





## Get Up onto the Roof!

The 21st century is already proving to be the century of urbanisation. More than half the world's population already lives in towns and cities. According to many studies, this is set to increase to more than two thirds by 2050. An ever denser urban habitat will inevitably be the result.

So as to guarantee a sufficient number of play spaces in the future, innovative solutions are needed now more than ever.

Roofs offer important potential for creating such play areas. Despite the trend towards greater urban density, the installation of play equipment at roof level opens up urban spaces and adds another dimension of functionality to buildings in the process.

Every roof project requires an individual solution, the precise nature of which will depend on the building methods and materials employed, as well as the choice of play structure. Foundations habitually employed at ground level cannot, for the most part, be used on roofs. Thus the principal question at the start of every roof project is to what extent the existing roof structure may be modified. Can the play equipment be attached to the existing roof structure directly, or must the existing roof surface remain unaltered?

Berliner's Creative Center - consisting of architects, designers, landscape planners and engineers - has developed a wide variety of roof installation techniques, enabling our play components to be installed without the need for deep concrete foundations. This in turn bypasses the question of whether the existing roof may be altered or not. Be it a single item of play equipment, entire climbing landscapes or individually tailored solutions, nearly any playground design can be realised up on the roof.

Why not let yourself be inspired on the following pages by some of the projects we've already completed? Come to us with your ideas!

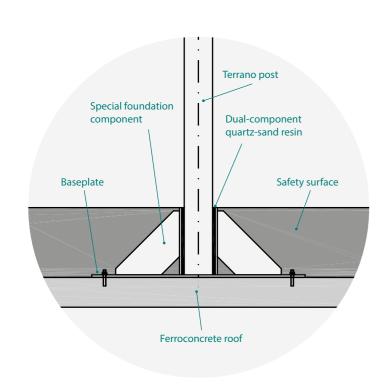
Together we'll create new spaces for movement and play on roof surfaces that have, until now, been unusable.

Berliner Play equipment for life

## School Grounds in Copenhagen

The grounds of a school in Copenhagen's modern Sydhaven quarter consists of a combination of "Terranos net landscapes" built across three different roof levels. In this case, it was not possible to sink the foundations to the usual depth. To overcome this obstacle and enable the 63 posts to be installed on the roof, special cylinder-shaped foundation elements were anchored into the surface construction. The Terranos posts were inserted into these, before being covered with a dual-component quartz-sand resin. In this way, despite its simplified construction techniques, the play structure could be sturdily anchored onto the surface of the roof. The entire foundation construction was then skillfully hidden from view by the green EPDM soft impact surface.

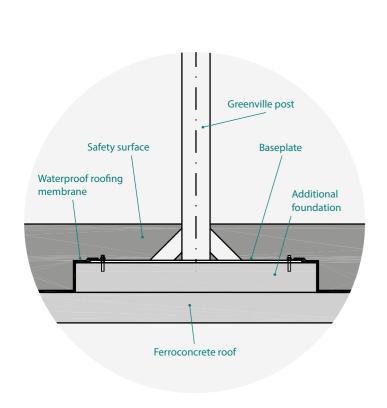
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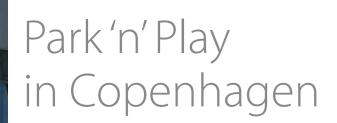




## Roof Kindergarten in Weil am Rhein

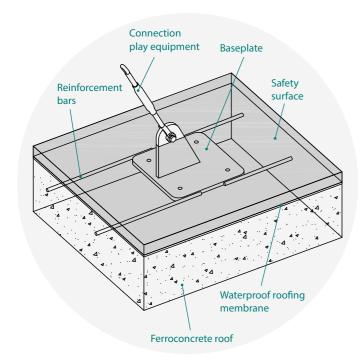
When a new residential district was built in Weil am Rhein, its kindergarten was planned with grounds located on the roof of an adjacent multi-storey car park. So as to ensure the most flexible play experience possible, it was decided to install a Greenville-Combi play structure on two different levels, thereby catering to the needs of children of differing ages. For constructional reasons, it was not possible to drill into the ferroconcrete roof, so individual, shallow foundations were poured onto the roof instead. To achieve the necessary stability despite this limited foundation depth, wider than normal foundation slabs were manufactured. The play equipment could be anchored onto these flat foundations, which were then overlaid with the waterproof roofing membrane.

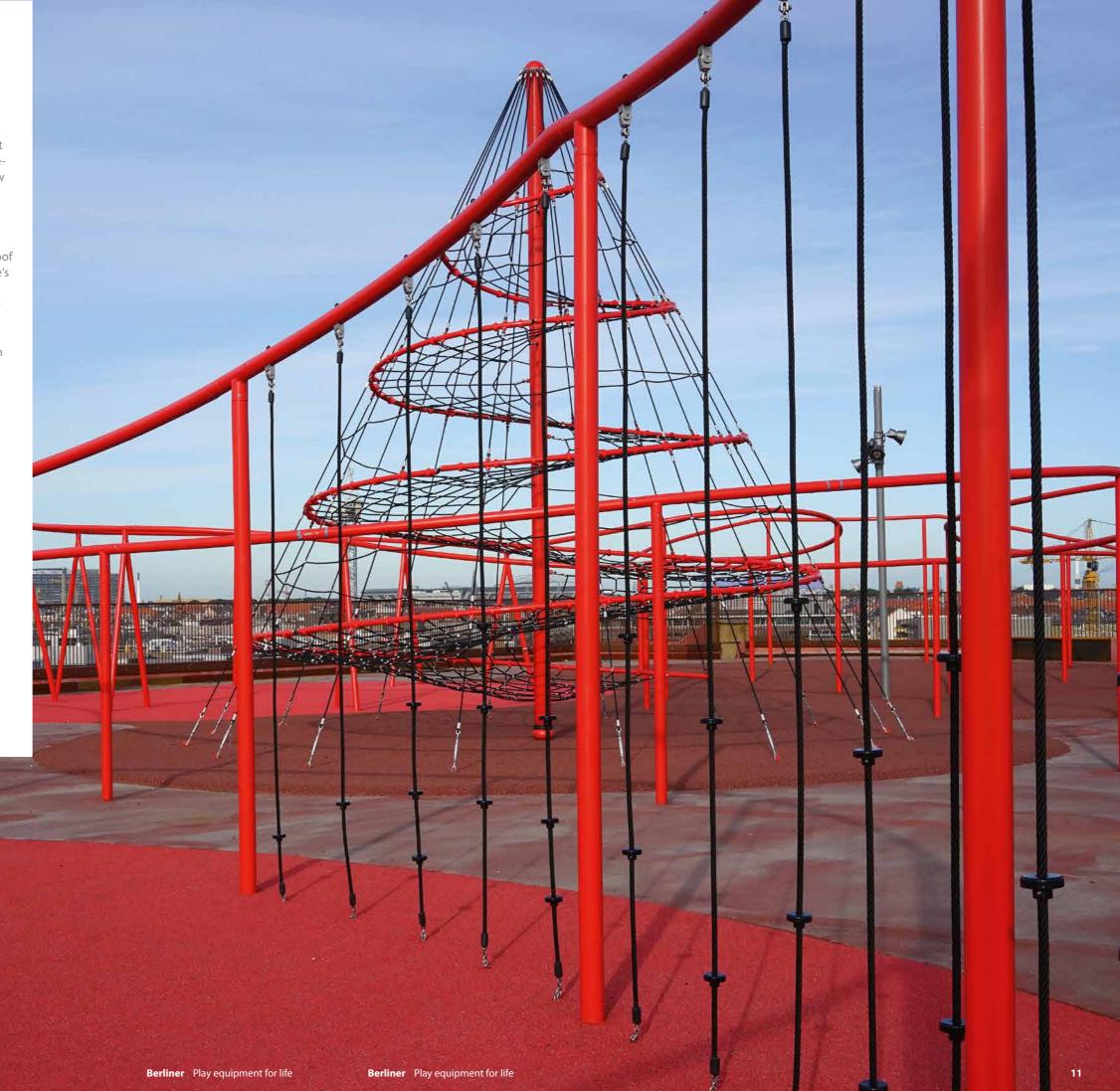




This bright red playground makes for an extraordinary sight, set as it is against the backdrop of Copenhagen's port. Not only that: it's located twenty four metres above sea level, on the roof of a multi-storey car park, thereby setting new standards in the design of public spaces.

The roof playground's biggest draw is an eight metre high climbing pyramid manufactured by Berliner Seilfabrik. The existing roof construction served as a firm anchor for the pyramid, without the roof membrane's properties being damaged in the process. A harmonious relationship between ferroconcrete roof and play structure was ensured by factoring the requirements of the structure's foundations into the building's roof design at an early enough stage. This resulted in the foundation plates of the play apparatus, together with additional reinforcement bars, being embedded into the roof prior to the pouring of the concrete. This ensured that the anchor points barely protruded from the concrete, allowing the waterproof roofing membrane to be laid without much additional effort.









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