

Case study

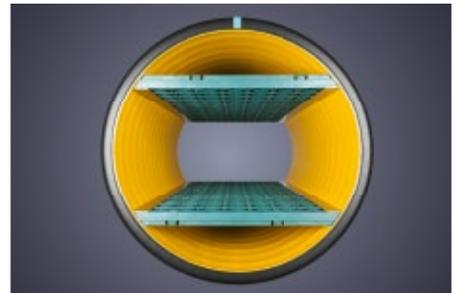
Surface water treatment
in construction/expansion of rest areas



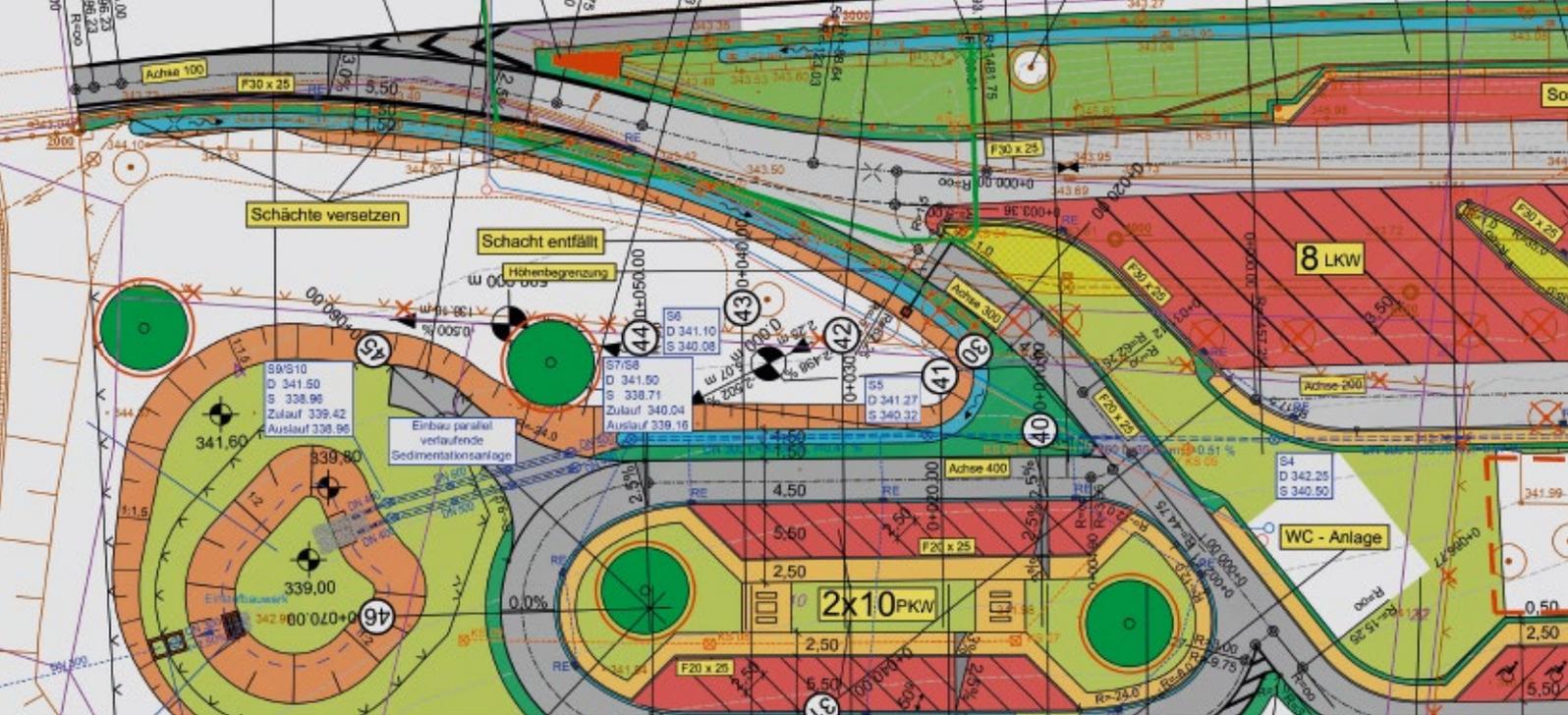
Construction project:
BAB A3 Köln-Frankfurt
Expansion of rest area and conversion
to rest facility

Builder:
Landesbetrieb Mobilität
Rheinland-Pfalz
Autobahnamt Montabaur

Construction execution:
Heinz Schnorpfeil Bau GmbH
Kastellauner Str. 51
56253 Treis-Karden



- DRAINAGE SYSTEMS
- ELECTRICAL SYSTEMS
- BUILDING TECHNOLOGY
- INDUSTRIAL PRODUCTS



Treatment of surface water and ...

The "Märker Wald" rest area is situated along the German motorway A3 heading towards Frankfurt, between the junctions of Neuwied and Dierdorf. The volume of traffic is changing.

Particularly due to a dramatic increase in road freight transport, considerable shortage of truck parking spaces can be observed along motorways, whereas transit routes are affected most.

In order to boost parking space capacities for vehicles – trucks, buses and heavy-duty vehicles in particular – and to create sanitary facilities, the existing "Märker Wald" rest area was upgraded to a PWC station.

Treatment system in compliance with the DWA-M 153 regulations

In the existing system, the accumulating surface water was discharged into the collectors situated parallel to the motorway without any treatment. Thanks to the modernisation and expansion measures, surface water from additional areas, especially heavily polluted truck parking spaces, will be discharged into the existing receiving waters. According to the regulations of the DWA-M 153 bulletin (Recommendations for handling stormwater), deteriorating the quality of waterbodies at a discharge point is not permitted. To clean the surface water that will accumulate in the future, a separation system under the RiStWag directive on water protection zones as a concrete en-

gineering structure was planned. This system had to be installed upstream of the new stormwater retention basin.

It was easy to decide in favour of the SediPipe XL plus system since with the help of FRÄNKISCHE sedimentation systems, an innovative and cost-saving solution of this task could be provided. Not only does SediPipe XL plus sediment dirt particles, it also reliably retains leaking light liquids both in dry weather and even during heavy rain. This is how SediPipe XL plus ensures the highest possible spill precaution and preventive water protection in the entire road traffic.

The stormwater treatment system helps save not only space, but also investment and maintenance effort due to its superior cleaning performance, large storage volume and high degree of maintenance friendliness coupled with additional functionality similar to a coalescence separator.

The treatment of surface water from the new PWC station is carried out by means of two SediPipe XL plus 600/18 sedimentation systems which are located upstream of the new open stormwater retention basin and are installed without any surface requirement. The installation process required little time and effort.





... preventive protection of waterbodies

The higher water protection authority gave its consent to the treatment via the SediPipe XL plus sedimentation system within the framework of the approval under the German Water Act. Additionally, another SediPipe XL plus 600/24

sedimentation system in the area of the existing service road was included in the design with the goal of improving water quality at the discharge point situated there.

High-performance sedimentation systems

Both functionality and performance of the SediPipe XL plus sedimentation system have been proven by independent scientific bodies. Especially with higher critical rain yield factors, significantly greater efficiency as compared to the conventional stormwater sedimentation tanks can be achieved. The size of the system and the installation location can be selected to perfectly meet your individual needs.

All SediPipe XL plus systems reliably retain dirt particles and are furnished with an immersion pipe in the target shaft for retaining leaking light liquids. Thanks to the integrated upper flow

separator, absolutely reliable retention of leaking light liquids even in case of great flow rates (heavy rain) is guaranteed. The discharge values match those of an oil separator according to DIN EN 858-1 (oil retention of at least 99.9 %).

Due to the installation of two SediPipe XL plus 600/18 treatment systems, sufficient storage volume for light liquids and a large enough mud chamber could be provided.

The systems are very robust and contain no complicated "sensitive" technical component. This is how a very long and entirely trouble-free service life is ensured. The system itself requires no

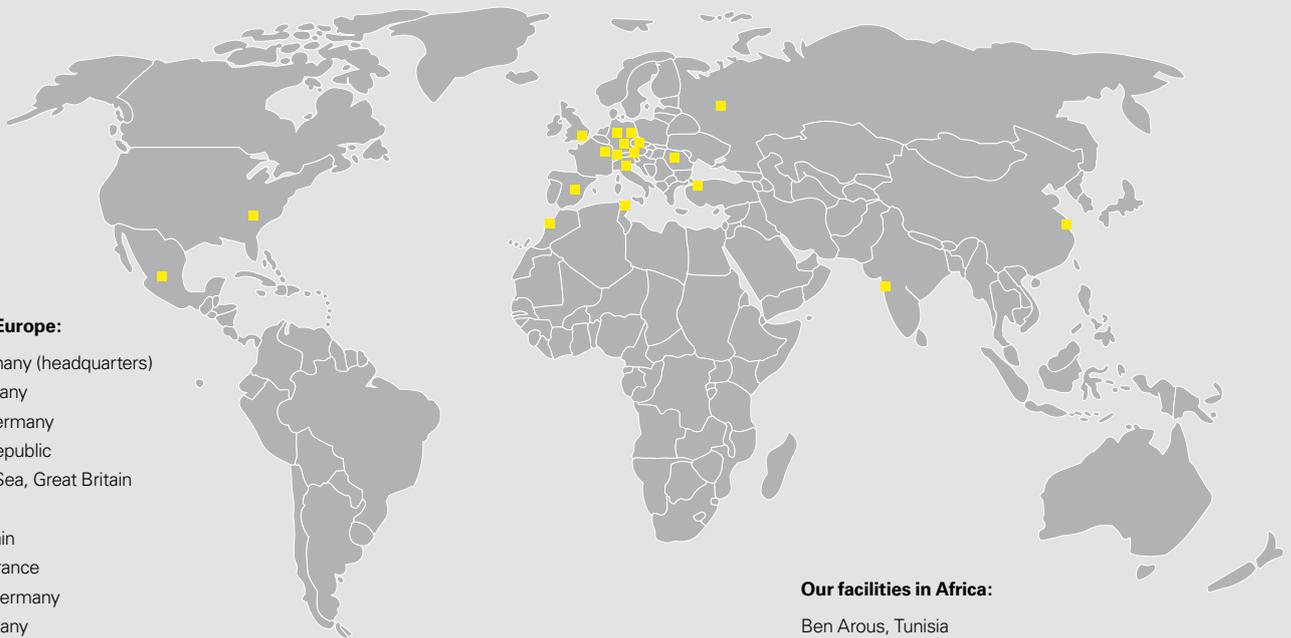
maintenance whatsoever. All that needs to be done is to dispose of the collected sediment at the maintenance intervals stipulated (approx. 3 to 4 years). This is done with conventional sewer cleaning equipment (suction and rinsing vehicles).

Scope of delivery:

- two type SediPipe XL plus 600/18 stormwater treatment systems
- one type SediPipe XL plus 600/24 stormwater treatment system



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 Torcy-le-Grand, France
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 Mönchaltorf, Switzerland
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that are perfectly tailored to our customers' needs. Our action and business philosophy focus on our customers and their needs and requirements for our products.

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