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## Sustainable Flat-Roof Solutions for BREEAM UK Standards

Protan is a company that offers flat-roof solutions that reduce greenhouse gas emissions and are compliant with BREEAM standards. Protan's goal is to make our products better, stronger, and more durable while having the lowest climate impact in the flat-roof market. Our most important contribution to greenhouse gas reduction takes place on the construction sites. With an expected lifespan of 40 years and the market's lowest greenhouse gas emissions, Protan contributes to a 30% reduction in emissions compared to alternative technology. Protan has achieved BREEAM-NOR certifications for several projects, such as Kristian Augusts gate 13, Vega Scene, Kjøpmannsgata Ung Kunst (K.U.K) and Breidablikkgården.

BREEAM-UK is a documentation of sustainable buildings, and a prerequisite in BREEAM-UK projects is to perform an early-phase calculation of greenhouse gas emissions (Mat01). This calculation should include alternative assessments, where the goal is to achieve low climate impact. If a material with higher greenhouse gas emissions is chosen, this must be justified. By setting goals for greenhouse gas reduction, the project can be awarded points. With a reduction from 20% to 60%, up to 4 points can be awarded. Furthermore: Allow optimal solutions to be identified and adopted to reduce overall environmental impacts arising from construction product use.

### What are the levels of BREEAM certification?

- Pass: The building has achieved the minimum required score in each category.
- Good: The building has achieved a score of at least 55%.
- Very Good: The building has achieved a score of at least 70%.
- Excellent: The building has achieved a score of at least 85%.
- Outstanding: The building has achieved a score of at least 90%.

## Classification levels

The classification levels for BREEAM for new construction projects are described in table Int-03:

Table Int-03 Classification levels for BREEAM:

BREEAM classification	Score in %
OUTSTANDING	≥ 85
EXCELLENT	≥ 70
VERY GOOD	≥ 55
GOOD	≥ 45
PASS	≥ 30
UNCLASSIFIED	< 30

BREEAM considers a variety of factors across different categories. Protan can help you achieve points in these categories:

- **Management:** Protan contributes to sustainable management practices in concept development, project optimization and Life cycle costs. With fossil free installation it's less to report of CO<sup>2</sup> on the construction site, with low energy consumption. Thereby, Protan is contributing to the project achieving sustainability goals.

- **Energy:** Protan contributes to the design of the optimal roof design and ensures documented energy-efficient solutions in accordance with BREEAM requirements in the category Ene01 - Reduction of energy use and carbon emissions.
- **Materials:** Selection of materials with a low environmental impact throughout their life cycle, including production, transportation, installation, maintenance, and ultimately reuse or recycling. Protan's roof coverings have the longest documented lifespan on the market, documented with EPD giving a 1.5 score.
- **Waste:** Strategies to minimize waste on the construction site, promote reuse and recycling of materials, and waste management. Protan BlueProof reduces the need for excavation extraction.
- **Land Use and Ecology:** Protection and enhancement of ecological values on the site, including biodiversity and green spaces on the roofs with proven root-resistant products.
- **Pollution:** Protan BlueProof fulfills the criterium as SuDS in Pol03, and reduce the need of other alternative for attenuation or infiltrations. Combine with green roof it also improves the criterion in LE02.

By choosing Protan BlueProof, a SINTEF-approved solution that handles rainwater on the roof and reduces the need for underground drainage, you can reduce climate gas emissions by up to 90% compared to underground concrete pipes. Protan BlueProof can be used together with other functional roofs such as roof terraces, solar cells, or green roofs, and thus increase the utilization rate.

Protan works actively every day to make projects as sustainable as possible and encourages the industry, from management to decision-makers on the projects, to make good choices for our common future.