ELIA GREEN BUILDING "NEW SCHAERBEEK" 2009 - 2013

Extension of the Elia headquarters including Offices, a Photovoltaic Parking Canopy, a Cable Park and Landscaping on the quai Monnoyer in Schaarbeek.



Site
Quai LÃ©on Monnoyer 1000 Brussels

Client
Elia Asset

Structural engineer
Arcadis

Services engineer
Arcadis

Contractor
CFE Brabant

Acoustics
Venac

Budget
19 000 000 EUR htva

Project Manager
Forum

BREEAM Certification
IBAM

Copyrights
Renaud Callebaut

Elia is a BREEAM certified ensemble including 10 000 sqm of offices (NZEB), a photovoltaic parking canopy for 200 vehicles, a cable park, and various depots. The proposed built form lying on heavily contaminated grounds completes the existing industrial fabric east, poised like a slightly folded Â« V Â» parallel to the canal. Low-lying landscaping following an extensive diagonal grid offers further visual unity between old and new.

The project complies with demanding quantified technical requirements addressing space use, environmental considerations, and budget. From the onset client, architects, and engineers laid down and then tested multiple open-ended options, be it concerning function layout, form, or techniques ... the design proposal gradually morphing into a pertinent answer. The resulting compact 6-level volume slips softly into place, its shallow depth optimising daylight entry, its envelope consisting of a pre-fabricated timber passive curtain-wall, offering wood finishes inside and recycled anodized aluminum sheet outside.

The environmental approach includes :
1Â° Applying passive criteria (highly-efficient thermal insulation, taking into account internal heat gain already present inside, compact volumes, bare concrete for thermal inertia, air-tight skin, external solar protection, and reduction of total glazed surfaces down to 45% of total facade surface) ;
2Â° Reduction of ground, water, and air pollution (designing taking into account the existing heavily polluted soil and the consequent 20cm impermeable concrete slab covering the whole site) and ecological water and sewage treatment (reed beds, natural filters, low-consumption non-polluting pumps, ...) ;
3Â° Extra attention to material choice (lowest possible embodied energy, lowest possible health risks)
4Â° Waste management (certified sorting and disposal, recycling)
5Â° Extensive nature/green areas (indigenous planting requiring minimum upkeep, indigenous aquatic planting, reed bed for sewage treatment)
6Â° Integration of BREEAM criteria.

Prefabricated facade panels are one-story tall, 540cm wide, designed with KYOTEC. 27cm of mineral wool are flanked by acoustic backing and an osb vapor barrier inwards, and by another osb panel with a water tight barrier outwards, all of it wrapped in a shimmery embossed and perforated aluminum skin. Each individual faÃ§ade module offers optimum daylight and acoustic performance for the corresponding office surface. This is one of the biggest upgrades since Loi 227 or Aeropolis, bringing Elia even closer to meeting the highly restrictive standard office criteria imposed on a very standard Brussels office market.