

Deerns – World’s first energy neutral factory for Innocent



PROJECT:
Industrial



COMPANY:
Deerns



LOCATION:
Rotterdam, Netherlands

Challenge

Innocent, a London-based healthy drinks company, strategically built a new factory in Rotterdam’s ‘Food Hub’ to accommodate its ongoing growth and bring production, bottling, and packaging processes in-house. Aligning with their health-conscious image, the goal was to create ‘the earth’s favorite little healthy drinks factory,’ emphasizing sustainability and energy neutrality.

Deerns was tasked with:

- > Designing the factory’s energy and HVAC installations
- > Incorporating specifications for the BREEAM-NL New Construction Outstanding certificate
- > Integrating criteria for the WELL Platinum certification, ensuring aspects such as air quality, green spaces, and daylight entry.

Solution / Approach

Sustainability efforts were guided by the requirements for BREEAM-NL New Construction ‘Outstanding’ and WELL ‘Platinum’ certification requirements, marking a shift towards global benchmarks in energy efficiency.

To foster a healthy work environment, unique features like breakout rooms were introduced in the design, differentiating from conventional factory layouts. High air quality, green spaces and daylight entry were considered in the design phase.

Collaboration with specialists in installation design and sustainable technology has been fundamental. This emphasises the importance of joint endeavors in achieving optimal energy efficiency and environmental responsibility in the production industry. Integrating a 12,000m² solar park and two wind turbines showcased a utilisation of both offsite and onsite renewables. The sustainability efforts extends to water conservation, waste reduction, and recycling.



Results

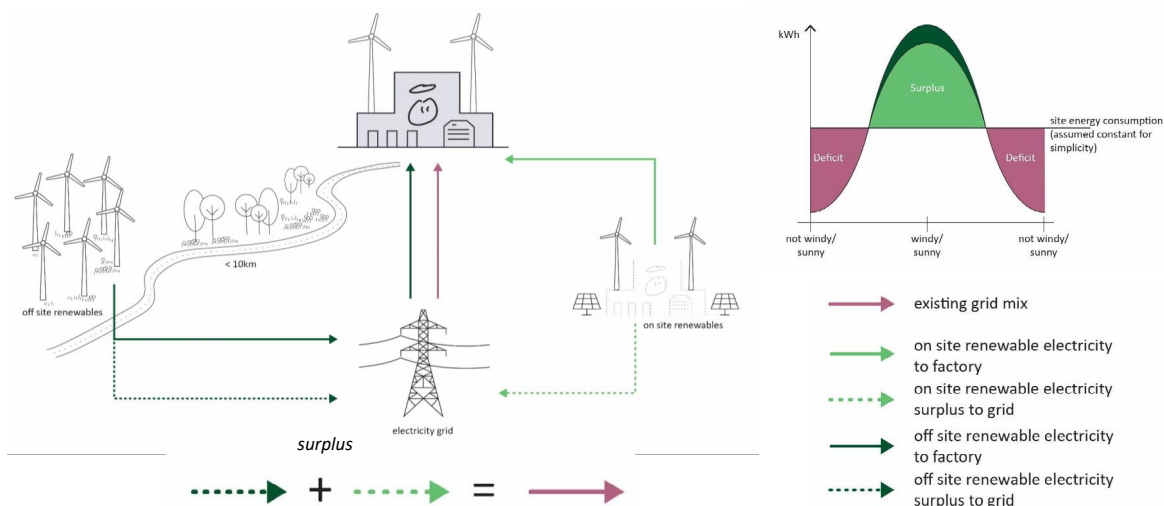
Guided by Deerns, the Innocent industrial complex became the world's first energy neutral factory. This groundbreaking effort transforms both the production process and the employee working environment. The factory earned its BREEAM-NL New Construction 'Outstanding' certificate in early 2023, showcasing leadership in sustainable construction practices.

Spanning 34,000 m², the factory produces 400 million Innocent drink bottles annually, leaving a significant mark on the market.

Outcome

Through these efforts, Innocent has reduced beverage transportation miles by at least 25%, resulting in a notable 10% decrease in CO₂ emissions. The integration of innovative heat pumps, high-efficiency LED lighting, energy-efficient mechanical and process equipment, and robust insulation values collectively ensures minimal energy consumption.

In demonstrating complete energy neutrality, Deerns conducted advanced energy simulations. The remaining energy demand will be met through the utilisation of solar panels and two wind turbines. Innocent's success not only exemplifies sustainable business practices but also highlights the tangible environmental impact achievable through dedicated efforts and adherence to rigorous certification standards.



Source: Innocent, Energieneutraal BREEAM and WELL

Deerns

We create healthy, sustainable, smart and future-proof solutions in the following markets: airports, real estate, health care, life sciences, electronics and data centres. Our high-quality services range from strategic consulting, system design and specialist engineering to sustainability advice and digital roadmaps. Our 550+ experts in mechanical and electrical design (MEP), building physics, energy efficiency digitalisation and sustainability are committed to make their work matter.