

## Case Study BREEAM

### Green Mountains – Logistics park

#### New build Schiphol-Rijk distribution centre



#### **Case Study BREEAM | Green Mountains Logistics park** New build distribution centre, Schiphol-Rijk

Title	New build distribution centre, Schiphol-Rijk
Illustration	
Website	<a href="http://www.greenmountains.nl">www.greenmountains.nl</a>
<b>Building data</b>	
Location	Walravenlaan 6-9, 1119 ME Schiphol-Rijk
GFA	ca. 25.800 m <sup>2</sup>
Function(s)	Office/industry/meeting
Elements	Loading/UIloading bays , planting
BREEAM-NL score	Expectation: <i>Very Good</i>
FM Global	Approved
<b>Project data</b>	
Client	Borghese Logistics BV
Projectmanager	Borghese Real Estate
Expert(s)	DGMR, Arnhem, Mr. E.H.J. Meijerink
Assessor	Mat25, Rotterdam, Mr. A. Vermeulen
<b>Ontwerpgegevens</b>	
Architect	MIES architecten in Ede, Mr. M. Richter
Contractor	Pleijser Bouw in Genemuiden, Mr. A. Oosterhof
Installateur(s)	E – Installations: Hoppenbrouwers, Mr. C. Bink W – installations: Van Bon, Mr. H.Bemelmans Sprinklerinstallatie: Spie, Mr. B. Rooke
Advisor(s)	Sustainability and the Environment: LBP Sight in Nieuwegein; Ecology and the Environment: ECOquickscan in Arnhem
<b>Project description</b>	

<p>Introduction</p>	<p>The Netherlands are considered the logistics hub of Europe. In the centre of this hub, Borghese Logistics are developing a modern logistics park with a total surface area of 25 hectares, called Green Mountains Logistics Park. Four buildings, with a total floor area of about 100,000 sq.m., will be built here in the long term. The second phase of this project, 25,800 sq.m., will be delivered in 2019.</p> <p>The new-build is a project of Borghese Logistics and Pleijsier Bouw. Borghese Logistics is the lessor and is responsible for the development of this new distribution centre, to be delivered in the summer of 2019.</p> <p>The new distribution centre will have a floor area of 25,800 sq.m., on a 40,000 sq.m. plot. Green Mountains is situated on the former Groenenberg site in Schiphol-Rijk. This distribution centre will fulfil all the modern requirements that such a new-build is expected to meet. The building shall have the following facilities:</p> <ul style="list-style-type: none"> <li>• Distribution centre 25,800 sq.m. GFA             <ul style="list-style-type: none"> <li>○ Industrial function approx. 25,200sq.m. GFA (incl. storage)</li> <li>○ Offices approx. 560 sq.m. GFA (incl. traffic space)</li> <li>○ Meeting room approx. 40 sq.m. GFA</li> </ul> </li> <li>• Approx. 130 parking spaces for cars</li> <li>• Sufficient loading bays for lorries</li> <li>• 29 loading/unloading bays</li> <li>• 4 access doors</li> <li>• Clearance height 12.20 m</li> </ul> <p>A team has been put together by AEW, Borghese Logistics, Pleijsier Bouw Genemuiden and several other suppliers to develop this high-quality distribution centre. The project commenced on 22 August 2018. The permit was granted in June 2016 and the distribution centre will be delivered in the summer of 2019.</p> <p>Borghese and AEW are developing this sustainable, high-quality logistics park together.</p>
<p>Ambitions</p>	<p>Sustainability is becoming an increasingly important theme around the world. Which is a good thing too. At Borghese Logistics, sustainability is hardly a new concern. We think a long-term perspective - i.e., for the entire life of the building - is evident. That is why we are always searching for new methods of sustainable construction and development. The main question is how can a building offer lasting added value, with a minimum environmental impact? We gladly share our pioneering ideas with you.</p> <p>At Borghese we share our ambition, namely sustainable construction and development, with others. We develop new concepts and study innovations, together with our partners. Because we believe that sustainable buildings should become the norm. That is why we also participate in the Dutch Green Building Council. This independent organisation is developing a quality label for the sustainability of Dutch buildings and areas.</p> <p>The premise for this project was "BREEAM "Very Good"" in line with our ambitions. The spearheads for sustainable were (and are) energy consumption and heating of the building with sustainable technology.</p>
<p>Technical Solutions</p>	<p>We opted for the following technical solutions:</p> <ul style="list-style-type: none"> <li>• Direct-fired HR heaters;</li> <li>• LED lighting with motion sensors;</li> <li>• Recharging points for electric vehicles;</li> <li>• High insulation value of the building (R value 4.5 façade and R value 6.0 roof);</li> <li>• ESFR sprinkler installation.</li> <li>• Ecological measures (bat boxes, insect hotel)</li> </ul> <p>All these solutions were selected because they are sustainable and will save the client money in the long term.</p>

	<p>We combined a high insulation value with floor heating in order to ensure that the building's heating has a low energy consumption. T5 lighting with sensors will also generate considerable savings.</p> <p>Expected estimated annual consumption:</p> <ul style="list-style-type: none"> <li>• Gas is 40,000 m<sup>3</sup> gas</li> <li>• Water is 715 m<sup>3</sup> water</li> <li>• Electricity <ul style="list-style-type: none"> <li>○ Expected Lighting Storage 235 kWh</li> <li>○ Outdoor lighting 20 kWh</li> <li>○ Office lighting 18 kWh</li> <li>○ Cafeteria 13 kWh</li> <li>○ Transportation (doors, battery chargers, fences) 175 kWh</li> <li>○ Vehicle recharging points 65 kWh</li> <li>○ Ventilation &amp; cooling 82 kWh</li> <li>○ Office workspaces 36 kWh</li> <li>○ Sprinkler installation 8 kWh</li> </ul> </li> </ul>
Process	<p>We were able to successfully fulfil our ambition, thanks to the involvement of experienced partners, who are aware of the importance of all the various BREEAM-NL phases. All the BREEAM aspects were discussed in detail during fortnightly building meetings. The premise at the start of this project was BREEAM "Very Good" and proved easily feasible during the entire project.</p>
BREEAM-NL	<p>Credits that were easy to obtain included Responsible Construction Practices (MAN 2) and Construction Site Waste Management (WST 1), whereby this point must be implemented from the start to become evident. The Mitigating Ecological Impact (LE 3) and Cyclist Facilities (TRA 3) credits, by contrast, were more difficult to achieve. These credits required a lot of time, because the basic site and logistics design did not take into account the space and design, required for the implementation of these credits. This gave rise to substantial consultation between the client and the contractor to develop the best solution for this project.</p>
Cost	<p>The cost involved in working to BREEAM requirements is high. Various parties must be engaged to draw up documents that check or demonstrate that certain requirements have been achieved. Technical solutions for being in line with BREEAM sometimes also cost more than the usual solutions. Borghese invested in this because it feels that a well-thought-through low-energy building is cheaper to manage and maintain in the long term, as well as being a nicer workplace for its employees.</p>
Tip(s) for future projects	<p>Decide on time which BREEAM credits are not necessary, to avoid losing time during the process for credits which ultimately are proven unnecessary. It is vital that the team starts early and that the current status is reviewed with all the parties involved, and that all the BREEAM information is supplied and shared with all the relevant parties.</p>