BREEAM
Sustainability - a priority for everyone
Schréder & Sustainability

Sustainability has always been one of Schréder’s fundamental values.

As a responsible lighting manufacturer, we promote environmental protection practices throughout the entire product lifecycle, from the selection of the raw materials, through the manufacturing of the luminaire, to its use and its end-of-life treatment.

Our commitment is to develop products with the lowest environmental impact and to be transparent about it.

What is BREEAM?

BREEAM (Building Research Establishment Environmental Assessment Method) is one of the world’s leading sustainability assessment methods for buildings, communities and infrastructure projects, owned by BRE (Building Research Establishment, UK).

As a quality label, it encourages the market to focus on sustainability in building design as well as the environmental impact of products in buildings.

BREEAM evaluates the overall building concept, taking into account 9 main categories with multiplied issues. Credits are awarded and weighted for each category in order to generate the final score for the building. The levels range from pass to outstanding.

Categories, maximum points & certification levels*

<table>
<thead>
<tr>
<th>Category</th>
<th>Maximum Points</th>
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</thead>
<tbody>
<tr>
<td>MAN</td>
<td>16</td>
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<tr>
<td>HEA</td>
<td>17</td>
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<tr>
<td>ENE</td>
<td>28</td>
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<tr>
<td>TRA</td>
<td>12</td>
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<td>WAT</td>
<td>10</td>
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<tr>
<td>MAT</td>
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<tr>
<td>WST</td>
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<tr>
<td>LE</td>
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<tr>
<td>POL</td>
<td>12</td>
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<tr>
<td>INN</td>
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</table>

*The maximum amount of credits available can differ slightly depending on building type.

Reduce operating costs, improve well-being and increase property value

BREEAM (August 2020):

- Registered certificates: 2,310,170
- Certificates: 591,906

As an independent and family-owned company, we are still guided by our founder Jules Schréder’s entrepreneurial spirit and principles.

Expertise, passion, innovation and sustainability drive our company to use the power of light for the safety and well-being of all, from public spaces to higher-risk environments, such as warehouses, factories and transport yards where the consequences of a dark or dimly lit workplace can lead to injuries.
Using Schréder solutions, up to 17 credits can be achieved in the BREEAM assessment (according to BREEAM International New Construction 2016*).

The analysis and the substantiation in this brochure have been drawn up by the independent engineering firm Encon.

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>MAX CREDIT</th>
<th>INDOOR LIGHTING*</th>
<th>OUTDOOR LIGHTING*</th>
<th>CONTROL SOLUTION*</th>
</tr>
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<tbody>
<tr>
<td>MANAGEMENT (MAN)</td>
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<tr>
<td>MAN03 Responsible</td>
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<td>MAN04 Commissioning and</td>
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<td>MAN05 Aftercare</td>
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<td>HEALTH &amp; WELLBEING (HEA)</td>
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<td>HEA01 Visual comfort</td>
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<td>HEA06 Accessibility</td>
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<td>ENERGY (ENE)</td>
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<td>ENE01 Reduction of energy</td>
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<td>ENE02 Energy monitoring</td>
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<td>MATERIALS (MAT)</td>
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<td>MAT01 Life cycle impact</td>
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<td>POLLUTION (POL)</td>
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<td>POL04 Night time light</td>
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<tr>
<td>INNOVATION (INN)</td>
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*The credits can slightly differ according to national BREEAM adaptation. Additional technical information: www.schreder.com.
To recognise and encourage construction sites which are managed with environmental and social considerations, in a responsible and accountable manner

CRITERIA
Monitoring of construction site impacts – max. 2 credits
- Transport of construction material and waste

To provide post-handover aftercare to the building owner or occupants during the first year of occupation and to ensure that the building operates and adapts correctly

CRITERIA
Aftercare support – max. 1 credit
- There are operational infrastructure and resources in place to provide aftercare support to the building occupants
- Monitoring of energy and water consumption data for a minimum of 12 months

Seasonal commissioning – max. 1 credit
- The seasonal commissioning activities will be completed over a minimum 12-month period, once the building becomes substantially occupied

Schréder solution: environmental analysis
An environmental analysis is carried out for all Schréder products. All the materials, processes and transport requirements (from the suppliers to the assembly factory and from the assembly to the customer site) are carefully examined and integrated into a life cycle analysis. The documents are available on request from our local sales teams.

Schréder solution: a turnkey solution provider
We developed a comprehensive approach to provide full scope solutions, from design to after-sales services. We define a plan, incorporating the Building Information Modelling (BIM) files if needed and manage the entire project, including the installation, commissioning, testing and validation. We also provide after-sales services. Our goal is to facilitate a smooth installation with minimal disruption and give you peace of mind.

Schréder solution: Smart Label
The Schréder Smart Label enables building owners to retrieve all key lighting information. In case of luminaire failure, they can use the troubleshooting assistance and follow the instructions to find out the root cause, fix the issue and if needed, request spare parts to repair the luminaire. As part of our after-sales programme, Schréder engineers can perform yearly visits to verify your lighting performance.

Schréder solution: daylight sensor & lens design
Our daylight harvesting system enables LED fittings to work in harmony with the natural light available. As a result, lighting remains at the ideal level at all times. Our technology uses photo sensors to closely monitor the level of natural light, adjusting LED output automatically.

We design our lenses in-house to optimise the performance without compromising on visual comfort: we have solutions offering a UGR* of 16.
To recognise and encourage effective measures that promote safe and secure access to and from the building.

**CRITERIA**

- **Safe access – max. 1 credit**
  - The lighting for access roads, pedestrian routes and cycle lanes in accordance with the national best practices.

**Schréder solution: uniformity & motion detection**

Lighting plays an important role to ensure safe access to and from the building at all times. Our application engineers can propose the best combination of lumen packages and light distributions to ensure a high level of uniformity, preventing patches on the ground and therefore meeting the safety challenge. A motion detector can be added to the solution to ensure that the light increases gradually to create a safe environment when needed.

We are constantly developing new technologies to reduce the energy consumption of our luminaires. Furthermore our luminaires can be set to either dim or switch off entirely when no movement is detected after a specific period of time. These technologies ensure that energy is not wasted on lighting empty spaces, such as little-used storage areas.

**ENE 02**

**ENERGY MONITORING**

To recognise and encourage the installation of energy sub-metering that facilitates the monitoring of operational energy consumption.

**CRITERIA**

- **Sub-metering of major energy-consuming systems – max. 1 credit**
  - Where the total consumption of any single end-use category is more than 10% of the annual energy consumption for a given fuel type, it is necessary for this end-use to be sub-metered.
- **Sub-metering of floors – max. 1 credit**
  - In most circumstances, sub-metering should be per floor, or per floor plate where there are multiple service risers, cores, or floor plates.

**Schréder solution: control system - OWLET & ABS**

Thanks to our control systems, the energy consumption of the lighting system can be closely monitored. Furthermore, they can use the same communication protocol as other services to be part of an overall integrated energy management plan (with lighting control and other building services). Customised reporting enables facility managers to track and continuously monitor energy costs and savings throughout the entire facility.

Because outdoor lighting is as important as indoor lighting, we also have solutions to illuminate outdoor areas like loading bays and car parks. We have a wide portfolio of solutions that can be deployed for all of your lighting needs. Those solutions are energy-optimised and environmentally adaptive to minimise light pollution (CPLL).

**ENE 03**

**EXTERNAL LIGHTING**

To recognise and encourage the specification of energy efficient light fittings for external areas.

**CRITERIA**

- **The average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt.**
- **All external light fittings are automatically controlled to prevent constant lighting during daylight hours or in areas of intermittent pedestrian traffic.**
To ensure that external lighting is only illuminating the appropriate areas and that upward lighting is minimised, reducing unnecessary obtrusive light pollution, energy consumption and nuisance to neighbouring properties, all external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00.

**Schréder solution: Pure Night Solution**

Schréder expertise in photometry and lighting studies is key to providing the right light for the right place. Our control systems enable dimming programmes and light-on-demand scenarios. Furthermore, we have developed accessories to ensure that light is where you need it without glare, light spill or ULR.

Schréder has created a certification software which enables you to check if the configuration of a luminaire will ensure dark sky compliance.

**Schréder solution: Circle Light Label**

After a careful analysis of the potential circularity of our luminaires, we decided to introduce a “Circle Light” product label. This label acts as a circular indicator for our customers, clearly promoting products that are optimised for circular economy through 12 criteria. This label complements our product life-cycle analysis to give the full picture of our products’ sustainability.

**Schreder solution: Innovation at Schréder**

Innovation is in Schréder DNA. Over the last 113 years Schréder has been a pioneer in lighting technology. Hundreds of patents have been filed. In 2015, we launched the Shuffle, the first smart modular-based lighting system on the market that integrates state-of-the-art technologies beyond light – Connectivity (4G and WIFI), Security (CCTV-cameras and panic button), Mobility (EV charger), Community (loudspeakers for announcements and music), Environmental sensors.