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Consulting Engineers & Landscape Architects



PROJECT:

Airport Gardens, Brussels

CLIENT:

SA Airport Gardens NV

ARCHITECTS:

Kohn Pedersen Fox Associates

BM SERVICES:

Landscape Architecture, Sustainable Masterplanning & Building Services (MEP) Engineering

VALUE:

£100million

DESIGN BRIEF

To develop a sustainable masterplan with KPF for a 7 hectare brownfield site on the outskirts of Zaventem, a suburb of Brussels. The development included the creation of a new ecological belt, restoration of an old waterway previously used as a sewer, buildings designed to keep out the noise of the motorway and solar responsive planning.



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DESIGN INITIATIVES/ACTIONS UNDERTAKEN

The success of the scheme hinged upon the endorsement of the Airport Authority, across whose land it was planned to construct a new primary access road, and reconciling the commercial interests of the developer with those of the mayor of Zaventem who was anxious to improve local amenities.

There had been a number of previous attempts to secure a development agreement with the local planning authority, the mayor and the Airport Authority. It was felt that these schemes did not adequately address the social, commercial and environmental aspects of the site. A fresh approach was needed.

Careful site analysis revealed the following:

Constraints:

- Pollution of the River Woluwe due to the discharge of untreated sewage effluent upstream.
- Noise and air pollution from the adjacent six-lane dual carriageway.
- Illegal tipping and disposal of untreated sewage from light industrial premises on the periphery of the site.

Opportunities:

- The proximity to Brussels Airport, adjacent road and rail transport.
- A core of ancient woodland and vegetation providing ecological structure.
- Existing water features including the river, a mill pond and associated wetland features.
- Existing brick-built industrial buildings, a possible source of reclaimed materials.

The holistic approach to the masterplanning of Airport Gardens integrated elements of sustainable urban drainage, the restoration of the River Woluwe and the creation of high quality parkland around an existing ecological core.

Building on the existing landscape structure, marshland features were reinforced to form part of a more extensive water management system of lakes and constructed wetlands that provide a physical barrier between public areas and private commercial development. The lakes form part of the sustainable urban drainage system designed to treat all of the surface runoff from roofs and areas of hard standing before discharging the treated surface water into the river.

Commercial buildings have a more formal setting, with high quality hard materials and ornamental planting, and are inward looking with uninterrupted views into the park across the restored River Woluwe.

The buildings have a strong physical presence along the main highway and were designed to act as a physical barrier helping to create a protected space at the heart of the development and allow good solar penetration into the park. The scale and massing of development is sensitive to the existing housing, becoming progressively higher along the southern boundary to the railway. The building plots are staggered creating a rhythmic façade that is a direct response to arrival by train or by car.

The landscape scheme promotes a greater diversity of flora and fauna through a succession of wet through to dry woodland habitats and a re-energized river corridor. Raising the bed of the River Woluwe was proposed by constructing a cascade weir with a new meandering course out to the existing woodland. This was to be configured as a semi-natural lake with simulated siltation supporting reed and marginal plants and trees. Deep open water pools serve as sediment sinks.

The transition between the lake and the free flowing river upstream is ideal for settling out coarse silts and screening floating pollutants. Good road access to this location was provided for removal of this debris periodically to control water and sediment pollution.



Water management within the landscape



View towards phase 1 office buildings



Water Management



Ecology



Landscape



Building Massing

The masterplan went on to be developed into the plan pictured below and is now built and occupied

