



## BUITENRING PARKSTAD LIMBURG: A UNIQUE PIECE OF ROAD CONSTRUCTION

WHEN THE DUTCH PROVINCE OF LIMBURG AWARDED THE CONTRACT FOR THE OUTER RING ROAD BUITENRING PARKSTAD LIMBURG (BPL), IT HAD ONE CLEAR GOAL IN MIND: TO EFFECTIVELY IMPROVE ACCESSIBILITY TO AND WITHIN THE FORMER MINING REGION OF PARKSTAD, WHICH INCLUDES THE MUNICIPALITIES OF BRUNSSUM, HEERLEN, KERKRADE, LANDGRAAF, NUTH, ONDERBANKEN, SCHINNEN AND BEEKDAELEN. CONTRACTORS BESIX NEDERLAND, BOSKALIS NEDERLAND AND STRUKTON CIVIEL WERE AWARDED THE CONTRACT AS THE BPL CONSORTIUM BACK IN 2011, BUT CONSTRUCTION WORK WAS ONLY ABLE TO START ON 11 MARCH 2015 AFTER THE FAVOURABLE RULING BY THE COUNCIL OF STATE.

### 39 BRIDGES, TUNNELS AND FAUNA PASSAGEWAYS

The sheer scale of the project makes Outer Ring Road Parkstad Limburg a unique piece of road construction in the Netherlands. Within the project, 14 km of existing roads were adapted and/or widened and 12 km of new roads were constructed. The BPL Consortium also constructed 39 bridges and tunnels as well as safe passageways for local fauna by means of ecoducts and fauna passages. Noise nuisance for local residents was limited by erecting 21 noise barriers with a total length of 8 km.

### SPECIAL ATTENTION FOR NATURE

The new road cuts through about 38 hectares of protected nature. Within the project scope, 125 hectares were compulsorily compensated in the form of new nature, and 45 hectares of additional nature was also created. The newly realised roadside verges, accounting for 60 hectares, were turned into green areas as well. During the construction of the BPL, the tranquillity of protected animals and the preservation of unique vegetation were strictly monitored. To this end, the entire route, some 26 km in length, was enclosed by fences and largely equipped with amphibian screens. The entire area was searched for protected animal and plant species and some 25,000 animals and plants were relocated to new habitats.



BUITENRING PARKSTAD LIMBURG, THE NETHERLANDS

### MUTUAL RESPECT AND TRUST

Over the past 10 years, cooperation has been vital to the success of Buitenring Parkstad Limburg. This applies both to the internal cooperation between the contractors and to the cooperation between the client and the contractor. Above all, the mutual respect and trust that was built up in this cooperation, led to the successful completion of the project. Ultimately, it is the shared passion of all parties involved that made it possible to deliver this impressive project.

### // A GUIDED TOUR ALONG BUITENRING PARKSTAD LIMBURG

DESCRIBING 39 CIVIL ENGINEERING STRUCTURES IN DETAIL IS NOT POSSIBLE IN THIS ACTIVITY REPORT. THAT IS WHY WE ASKED JEAN-DOMINIQUE DE PRÉ, HEAD OF THE TECHNICAL OFFICE FOR THE CONCRETE DIVISION, TO GUIDE US ALONG THE MAIN ATTRACTIONS ON THE ROUTE.



#### TURBO ROUNDABOUT OVER A76

The turbo roundabout over the A76, which consists of two mirrored viaducts of 32 m wide, presented a logistical challenge as it had to be realised with minimum disruption to road users. Thanks to good work planning, the disruption was limited to 10 night-time road closures.



#### NOISE BARRIER AT BRUNSSUM

Various noise barriers were placed along the Buitenring Parkstad Limburg either in glass or in concrete. The 655 m long canopy at Brunssum is a special variant that protrudes over the road with a maximum span of 4 m.



#### STEEL PLATE TUNNEL RIMBURGERWEG

In addition to the classic viaducts on the Buitenring Parkstad, four steel plate tunnels were installed along the route, of which the one at Rimbürgerweg, with a length of 80 m and a height of 6.5 m, was the largest.



#### FELDBISS ECODUCT - BRUNSUMMERHEIDE

This ecoduct, with a span of 23.5 m and a width of 51 m, was designed to provide a natural, continuous habitat for local wildlife, such as badgers, deer, pine and stone martens.



#### SLID-IN RAILWAY VIADUCT EYGELSHOVEN

One of the greatest technical challenges was to slide this 90-metres-long, 4,000-tonnes tunnel section under an existing railway line. The whole operation was carried out successfully during a 100-hour decommissioning of the railway tracks. We even installed a grandstand so that interested local residents could follow the spectacle from a safe distance!



#### RAILWAY VIADUCT ZUID-LIMBURGSE STOOMTREIN MAATSCHAPPIJ (SOUTH LIMBURG STEAM TRAIN COMPANY)

To give the viaduct of the railway line of the Zuid-Limburgse Stoomtrein Maatschappij, locally known as the heritage railway 'Miljoenenlijn', a unique appearance, it was decided to finish off the edge of the viaduct with perforated steel plates that are equipped with led lighting, which illuminate the artful construction at night.