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Energy-neutral car park in Amsterdam

In 2020, Q-Park Netherlands opened the greenest car park in Amsterdam. The car park is located in a newly developed residential area in the eastern part of the city. The car park plays a central role in making the new neighbourhood a low-traffic zone because there are no on-street parking spaces. The 704 spaces are used by visitors and residents.

With a roof full of solar panels, the car park generates enough electricity to be energy neutral. Any excess green electricity is used to power the 30 EV charging points. Succulent sedum plants cover the remaining roof to buffer rainfall.

Solar panels on the roof

Stronger together

This parking facility is another example of how Q-Park collaborates with project developers, constructors and investors. **Q-Park Oostenburg** is a joint venture between developer/constructor Ten Brinke, investor Holland Immo Group and Q-Park providing car parking expertise in the design and operational phases.

More about Oostenburg in Amsterdam.

Cradle-to-cradle construction

Venlo is one of the most sustainable municipalities in the Netherlands. The region has the highest number of companies with cradle-to-cradle (C2C) certified products in the world and Venlo city hall, also constructed according to cradle-to-cradle principles, has the largest green façade in Europe.

Blok van Gendt car park

So, logically, when Venlo municipality issued a Design, Finance, Build, Maintain and Operate (DFBMO) tender for a new parking facility, it also stipulated that this should be built according to the same C2C principles.

Advantages of circular construction include:
- little or no raw material wastage;
- contribution to the circular economy;
- high-quality building, worth more in the long run;
- government subsidy opportunities.

The consortium, consisting of Holland Immo Group (finance), Kern Architects (design), Aan de Stegge Twello B.V. (construction) and Q-Park (operation), submitted a C2C construction plan for a new parking facility on the site.

Reusable materials
The building materials chosen can largely be reused. Furthermore, by developing the car park in an energy-efficient way, a circular structure has been realised in line with the C2C principles of Venlo municipality.

Another important aspect of the plan was integrating the car park into its surroundings. This has been achieved by finishing the façade with brickwork and steel elements – materials which can easily be recycled.

More about this cradle-to-cradle construction.

Temporary construction

Q-Park and Aan de Stegge Twello B.V. are collaborating on another parking facility in Venlo: a temporary car park designed by MH1 architects in collaboration with Continental Car Parks.

Despite the temporary nature of the car park, the plans are for a high-quality structure that blends in perfectly with the local landscape. Circular building materials will include:
- high-quality and durable galvanised steel;
- TT floor slabs;
- wooden slats to shield parked cars from view.

Circular design
The temporary parking facility will be fully dismantlable and suitable for rebuilding at another location in due course.

This parking system, the Flexideck, a Continental Car Parks innovation, scores high in a cradle-to-cradle context because most of the materials can be reused.

The construction of the parking facility in Venlo will take about four months, construction work will begin in January 2021.

More about Venlo's temporary car park.

Sustainable renovation

In 2020, Q-Park Germany completed a challenging renovation project of Q-Park Karstadt in Bielefeld. This concerned a multi-storey car park built in 1965, and acquired by Q-Park in 2009.

Major refurbishment was required as holes were appearing in the reinforced concrete floor and corrosion was found throughout the reinforcement. Exposed concrete allowed de-icing salts from cars to penetrate the structure easily and attack the internal reinforcement, compromising the structural stability.

Q-Park's real estate team identified the problems and, together with a specialist planner, came up with innovative methods to renovate the site while keeping this busy city centre car park open.

Innovative maintenance plan
A combination of innovative maintenance systems was chosen to replace the reinforcement, with additional protection against further corrosion. This included:
- structural steel, glass fibre composite reinforcement and carbon scrims;
- carbon-fibre reinforced concrete;
- carbon scrim coating with anti-corrosion and anti-oxidation properties;