



# Track Record Highways

## A1/A6 Motorway – Netherlands

The Schiphol-Amsterdam-Almere (SAA) A1-A6 Diemen interchange – Almere Havendreef DBFM project includes the design, construction, financing and maintenance of 18 km of widened carriageway.

Within the secondary market transaction process of the highway, TA Europe has advised an International Infrastructure Fund and focused on the analysis of the asset management strategy. A special attention was paid to the lifecycle assumptions of road pavement, especially the fast lanes, but also engineering structures and road markings.

During the DD process, TA Europe used its technical and cost benchmarks to conduct a high level assessment of the costs and lifecycle assumptions to provide the Client with potential saving potentials.

With regards to the road structures, TA Europe has built up an own tool, which simulates the condition development of the road structures within the concession period, enabling the HM Manager to manage the Project towards the hand back criteria, limiting the risk of overspending or underspending.

# Highways – Case Studies – Europe (1/4)

## A9 Motorway – Germany

TA Europe took over the LTA Mandate in 2014, when the project was in the need of a detailed HM budget assessment to ensure that the budgets are still sufficiently funded to achieve project hand back, especially in the light of a ASR refurbishment of the pavement.

TA Europe reacted promptly and conducted a detailed plausibility check of the budgets vis-a-vis the condition of the asset. Since then, TA Europe is acting as LTA and yearly re-assessing the HM budgets until project hand back.



## A-Model A7 (1) – Germany

TA Europe is was involved in the transaction of the A7 (1) project and has checked and optimized the asset management strategy of the Project.

TA Europe has also reviewed the maintenance scope and strategy of the structures and identified relevant optimization strategy with a headroom for savings.





## Highways – Case Studies – Europe (2/4)

### R4 Motorway – Belgium

The R4, the ring road around the city of Ghent, is an important link in the Belgian main road network between the Dutch border and the E40 and E17. The road is currently not functioning as a primary road due to many crossings with local roads.

TA Europe has reviewed the whole technical package of the Project including construction programme, operation and heavy maintenance concept, risk and environmental scope, cost analysis and benchmarks, etc.



### A-Model A1 – Germany

TA Europe was mandated a role for the heavy maintenance review of the A1 project in Germany. Under this role TA Europe has reviewed also the existing and newly built structures of the project, analyzed the maintenance strategy, costs and identified relevant optimization mechanisms. At the same time TA Europe provided its clients with best, real and worst case scenarios on the possible development of the structures during the project life and possible impact on the HM budget.



# Highways – Case Studies – Europe (3/4)

## A11 Motorway – Belgium (Team Member's Experience)

The A11 is a greenfield motorway project of 13km with a CAPEX of EUR 500m commissioned by AWV, the Flemish agency for road and traffic. It includes the construction of a 1.7km 4 lanes viaduct, 2 bascule bridges and 2 cut and cover tunnels. The viaduct is the longest integral bridge in Europe. This innovating technique means that the bridge is connected to the piles without bearings nor expansion joints. It was opened beginning of September 2017.

Luc Tousseyn was acting as the Lenders Technical Advisor. He was based in Brussels and was the first point of contact with the client during the DD and the coordinator of the monitoring team during the Construction period up to the completion.



## A15 Motorway - Netherlands

The A12/A15 Ressen – Oudbroeken (ViA15) is an important link in the Dutch main road network, which strongly improves the route from de Randstad to Germany (North Rhine Westphalia). The realization of this part of the A15 also creates a second connection (parallel to the A12) with Germany in this part of the Netherlands. TA Europe was acting as the Lenders Technical Advisor for a Consortium of Macquarie, Boskalis, Jan de Nul and Van Gelder. Our LTA a team comprised Technical Risk Managers based in Essen, Brussels and the Netherlands and advised the Lenders during the bidding stage of the project.





# Highways – Case Studies – Europe (4/4)

## E18 Highway – Norway

The E18 Motorway project is a DBFO project for the construction of a 36km dual carriageway between the towns Kristiansand and Grimstad, Norway. It included the construction of 61 bridge structures (the five largest bridges ranging between 130m and 400m long), seven bored twin tunnels with a total length of 5,750m (the longest is 2.2km long) and one cut/cover tunnel. TA Europe was appointed to support the TDD and transaction of the Norwegian highway E18 as part of a large trans-continental portfolio. Based in Luxembourg, Sebastian Frohwann managed the technical team from UK and Norway.



## RV3/RV25 Løten-Elverum – Norway

The National Road 3 is part of the transport corridor between Oslo and Central Norway. It is the shortest and fastest road connection between Oslo and Trondheim and is often chosen by the majority of the heavy traffic between Oslo and Trondheim. TA Europe was appointed to act as Lenders Technical Advisor for the Acciona / Strabag consortium in the first project of this pipeline. TA Europe set up a team of experienced international LTA experts in combination with local road engineers.



# Sea Locks – Case Study

## Ijmuiden Sealock Project - Netherlands

Ijmuiden Sealock is the biggest lock in the world (dimensions 70m x 500m). **Luc Tousseyn** was the lead advisor for a consortium in the tender phase (not the winning consortium) and was in charge of the coordination of the internal and external consultants. He performed the review of the contracts, payment mechanism, risk analysis and of the civil construction.

Further experiences are his engagement as LTA in the Beatrix Lock in Nieuwegein (Netherlands) and the Eefde Locks in Eefde (Netherlands).



In 2021, TA Europe was mandated as Technical Advisor during the acquisition phase of the Ijmuiden Sealock by an international Infrastructure Fund.

**Luc Tousseyn** and **Denis Maly** were both involved in the Project with a specific focus on the following topics:

- Review of the project setup and check relevant references of the involved Contractors,
- Review of the main contracts incl. Project Agreement, EPC Contract and M-Contract, with a special focus on the risk allocation and interface risks,
- Review and opine on the contractually agreed and available security package of the EPC Contractor and M-Contractor,
- Evaluation of the Construction Program and commenting of the Completion and Long Stop Date,
- Review and comment on construction issues and their remediation incl. impact analysis on future operation and maintenance activities and costs,
- Review opine on the commissioning plan of the lock,
- Review of the Project Budgets incl. benchmarking of the CAPEX, OPEX and HM Costs with other comparable sea lock projects,
- Identification of saving potentials in the OPEX and HM Costs.



# Social Infrastructure – Case Studies – Healthcare

## KAV Hospitals Vienna – Austria

TA Europe was mandated as Technical Advisor in the Secondary Market Transaction of the KAV Hospitals Vienna, comprising two Oncology Centers in the city of Vienna (KH Hitzing & Donauespital).

As part of the advisory services, TA Europe focused on the O&M and HM costs of the building elements incl. bunkers as well as the lifecycle cost assumptions and replacement cycles of the medical equipment, comprising LINACs, CTs and Radiology in the light of expected patient turnovers .



## Innovation Project 3 by “Gesundheit Nordhessen AG” – Germany

Advice on the purchase and purchase parameters of medical equipment for the Innovation Project 3 by the “Gesundheit Nordhessen Holding AG” as Lender’s Technical Advisor. TA Europe has analysed different medical equipment (intended for the use of 8 clinics and one care home) for a bidding consortium, conducted the risk management of the project, identified the main parameters of the lifecycle for relevant equipment, benchmarked relevant costs and analysed the payment mechanism. The results have been summarized in the technical due diligence report prepared for the Lenders.



## Social Infrastructure – Case Studies – Schools (1/2)

### Schools Cologne – Germany

TA Europe is acting as LTA for the financing banks since bidding stage and is currently monitoring the 7 schools in the 16<sup>th</sup> year of operation. The city of Cologne has awarded the renovation and ongoing maintenance of Cologne schools in 2005 to HOCHTIEF.

The project has a total volume of 125 million Euros and covers the renovation and operation of seven Cologne schools. On this scale, it was the first PPP project of a German city in the area of school construction.

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### School Berresgasse, Vienna, Austria

TA Europe is providing Lenders' Technical Advisory services to the European Investment Bank and other international lenders since the bidding phase. The concession was awarded to PORR in 2017 and includes the design, building, financing, operation and maintenance of the school over a period of 25 year. The project is currently in its construction phase.

Berresgasse is just one project of the Austrian "Campus+" model, which entails various school projects. TA Europe was also involved in the Stammersdorf and Nordbahnhof PPP school projects.







## Social Infrastructure – Case Studies – Schools (2/2)

### Infraestructura Educativa PPP – Uruguay

Construction monitoring and operation monitoring of 3 comprehensive social infrastructure projects in Uruguay, Latin America:

- Educativas 1: 59 buildings (15 kinder gardens and 42 primary schools) in different locations
- Educativas 2: 42 buildings (23 primary schools; 9 professional training centres and 10 sports centres)
- Educativas 3: 42 buildings (15 primary schools and 27 kinder gardens) all around Uruguay

## Social Infrastructure – Case Studies – Prisons (1/2)

### Prison Burg Madel – Germany

Lenders Technical Advice for a newly built PPP prison in Sachsen-Anhalt, Germany. Our team was part of the project from the first tender and still monitors the operational phase of this successful prison PPP.

At the moment we can see the results, real costs, risks and chances 12 years after the launch of the project. The project was awarded to Bilfinger Project Investment and later sold to BBGI.



### Prison Düsseldorf – Germany

Development of the first PPP Prison project in Germany together with a **German–English consultant team**. When PPP was established in Germany, Wolfgang Schlicht supported the German PPP task force and the treasury in setting up the first pilot project, in visiting PPP prisons in UK, leading workshops on how to create output specs and payment mechs. Later, the results have been the basis for all following prison PPPs in Germany.

### Prison Burgdorf – Switzerland

Lenders' Technical Advice for a newly built prison PPP in Switzerland. Sponsor was Bilfinger Project Investments, financing banks KfW und DZ Bank. The project consisted of the design, construction, and O&M of the prison. Our engagement was stopped after BAFO phase.





## Social Infrastructure – Case Studies – Prisons (2/2)

### Northern Territory Security Facility – Luxembourg

Technical Advisor in the acquisition phase on the secondary market by BBGI. TA Europe Partner Sebastian Frohwann was supporting the coordination of the technical advisor from the BBGI headquarter in Luxembourg.

### Avon & Somerset Security Facilities, UK

Technical Advisor in the acquisition phase on the secondary market by BBGI. Sebastian Frohwann was supporting the coordination of the technical advisor from the BBGI headquarter in Luxembourg. The project comprised three police stations including security facilities (prisons) and a shooting range.

