoring-Based), 6/6 pts	21.1% energy cost savings vs. ASHRAE 90.1 baseline; predicted consumption: 1,258,075 kWh/year; continuous monitoring of all building systems	Tenants occupy a building with third-party verified energy performance and ongoing monitoring, reducing operational carbon and utility costs throughout the lease term
Water Efficiency: Resource reduction; DNSH Water compliance under EU Taxonomy	LEED: Indoor Water Use Reduction, 4/6 pts; Cooling Tower Water Use, 2/2 pts (No Cooling Tower path)	43.51% indoor water reduction vs. baseline	Tenants benefit from water-efficient automated fixtures and zero cooling tower water use, lowering operational utility costs
Circular Economy: Glenveagh Circular Economy Strategy published February 2024; 70% C&D waste recovery target	LEED: Construction & Demolition Waste Management, 2/2 pts (Option 1, Path 2); WELL: Waste Management Plan (X09.1), 2/2 pts	C&D diversion independently verified; waste management plan confirmed on-site	Blueprint for Glenveagh's portfolio-wide circular economy practices, replicable across the commercial pipeline

Figure: Ethos Engineering: Environmental ESG-alignment, The Freight Building

S, Social: Glenveagh's social priorities are anchored in three pillars: own workforce (health, safety & DEI), value chain workers, and consumers and end-users. The Freight Building's WELL Gold certification operationalises each of these commitments at asset level, extending Glenveagh's social standards beyond construction sites and into the in-use phase for all future occupants.

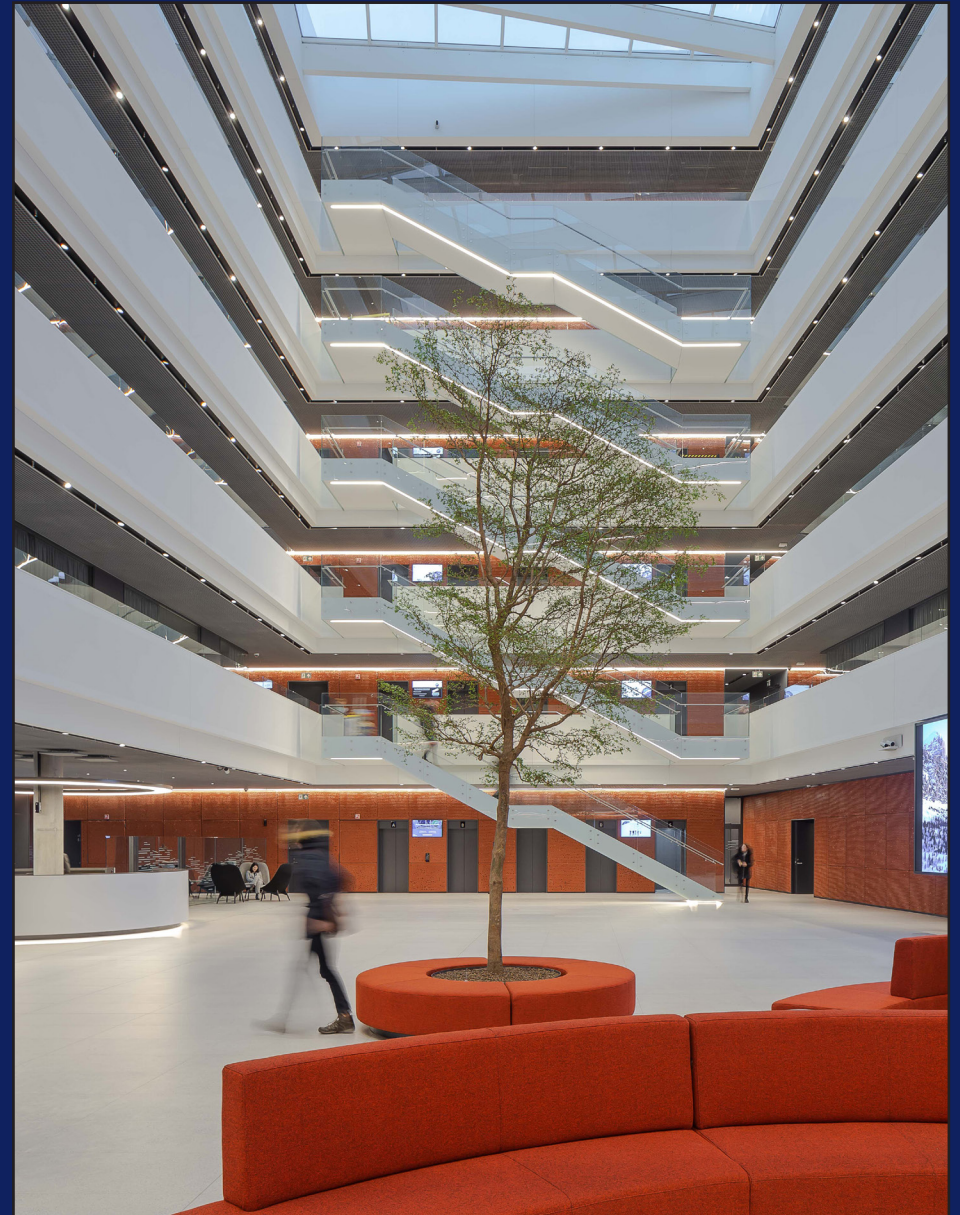
Glenveagh ESG Goal	Certification Achievement	Verified Metric	Tenant Benefit
Health & Safety: Zero fatalities; TRIR 3.45 (FY2024); safety-first culture	WELL: Air Quality (A01–A13), 12/15.5 pts; Ergonomic Workstation Design (V02), all 5 parts achieved	All PM, VOC, CO ₂ and radon thresholds on-site verified; enhanced ventilation (+2 pts); all ergonomic preconditions independently assessed	Tenants inherit certified indoor air quality and ergonomic infrastructure, extending Glenveagh's safety culture beyond construction into the in-use phase
Customer Satisfaction: 94% score (FY2024, 1,019 customers surveyed); "placing the customer first" strategic priority	WELL: Daylight (L05), 3/3 pts; Sound Mapping (S01), Required, Achieved; Max Noise Levels (S02), 1.5 pts; LEED: Quality Views, 1/1 pt	4.5 Light pts + 2.5 Acoustic pts achieved; natural light and acoustic comfort independently verified	Measurably better workspaces, natural light, quality views, and acoustic performance are proven drivers of occupant productivity and satisfaction
Diversity & Inclusion: 28% women in senior management by 2025 (currently 14%); Irish Centre for Diversity Gold 2024	WELL: DEI Assessment & Action Plan (C12.1), 3/3 pts; Universal Design (C13.1), 3/3 pts	Comprehensive DEI action plan + full Universal Design integration independently verified by IWBI	Tenants benefit from a building designed for equity, inclusion and accessibility, supporting their own DEI obligations and reinforcing Glenveagh's position as a responsible developer
Active Mobility: Reducing Scope 3 Category 7 (employee commuting) emissions	WELL: Cycling Infrastructure (V04.1), 3/3 pts; Showers & Lockers (V04.2), 2/2 pts; Access to Mass Transit (V05.2), 3/3 pts	96 secure bike spaces + 8 showers; pedestrian-friendly streets and mass transit access confirmed	Tenants' employees benefit from best-in-class active commuting infrastructure, directly addressing Scope 3 Category 7 for both Glenveagh and tenant organisations

Figure: Ethos Engineering: Social ESG-alignment, The Freight Building

G, Governance: Glenveagh's governance framework ensures sustainability is not a peripheral commitment, the ESR Committee (chaired by Camilla Hughes) oversees all material IROs quarterly, and non-financial KPIs (health & safety + customer satisfaction) account for 30% of the annual bonus for executive directors. The Freight Building's third-party certifications provide independently audited data that directly strengthens Glenveagh's governance disclosures.

Glenveagh ESG Goal	Certification Achievement	Verified Metric	Tenant Benefit
CSRD Reporting & Transparency: First CSRD report (FY2024); ESR Committee oversees all material IROs quarterly	LEED Gold (USGBC-verified) + WELL Gold (IWBI-verified), independently audited data across all E, S & G dimensions	LEED and WELL, dual third-party certification at asset level	Tenants can directly reference The Freight Building's certified data in their own CSRD and ESG disclosures, reducing the burden of asset-level data collection
Operational Excellence & Stakeholder Engagement: CEO accountable for Environmental Policy; Board reviews ESG ratings annually; non-financial KPIs (health & safety + customer satisfaction) = 30% of executive annual bonus	LEED: Tenant Design & Construction Guidelines, 1/1 pt; WELL: Occupant Survey (C04.1 + C04.2), Required, Achieved; WELL Feature Guide (C01.1), Required, Achieved	Tenant fit-out standards formalised; annual occupant survey mandated; WELL Feature Guide provided to all building users	Governance standards extend into tenancies, Tenant Guidelines protect Glenveagh's portfolio-level ratings while annual surveys ensure ongoing stakeholder engagement at asset level

Figure: Ethos Engineering: Governance ESG-alignment, The Freight Building



Eastnine S7-3 office building (6 floors, 14,536 m² lettable area).
Location: Saltoniskiu str. 7, Vilnius; completed in 2019; acquired by Eastnine in 2020.
Certification: BREEAM In-Use International Commercial V6, Part 1 – Asset Performance 89.9% (Outstanding).
MEPCO, LITHUANIA

8.2 MEPCO: Eastnine S7-3 Offices – BREEAM In-Use Outstanding, Vilnius, Lithuania

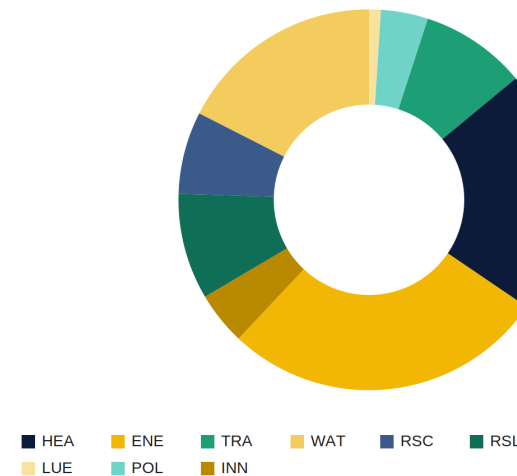
KPI and certification achievements

The Eastnine S73 building achieved Outstanding performance under the BREEAM In Use International V6 scheme, reaching an Asset Performance score of 89.9%, the highest certification level available. Across individual KPIs, the asset demonstrates consistently strong results, including 89.13% in Health and Well-being, 84.62% in Energy, 92.11% in Water, and a perfect 100% in Resilience, reflecting robust design, efficient systems, and a high quality user environment. These achievements confirm the building's advanced sustainability performance, strong environmental governance, and alignment with modern ESG expectations, positioning it as a top tier benchmark within its asset class.

Category	Achieved Credits	Available Credits	Score %	ESG Relevance
Health and Well-being	41	46	89.13%	S
Energy	55	65	84.62%	E
Transport	18	22	81.82%	E / S
Water	35	38	92.11%	E
Resources	14	16	87.50%	E / G
Resilience	18	18	100.00%	G
Land Use and Ecology	2	6	33.33%	E / G
Pollution	8	16	50.00%	E / G
Exemplary	9	10	90.00%	Mixed

Main sustainability features

- Health and Well-being: Daylight access with glare control; LED lighting with user controls; inclusive design (step-free access, Braille signage).
- Energy: 100% LED lighting; BMS-driven controls; sub-metering for all significant uses; rooftop PV covering part of electricity demand; energy-efficient lifts (ISO 25745-2 classes B and C).
- Water: Low-flow fixtures; leak detection and flow control; BMS-linked meters; rainwater used for toilet flushing (1st floor).
- Transport: Excellent public transport; cycling facilities (racks, showers, drying); 14 EV charging spaces; amenities within walking distance.
- Resources and Circularity: Construction waste sorting; on-site storage for reusable materials; resource inventory; adaptable layouts for future needs.
- Resilience and Governance: Low flood risk; robust design to reduce repairs; certified fire and intruder alarms with 24/7 monitoring.



Connection with ESG performance

Environmental (E): High scores in Water (92.11%) and Energy (84.62%) reflect reduced operational footprint via LED, PV, sub-metering, and rainwater reuse.

Social (S): Strong Health and Well-being performance (89.13%) via daylight, thermal comfort, CO₂ monitoring, amenities, and inclusive design supports occupant well-being and productivity.

Governance (G): Full Resilience score (100%) and strong Resource management (87.50%) demonstrate risk management, asset robustness, and circular practices aligned with investor ESG frameworks.

Conclusions

Eastnine S7-3 delivers Outstanding asset performance under BREEAM In-Use V6. The building combines efficient systems, user-centric design, and governance-aligned risk controls. Key priorities ahead could include biodiversity uplift and pollution reduction to balance the profile across all categories and further enhance whole-asset ESG outcomes.



8.3 INGENIUM GROUP: Patronale Real Estate Portfolio – Carbon Neutral Roadmap, Belgium

CRREM and EU Taxonomy Assessment Across Six Strategic Assets

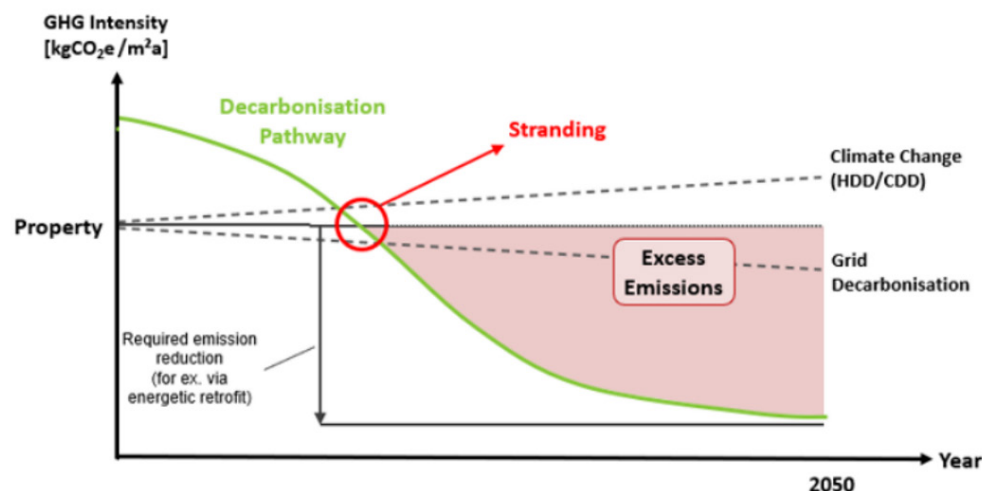
Ingenium Group conducted a comprehensive decarbonisation roadmap for Patronale Real Estate (via Banimmio), covering six strategic buildings across Belgium. The portfolio includes mixed-use properties combining offices, industrial warehouses, laboratories, and distribution centres.

CRREM Pathway Analysis

The Carbon Risk Real Estate Monitor (CRREM) framework was applied to assess stranding risk for both CO₂ emissions and final energy consumption. The study evaluated decarbonisation pathways against science-based targets aligned with the Paris Agreement's 1.5°C scenario.

EU Taxonomy Assessment

All buildings were screened against EU Taxonomy criteria for “Acquisition and ownership of buildings,” focusing on climate change mitigation. In the assessment, the Primary Energy Demand (PED) in the three scenarios was compared with the threshold values for the top 15% and top 30% of the national building stock, distinguishing between offices (144/182 kWh/m²) and logistics buildings (59/91 kWh/m²).



Three Decarbonisation Scenarios

Scenario 1 -

Light: Quick-win measures including PV installations (up to 938 kWp), LED relighting, presence sensors, efficient ventilation, and building management systems.

Scenario 2

Market Position: Enhanced interventions adding heat pumps, thermal insulation, window replacement, and heat recovery systems.

Scenario 3

CO₂ Neutral: Full fossil fuel phase-out through air-source/ground-source heat pumps, comprehensive building envelope upgrades, complete PV coverage, and advanced ventilation systems (CO₂-controlled).

Connection with ESG Performance

Environmental (E)

The CRREM alignment demonstrates quantifiable climate action, reducing portfolio-wide stranding risk and enabling robust ESG reporting for frameworks including GRESB, CDP, and TCFD. The phased decarbonisation pathway supports Patronale Real Estate's commitment to science-based targets, guiding the reduction in operational carbon emissions across the portfolio. EU Taxonomy compliance positions assets as "green investments" under the Sustainable Finance Disclosure Regulation (SFDR), enhancing access to sustainable finance instruments and attracting ESG-focused investors.

Social (S)

Energy efficiency improvements directly enhance occupant comfort through improved thermal stability, air quality (advanced ventilation systems), and lighting quality (LED with daylight control). Heat pump installations eliminate gas combustion, reducing local air pollution. Enhanced building performance supports tenant health and productivity while reducing energy poverty risk through lower operating costs, critical social outcomes aligned with SDG 3 (Good Health) and SDG 7 (Affordable Clean Energy).

Governance (G)

The structured three-scenario approach provides transparent decision-making frameworks integrating climate risk into capital allocation. Data-driven CRREM and EU Taxonomy assessments demonstrate governance excellence through: (1) systematic climate risk identification and mitigation planning; (2) stakeholder transparency via standardized ESG metrics; (3) regulatory compliance readiness for Energy Performance of Buildings Directive (EPBD) and Corporate Sustainability Reporting Directive (CSRD); (4) integration of sustainability into core business strategy and asset management protocols.

Conclusion

The comprehensive CRREM and EU Taxonomy assessment across six Patronale Real Estate buildings demonstrates that strategic decarbonisation is both technically feasible and economically viable when approached through a phased, scenario-based methodology. The study provides insight into:

- how the portfolio compares to the science-based targets of 2030 and 2050
- the quick wins to be future proof for the near term (10 years) in a pragmatic and cost-efficient manner
- the investments that need to be planned for the longer term (and whether a thorough renovation or new construction is preferable)
- a solid estimate of the return on investment of the planned expenditures.



The DEVK headquarters after energy-efficient refurbishment. © Lengfeld & Wilisch Architekten PartG mbB
ZWP INGENIEUR AG, GERMANY

8.4 ZWP INGENIEUR-AG (MorgenGrün): DEVK Head Office – DGNB Certification, Cologne, Germany

DEVK is a German insurance company with approximately 4.2 million clients. Its headquarters in Cologne is undergoing comprehensive refurbishment. The building, located in direct proximity to the Rhine River, consists of more than 76,000 m² of gross floor area (GFA) and was originally constructed in 1979. ZWP Ingenieur-AG has been commissioned to provide comprehensive planning and consulting services, including the renovation of technical building equipment and support for the certification process according to the DGNB system.

Main sustainability features

The proximity to the Rhine enables the use of abundant groundwater resources as an energy source for water-to-water heat pumps. This also allows for passive cooling via groundwater, which significantly reduces the original energy demand for cooling.

By consciously preserving and reusing functional MEP components (especially chillers, elevators, escalators, and lighting), valuable embodied energy is saved, and the ecological footprint of the renovation is significantly reduced.

To meet DGNB minimum requirements, the DEVK refurbishment must achieve a net-zero target by 2045. The renovation will already result in energy savings of 67% per year in the building's operations. To achieve the Net Zero goal, ZWP has developed a climate protection roadmap with further measures.

To maximize points for DGNB criterion SOC1.3, an acoustic concept based on DIN 18041 was developed early on for all meetings,

seminar, and communal rooms. Implementation of noise-absorbing ceiling sails, textile flooring, and active partition walls will optimize reverberation times and reduce background noise, significantly enhancing user comfort.

Current project status

Currently the project is under construction and MorgenGrün is monitoring the DGNB certification. The following figure shows the current interim status with regard to the fulfillment of the DGNB requirements for each criterion. The project aims for “DGNB Gold” certification, requiring a total performance index of minimum 65%. At this stage, the project has achieved an overall performance index of 68%.

DGNB Project achievements

ENV: 54%	•total performance of environmental quality
ECO: 67%	•total performance of economical quality
SOC: 68%	•total performance of socio-cultural and functional quality
TEC: 74%	•total performance of technical quality
PRO: 85%	•total performance of process quality
SITE: 68%	•total performance of site quality

Connection with ESG performance

In Germany the DGNB system is the leading tool for the comprehensive implementation and verification of ESG compliance in the construction and real estate sector. It translates abstract ESG goals into measurable, building-related criteria: The environmental requirements are largely harmonized with the technical screening criteria of the EU Taxonomy for climate change mitigation and adaptation. Parallel to this, the DGNB criteria regarding sociocultural quality address the social ESG aspects by focusing on health, comfort, and user well-being. Through structured process quality and independent auditing, the system also provides the necessary database for governance requirements and professional ESG reporting.

Furthermore, the DGNB offers a specific ESG Verification for the EU Taxonomy, which serves as a dedicated instrument for financial market participants to verify the compliance of buildings with specific taxonomy requirements, ensuring a streamlined process for reporting according to the SFDR.

Conclusions

A DGNB-certified building makes a significant contribution to achieving ESG goals by making sustainability measurable and transparent.

Regarding Environmental (E), it actively reduces CO₂ emissions and promotes the circular economy through high energy efficiency and optimized life cycle assessments. In terms of Social (S), it increases value for people and society through high user comfort, health-promoting materials, and accessibility. Concerning Governance (G), the structured process management ensures transparent documentation that serves as a reliable basis for professional ESG reporting and financing. Overall, a DGNB certificate reduces investment risks and demonstrates the future proofing of the property.



Antilooppi's Real Estate Portfolio - Using AI energy tool to reach ESG and certification goals
GRANLUND OY, FINLAND

8.5 GRANLUND OY: Antilooppi Real Estate Portfolio – AI-Driven ESG and Certification Strategy, Helsinki, Finland

The background and goals

Antilooppi is a Finnish real estate investment company that develops its properties with a long-term and responsible approach. Most of its extensive portfolio, which is concentrated in the Helsinki metropolitan area, consists of office buildings.

In line with the Net Zero Carbon Buildings Commitment, Antilooppi aims to achieve carbon-neutral energy use by 2030. Regarding environmental certifications, the company aimed to certify its entire portfolio by 2023, using either BREEAM or LEED depending on the property.

While environmental certifications evaluate sustainability at the individual building level, Antilooppi's own ESG objectives are portfolio wide. In addition to certifications, the company has other major ESG goals. To achieve the best outcomes, these objectives and the measures supporting them must be assessed in a holistic way.

The Project

Granlund conducted an AI energy and taxonomy audit for Antilooppi in 2022. The goals of the project were to:

- Identify, at the portfolio level, the optimal measures to improve building energy efficiency in a way that best supports Antilooppi's full ESG target set including certifications, reduced climate impact, and EU taxonomy alignment.
- Create a roadmap for systematic property development and prioritization of ESG actions.
- Based on the analysis, a carbon neutrality roadmap was developed for Antilooppi. In the same year, Granlund also supported Antilooppi in achieving BREEAM In-Use certifications for eight properties.

Execution

The project was implemented using Granlund's AI-based Energy Audit tool. The tool uses multi-objective optimization to automatically identify the most effective portfolio-level energy improvements.

Granlund's AI Energy Audit quickly determines the energy efficiency potential across an entire property portfolio and identifies optimal measures to achieve ESG goals such as lowering lifecycle costs, improving EU taxonomy performance, or reaching carbon neutrality. The tool also supports the energy-efficiency and low-carbon goals required for environmental certifications.

Only the EPCs (Energy Performance Certificates) were needed as input. The AI algorithm then explored thousands of alternatives and automatically identified cost-optimal improvement measures for each building. The final results and proposals were checked by an expert.

Summary of Antilooppi's ESG Targets and Their Link to AI Energy Analysis

Target	Description	Optimisation Focus
Reducing lifecycle cost	Lowering energy-related lifecycle costs	Identifying the most cost-efficient measures using LCC
Increasing renewable energy share	Switching to renewables or purchasing energy certificates	Comparing renewable energy shares achieved
EU taxonomy compliance	Achieving top 15% EPC primary energy level and required resiliency measures	Identifying properties where compliance can be reached cost-efficiently
Carbon-neutral energy	Reducing carbon footprint through energy savings or renewables	Finding the most efficient measures vs. purchasing certificates
BREEAM In Use	Energy efficiency and resiliency measures supporting ENE and RSL credits	Identifying measures that also support certification scoring.

Results

The AI Energy Audit identified profitable and ESG-aligned measures to improve energy efficiency across Antilooppi's portfolio. Some less typical but highly effective opportunities were found, such as recovering waste heat from a grocery store's refrigeration system located under an office building.

Highly profitable and widely beneficial measures also included modernizing older ventilation units to models with high-efficiency heat recovery and replacing water-cooled chillers with air-to-water heat pumps.

Based on the findings, Antilooppi received prioritised actions and a multi-year roadmap to support portfolio development and systematic ESG management.

Certification coverage was also expanded during the year: four properties achieved BREEAM Excellent and four properties achieved BREEAM Very Good. These upgrades increased Antilooppi's certified portfolio share to 50%.

Conclusions

Looking at different ESG goals together helped identify the most effective measures to support Antilooppi's strategy and long-term sustainability targets, and to prepare a robust, knowledge-based roadmap for future actions. Using an AI-based multi-optimization tool enabled highly efficient analysis at portfolio scale.



The L. L. Hotel
LMSI, PORTUGAL

8.6 LMSI: L. L. Hotel – Energy Performance and CRREM-Based Decarbonisation Strategy, Lisbon, Portugal

The background and goals

The L. L. Hotel, located in Lisbon, Portugal, is a 6,709 m² hospitality building operating continuously throughout the year. This decarbonisation audit was conducted to evaluate the building's current energy performance and define a structured pathway toward carbon reduction. The building currently consumes approximately 1,811 MWh/year and emits around 161 tCO₂/year.

The project consisted of developing a Decarbonisation Audit to assess building carbon footprint, energy performance and identifying emission reduction opportunities in line with ESG guidelines. A prioritised roadmap was developed with an implementation timeline and investment guidance, ensuring long-term alignment with CRREM targets based on projections up to 2050.

Although renewable energy systems such as solar thermal collectors and aerothermal technologies are already implemented, fossil fuel dependency remains significant, particularly due to natural gas usage.

The Project

The building demonstrates good structural integrity and incorporates several efficient technologies, including LED lighting, solar thermal systems, and centralized HVAC solutions. However, energy consumption patterns reveal significant inefficiencies.

HVAC systems represent the largest share of consumption (40%), followed by miscellaneous equipment (34%), lighting (15%), and hot water (8%). The continued reliance on natural gas for heating, hot water, and kitchen and laundry operations contributes significantly to emissions.

A major operational challenge is the centralized laundry facility, which

serves multiple hotels of the group. The decision to centralize this service in the L. L. Hotel has led to increased energy demand and reduced overall efficiency. Furthermore, the Building Management System (BMS) is only partially used, limiting optimization potential.

The absence of real-time monitoring and sub-metering prevents detailed tracking of energy consumption by end-use. Additionally, incomplete technical documentation and limited system integration further constrain performance analysis.

From a technical standpoint, inefficiencies such as degraded pipe insulation, lack of integration between systems, and limited automation reduce system performance. Thermal comfort measurements indicate indoor temperatures are off the recommended values, suggesting potential overuse of cooling systems.

These challenges highlight the need for both technological upgrades and improved operational strategies.

Results

The building's total energy consumption is 1,811 MWh/year (270 kWh/m²·year), with 68% from electricity and 32% from natural gas. Total emissions are approximately 161 tCO₂/year (~24–26 kgCO₂/m²·year).

HVAC systems account for 40% of consumption, followed by miscellaneous equipment (34%), lighting (15%), and hot water (8%). A significant discrepancy was identified between actual and EPC values, with electricity consumption nearly double the estimated value in the Energy Performance Certificate.

Several measures were defined based on inefficiencies, prioritizing energy, CO₂ reduction and real feasible solutions. After that,

different scenarios which combine these measures were created, to assess impact and decarbonisation pathways.

The most impactful measure was HVAC electrification (M1), replacing old chillers and eliminating boilers for high-efficiency heat pumps. This eliminates natural gas dependency and improves system efficiency:

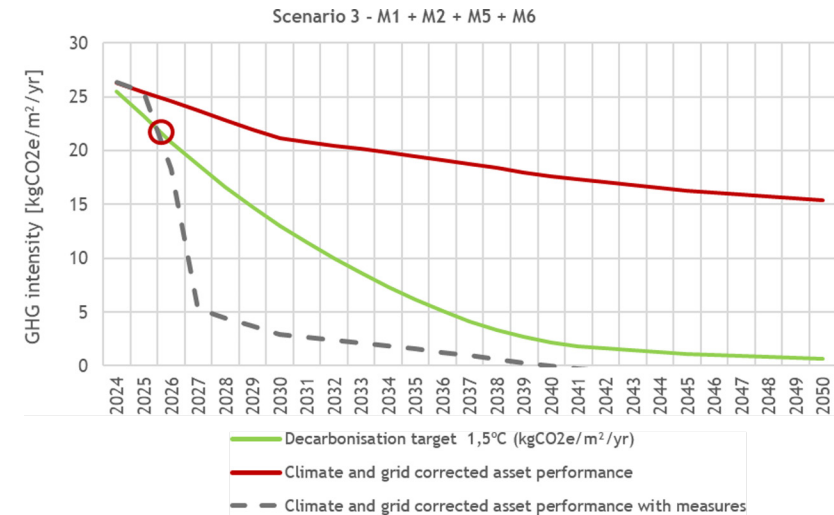
- Energy savings: ~420 MWh/year
- Emissions reduction: ~74.5 tCO₂/year
- Analysis showed that scenario 3 (M1 + M2 + M5 + M6) provides the best results: electrification of kitchen equipment (M2), optimization of laundry operations (M5), and installation of photovoltaic panels (M6).
- Energy savings: ~768 MWh/year
- Emissions reduction: ~116 tCO₂/year (~76%)
- Final carbon intensity: ~4.4 kgCO₂/m²·year

CRREM analysis indicates current stranding risk. Implementation of measures enables alignment with decarbonisation targets by ~2028. Remaining emissions are linked to electricity consumption and require renewable sourcing.

Key technical conclusions:

- Electrification is the main decarbonisation driver.
- Operational loads (e.g., laundry) significantly impact performance.
- Monitoring and BMS integration are critical for optimization.

CRREM Decarbonisation PATHWAY



Conclusions

The building has strong potential for decarbonisation through electrification and renewable integration. Scenario 3 provides the most effective pathway toward achieving decarbonisation targets before 2030.

After the presentation of the implementation roadmap for scenario 3, the client is preparing the next phase which consists of developing the HVAC project and market quotations.

This analysis mainly focused on strengthening ESG performance by linking environmental actions to measurable outcomes and transparent benchmarks. A decarbonisation audit and CRREM analysis are inherently complementary tools within a broader ESG strategy. The decarbonisation audit operationalizes ESG objectives defining measures, while CRREM provides a standardized methodology to track progress.



GoCo MHC, Mölndal
BENGT DAHLGREN, SWEDEN

8.7 BENGT DAHLGREN: GoCo MHC - LEED Platinum and WELL Gold, Mölndal, Sweden

GoCo MHC serves as the new corporate headquarters for Mölnlycke Health Care and is situated in GoCo Health Innovation City, Mölndal, Sweden. The developing district unites research, industry and skilled professionals in life science with the aim of becoming a leading MedTech innovation cluster.

The building spans about 19,000 m² and is soon to be certified **LEED® Platinum and WELL® Gold**, with a strong focus on energy performance, indoor environment, and human health.

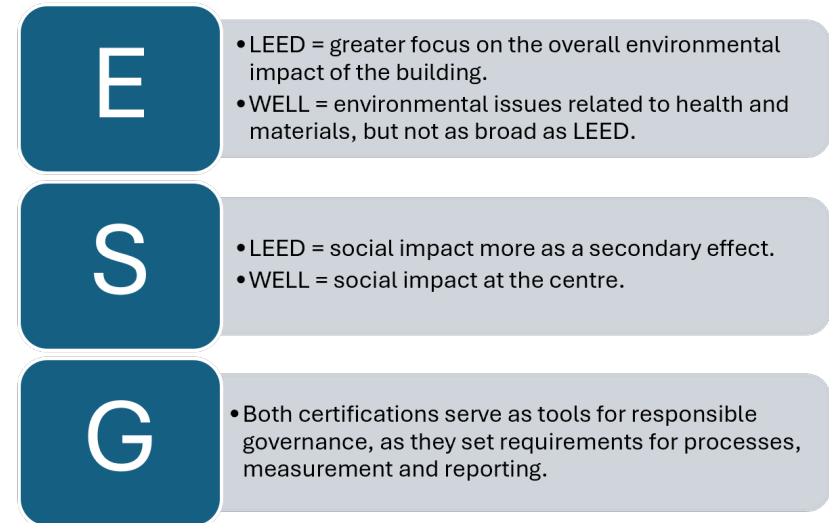
LEED®: Holistic environmental performance - energy, water, sites/transport, materials/circularity, and indoor environmental quality

WELL®: Health and well-being performance - air, water, light, thermal comfort, sound, movement/ergonomics, nourishment, materials, mind and community

Steptura, the property owner, had a goal from its owners to LEED® certify all new buildings and now also wanted to WELL® certify this building, as this certification placed human health in focus, which Steptura considered to be the next step in its sustainability work. This is well aligned with Mölnlycke Health Care's values as a company in the healthcare sector.

As Mölnlycke Health Care had already used the Leesman® Index and conducted extensive surveys, the team decided to build on that work and apply the results to the WELL® certification process.

Our interpretation of how LEED® and WELL® affect ESG



Project and architectural key words

Welcoming, Care & innovation, Scandinavian, Bright & crisp, Sustainability, Pride

The goals and strategies established during the initial phase of the project focused on health, well-being and user experience. This was directly integrated into the project design, resulting in features that promote movement, daylight, air quality and social interaction.

Throughout the project, MHC's idea has been to create a workplace for the employee that gives the experience of coming to a conference or spa facility. Even those who visit the building should get the feeling and experience that this building is not the usual traditional workplace. The idea has been in focus together with the requirements for the WELL® certification.



Workspaces are organized around two atriums:

The Heart, an open, social meeting place and The Lung, a calmer zone for focus and collaboration.

The integration of the WELL requirements has been achieved, for example, by the architect designing so that those who come to the building already see the large, wide staircase in the space called the Heart in the entrance. The name comes from the fact that this is the central meeting place for the building. The designers have also worked in such a way that there is good air quality and access to good lighting, both in the form of daylight and in the choice of lighting fixtures. They have also created spaces that encourage social interaction and community, both in the form of yoga rooms, games rooms and a large communal dining room in a hotel/lounge style. The material choices are connected to nature where there is visible wood and where the material choices are also chosen to minimize negative effects on the environment.

“Byggvarubedömningen provided us with a comprehensive source for EPD and climate data (E), emissions and chemical requirements for a good indoor environment (S), as well as traceable documentation and substitution control that strengthen governance and auditing (G).”

Byggvarubedömningen is a Swedish assessment database that reviews construction products based on chemicals, climate impact and supplier traceability to facilitate sustainable material choices.

The International WELL Building Institute, USGBC, and GBCI have issued guidance to demonstrate how LEED and WELL can complement each other. This crosswalk highlights ways in which the two systems can support mutual goals in sustainable and healthy building design.



The plan is for GoCo Health Innovation City to be certified according to Well community.



Crosswalk between ESG, BREEAM and GPR
SMITS VAN BURGST, NETHERLANDS

8.8 SMITS VAN BURGST: MICS Campus – Crosswalk between ESG, BREEAM-NL and GPR Gebouw, Schiedam, Netherlands

MICS Campus Development

There are several reasons for implementing innovative sustainable solutions for the MICS projects in Schiedam, Netherlands. The municipality has a requirement for a GPR-Gebouw building score and the developer wants to incorporate ESG aspects and certify the buildings according to BREEAM-NL (Excellent). Furthermore, grid congestion in the development area limits the available connection capacity, necessitating local energy production and efficient use.

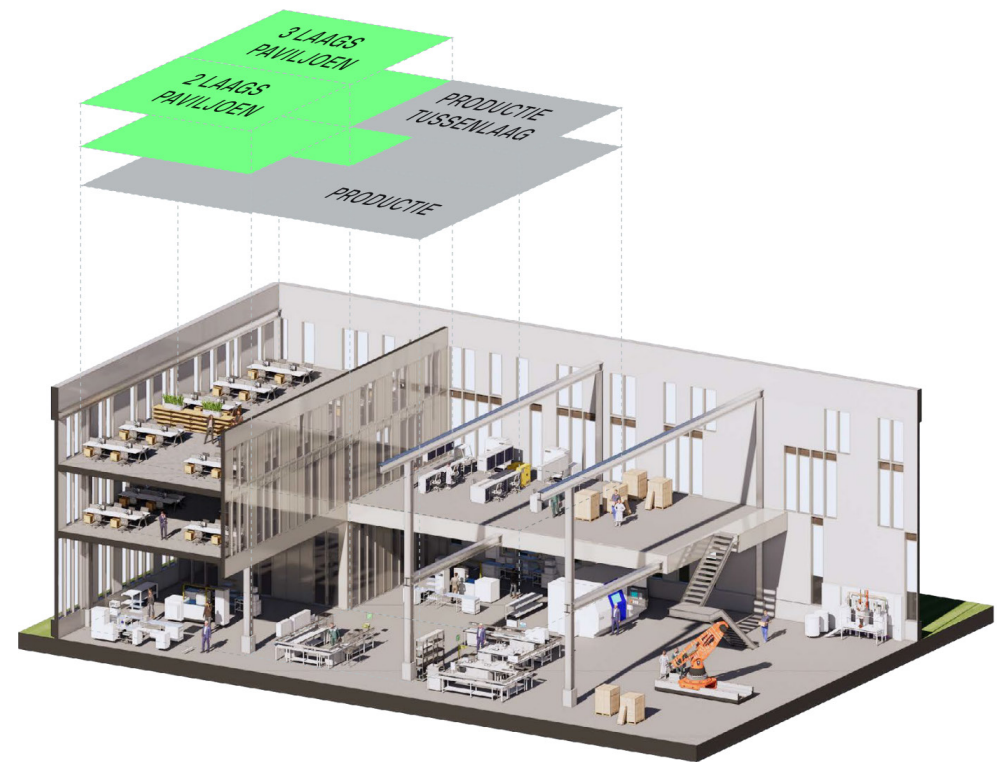
The Project

Developer SDK Vastgoed, in collaboration with the municipality of Schiedam, is transforming an existing 42-hectare industrial estate into the Mechatronics Innovation Campus Schiedam (MICS), a sustainable campus for technology companies.

MICS provides a growing ecosystem of separate projects, built around central underground heat and cold storage at the area level, to which most buildings will be connected. The roofs of all the buildings will be equipped with a large area of PV panels. A modular building concept will be applied to the leased areas to maximize the efficiency of building materials and installation components.

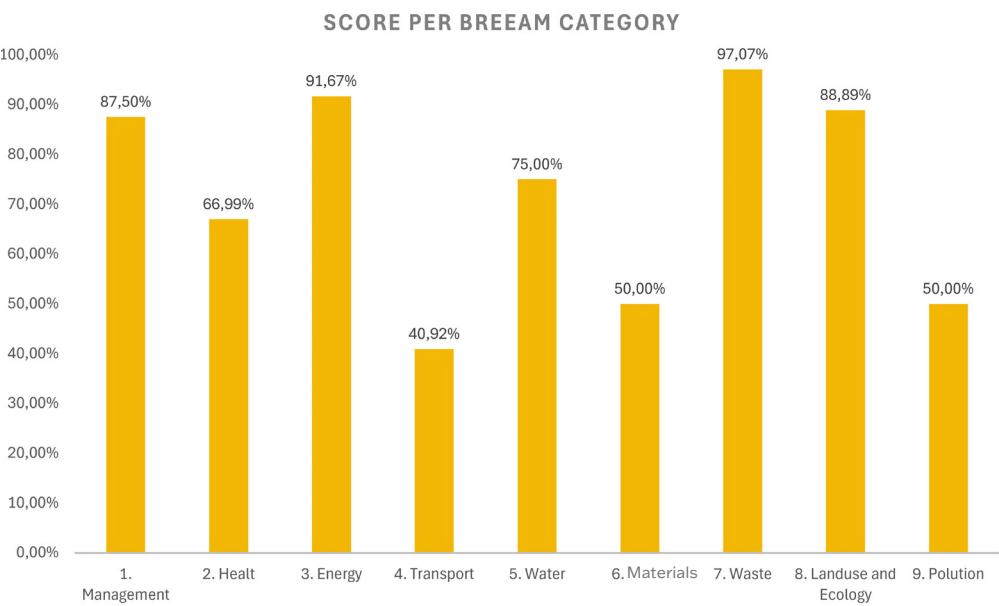
Modular building concept

In addition to the ESG guidelines, GPR-Gebouw and BREEAM-NL are applied. GPR Gebouw is a Dutch digital tool that scores building sustainability from 1 to 10 across five themes: Energy, Environment, Health, User Quality, and Future Value. BREEAM-NL New Construction is the premier Dutch certification method for assessing the holistic sustainability of new buildings across nine categories, including energy, health, and materials. Projects earn credits resulting in ratings from 'Pass' to 'Outstanding', providing internationally recognized proof of high environmental and operational performance.

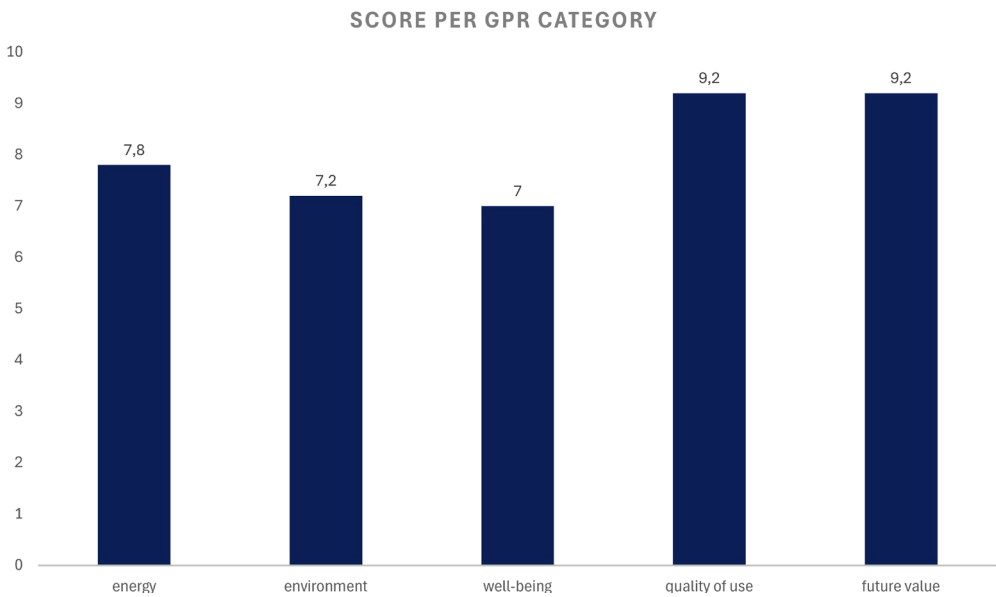


BREEAM-NL and GPR-Gebouw ambitions

Both BREEAM-NL and GPR-Gebouw often use standard calculations and determinations to demonstrate the degree of sustainability, for example, for energy and environmental performance.



BREEAM-NL New Built – Excellent (>70%)



GPR Gebouw – Average score of 8

Crosswalk ESG, BREEAM-NL and GPR Gebouw

In the Netherlands there is considerable overlap in the requirements between ESG, GPR-Gebouw, and BREEAM-NL. The strictest requirement must be determined for the final design. The requirements for the most recent versions of the various methods have been largely aligned.

ESG	BREEAM-NL	GPR-gebouw	Crosswalk
Environmental	Energy, Materials, Water, Land Use & Ecology, Pollution, Waste	Energy, Environment	CO ₂ reduction, renewable energy, circularity (LCA), and biodiversity.
Social	Health & Well-being, Transport	Well-being, Quality of use	Indoor air quality, thermal comfort, acoustics, safety, and accessibility.
Governance	Management	Future Value	Performance monitoring, quality assurance, and building flexibility.

The methods, however, still emphasize different aspects. BREEAM has clear frameworks for design specifications (ventilation rate, energy consumption, water consumption, etc.), while GPR Gebouw focuses more on future value (flexibility), the environment (materials/MPG), and local health standards. By applying both systems, best practice is ensured for each sustainability aspect.

For the MICS building, this has led to design choices that result in energy-efficient buildings that take the user and the environment into account.

Conclusions

The organisations that manage the assessment methods are actively developing ways to generate evidence for ESG in addition to their own results. In the future in the Netherlands BREEAM-NL and GPR Gebouw can also be used as tools to support the integration of ESG requirements.



Montepino Logística - LEED® and GRESB® Sinergy in Real Estate Portfolios
JG INGENIEROS, SPAIN

8.9 JG INGENIEROS: Montepino Logística - LEED and GRESB
Sinergy in Real Estate Portfolios, Parla, Spain

While LEED® evaluates the sustainability of individual buildings, GRESB (Global Real Estate Sustainability Benchmark) measures the ESG performance of whole real estate portfolios. Integrating both certifications demonstrates the technical quality of the asset and the global management of the portfolio.

The Project

The Montepino Logística Parla building consists of more than 25.000 m² of industrial warehouse leased to a single tenant for distribution and shipping activities.

The building complex corresponds to a rehabilitation of an existing structure built in 1999. The main logistics volume has a single above-ground floor with a height of 12 meters and four bays spanning 25 meters each. The adjoining office building includes two floors for administrative activities. The project also features access areas, circulation zones, outdoor common spaces, parking, and landscaped areas.

It represents both a major achievement in environmental sustainability measures and an example of collaborative and integrated work. Thanks to Montepino and the involvement of all stakeholders in just five months the team managed to fully rehabilitate a warehouse that had been abandoned since 1999, restoring a valuable asset to the town of Parla, making it fully operational while meeting stringent sustainability standards, as evidenced by achieving the LEED® Platinum certification.

LEED® Project achievements

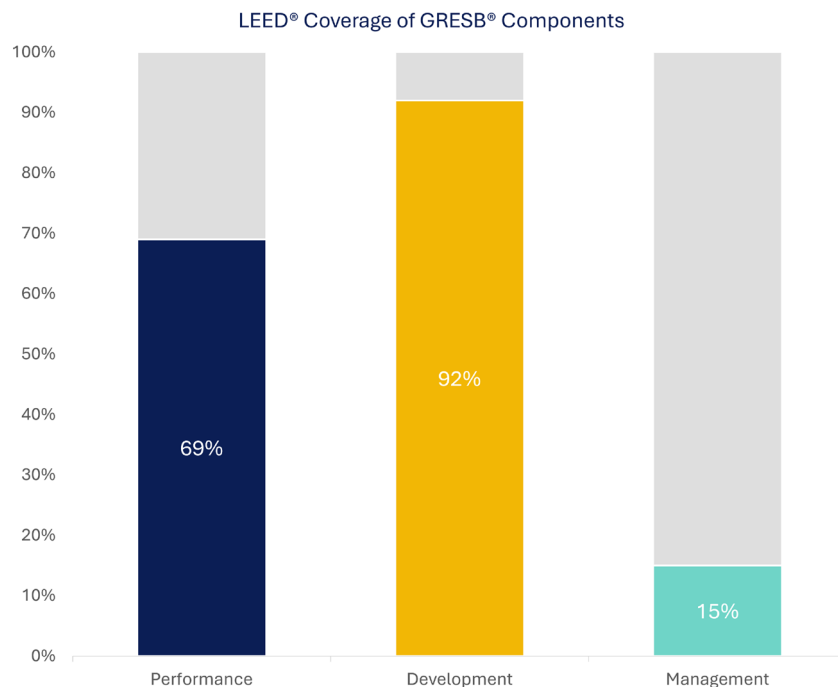
50%	•Water use reduction as compared to baseline through efficient fixtures
60%	• Energy cost reduction as compared to ASHRAE 90,1 – 2010
64%	•Savings in energy as compared to total consumption, through renewable energy production
94%	•Regularly occupied areas have access to daylight and quality views
97%	•Reuse of the existing building structure, avoiding 3.000 tCO2 emissions
100%	•Lighting fixtures are high efficiency LED
100%	•Outdoor water savings through native vegetation

Link with ESG: LEED®-GRESB® Crosswalk

The LEED® achievements of the project directly strengthen the company's ESG performance as assessed by GRESB®. Each sustainability measure implemented—such as energy efficiency, water conservation, waste reduction, and improved indoor environmental quality—provides verifiable evidence for key GRESB® indicators in the Performance and Development components.

By achieving LEED® Platinum, the asset demonstrates compliance with international green building standards, which GRESB® recognizes as part of its scoring methodology.

This alignment not only enhances the environmental credentials of the individual building but also contributes to the overall ESG rating of the portfolio, reinforcing transparency and investor confidence.



Next is a summary of the most relevant GRESB indicators covered by LEED:

GRESB Indicator	LEED Credit
RA3 – Energy Efficiency Measures	EA Optimize Energy Performance
RA4 – Water Efficiency Measures	WE Indoor/Outdoor Water Use Reduction
RA5 – Waste Management	MR Storage and Collection of Recyclables /Construction and Demolition Waste Management
DBC1.1 – Green Building Standard Requirements	LEED BD+C, ID+C, O+M Standards
MR1-MR4 – External ESG Review	LEED Zero (Energy, Carbon, Water, Waste)
PO1 – Policy on environmental Issues	SS Site Assessment /IEQ Minimum Indoor Air Quality Performance/EA Energy Performance
SE7 – Stakeholder engagement	LEED AP on team

Conclusions

Integrating LEED and GRESB strengthens ESG strategy: LEED demonstrates the technical performance of the asset, while GRESB showcases global portfolio management for investors. This synergy maximizes transparency and sustainable value.



Panorama St Paul's, London, UK
CHAPMANBDSP, UNITED KINGDOM

8.10 CHAPMANBDSP: Panorama St Paul's - BREEAM Outstanding and WELL Platinum Refurbishment, London, UK

Refurbishment of outdated office block into a sustainable office building. The refurbishment transforms an outdated office block into a sustainable office building. It retains, repurposes and recycles where possible, successfully retaining 76% of the existing structure and diverting 95% of the waste from landfill. The scheme will deliver a net zero operational carbon strategy for base building energy consumption through an all-electric building, and aims to achieve BREEAM Outstanding, WELL Platinum and WiredScore Platinum.

PROJECT DETAIL

Location	London, UK
Type	Commercial & Retail
Size / Area	71,000m² GIA
Construction Cost	£160m
Services Provided	MEP, VT and Sustainability Consultant

PROJECT TEAM

Client	Orion/Pella
Architect	KPF
Structural Engineer	AKT II
Main Contractor	Mace
Environmental Credits	BREEAM 'Outstanding'; WELL, 'Platinum'; NABERS 5 stars.

Alignment with ESG Strategy

Environmental (E)

- Carbon Reduction: Early-stage carbon optioneering reduced embodied carbon, supporting net-zero goals. Operational energy strategies align with UK Building Regulations Part L and Science-Based Targets.
- Resource Efficiency: Incorporation of circular economy principles in material selection and construction waste management.
- Climate Resilience: Passive design and façade optimization mitigate overheating risks and reduce reliance on mechanical cooling.
- The scheme is currently undergoing the NABERS Independent Design Review process and is on track to achieve the target 5 Star rating.

Social (S):

- Health & Well-being: Design prioritises occupant comfort through daylight optimization and WELL principles.
- Community Impact: The project contributes to local economic development and urban regeneration, creating high-quality spaces for collaboration and innovation.

Governance (G):

- Transparency & Compliance: The project adheres to recognized standards (BREEAM, WELL, UN SDGs) and Chapmanbdsp's Sustainability Charter, which commits to annual reporting and science-based targets.
- Stakeholder Engagement: ESG considerations were integrated from inception, ensuring alignment with client values and regulatory frameworks.



VELUX LKR Innovation House ©Adam Mørk
SØREN JENSEN, Denmark

8.11 SØREN JENSEN: VELUX LKR Innovation House - Low-Carbon Adaptive Reuse, Østbirk, Denmark

The LKR Innovation House is a 14,000 m² warehouse transformed into a modern innovation environment, bringing VELUX’s research, development and related functions together under one roof. Rather than constructing a new building, the existing structure has been adapted and upgraded to integrate daylight, fresh air and healthier indoor climate into offices, laboratories and workshops designed for collaboration. By reusing much of the original building, it demonstrates the potential of renovation and adaptive reuse as an approach to transforming existing buildings with a lower material footprint and a strong focus on indoor climate.

PROJECT DETAIL

Construction Client

Design Team

Contractor:

VELUX

Praksis Architects (building),
Det Blå (landscape), BRIQ
(interior) and Søren Jensen
Engineering.

KG Hansen

PROJECT IMPACT HIGHLIGHTS:

Transforming instead of demolishing

The LKR Innovation House demonstrates how transforming an existing building can reduce environmental impact while creating a workplace designed to deliver increased daylight and a healthy indoor climate. By choosing renovation over demolition and new construction, the project retained major structural elements preserving both material value and architectural potential.

Extensive material reuse and upcycling

Material reuse was a central design principle in the transformation. Timber façade modules, glulam frames, internal concrete walls, gypsum partitions and SF paving blocks were reused or upcycled and reintroduced on site in new roles. These materials now form interior furnishings, redesigned façades, stair-core walls and landscape elements, showing how existing resources can be rethought rather than replaced.

R&D Laboratories

The building brings together laboratories, workshops and office environments to support VELUX research and product development in one integrated setting. Experimental facilities for wood, metal, electronics and prototyping are embedded within a workplace designed to deliver strong indoor climate performance, supported by daylight and natural ventilation. This setup enables collaboration, experimentation and real-world testing in daily use.

Documented low-carbon performance

The transformed building has a documented carbon footprint of 4.6 kg CO₂e/m²/year, based on third party verification by Artelia. The result reflects extensive material reuse, structural retention and efficient design choices.

Nature-based design and indoor environment

Daylight, access to nature and indoor comfort were key drivers throughout the transformation. All workspaces have access to daylight and views of the surrounding landscape, supported by new courtyards and roof windows with varying orientation. Together, these elements contribute to a workplace designed to support comfort, concentration and long term use.



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ESG Linkage

Environmental (E)

- Demonstrates how adaptive reuse can reduce embodied carbon while extending the life of existing structures.
- The design prioritises the reuse of original materials, integrating daylight and fresh air, and carefully considering all new material choices.
- Indoor climate performance is addressed through daylight and natural ventilation as core design principles, supporting a healthy indoor climate in everyday use.

Social (S)

- Daylight, fresh air and visual connection to the surrounding landscape are prioritised to support well-being in everyday work.
- Co-location of research, testing and development functions supports collaboration, knowledge exchange and cross-disciplinary interaction.

Governance (G)

- Reflects an approach grounded in collaboration and applied research, with real-world testing embedded in the building's everyday use.
- Integration of laboratories, workshops and real-world testing environments supports continuous learning and evidence-based development.
- Guided by the VELUX People & Planet model, a shared decision framework that helps balance indoor environmental quality, carbon impact and cost based on documented performance.

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The Network that Powers First Q



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