# **Worldwide Activities**



### **CONTACT**

#### **SALZBURG**

Dr. Sauer & Partner GmbH

T. +43 662 879 999 F. +43 662 878 999

Sterneckstrasse 35-37 5020 Salzburg Austria

salzburg@dr-sauer.com

#### LONDON

Dr. Sauer & Partners Ltd.

T. **+44 208 339 7090** 

11 Langley Avenue Surbiton, Surrey KT6 6QH UK

london@dr-sauer.com

### **WASHINGTON D. C.**

Dr. Sauer & Partners Corporation

T. +1 703 707 0700 F. +1 703 707 0703

560 Herndon Parkway, Suite 310 Herndon, VA 20170-5240 USA

washington@dr-sauer.com

### **TORONTO**

Dr. G. Sauer & Partners Corporation

T. +1 647 276 4000

2200 Yonge Street Suite 1004 Toronto, ON M4S 2C6 Canada

canada@dr-sauer.com

### **TEL AVIV**

Dr. Sauer & Partners

T. +972 733903711

Atrium Tower, 18th Floor Zeev Jabotinksy Rd 2 Ramat Gan 52050501 Israel

telaviv@dr-sauer.com



**TUNNEL DESIGN** 

**TEMPORARY WORKS DESIGN** 

**GEOTECHNICAL ENGINEERING** 

**CONSTRUCTION MANAGEMENT** 

**INSTRUMENTATION & MONITORING** 

WATERPROOFING & WATER CONTROL

**TUNNEL REHABILITATION** 

MINING SUPPORT SERVICES

www.dr-sauer.com

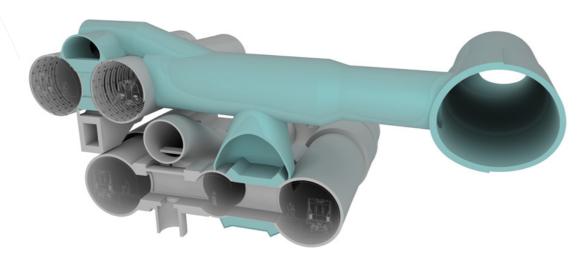
Salzburg | London | Washington | Toronto | Tel Aviv



# **Tunnel Design**



Dr. Sauer & Partners is an independent consultancy specialised in providing design and construction management services for tunnels, shafts and caverns in any type of geology. The company has experience in some of the most challenging tunnelling projects around the world.



A BIM Model – Bank Station Capacity Upgrade, London, UK

# BANK STATION CAPACITY UPGRADE, London, UK

Bank Station is a London Underground station located in the City of London financial district; it is a key interchange served by five lines. The Bank Station Capacity Upgrade (BSCU) aims to relieve heavy passenger congestion during peak hours for boarding, alighting and interchange. The capacity upgrade comprises the construction of a new southbound platform tunnel and associated length of running tunnel for the Northern line, connecting passageways to the existing station tunnels, and the provision of step-free access. The total length of new tunnels is 1,300m with tunnel cross sections that range from 10m<sup>2</sup> up to 90m<sup>2</sup>.





# Dr. Sauer & Partners' Services

Dr. Sauer & Partners designs pioneering underground solutions - delivering innovative, cost-effective and environmentally aware designs.



### **TUNNELLING METHODS**

Dr. Sauer & Partners offers expertise in all areas of tunnelling and for the different tunnelling methods: mined (NATM / SEM / SCL), mechanised tunnelling methods and pressure-face TBMs, open cut methods (Cut & Cover, Top-down).

## **DESIGN SERVICES**

Design services offered by Dr. Sauer & Partners include:

- Feasibility and other technical studies
- Comparative studies: comparing mined / mechanised / Cut & Cover tunnelling methods
- Conceptual and preliminary design
- Final design and bid support services
- Conceptual and detailed cost estimates
- Risk management
- · Value engineering
- Design-build design services
- Construction support services
- Expert advice
- Waterproofing design
- Tunnel ventilation and emergency evacuation design
- Insurance support services
- Claim management



### **VALUE ENGINEERING**

Dr. Sauer & Partners provides a bespoke solution for every scenario, delivering a value-driven design that is both safe and durable. Through value engineering, the following benefits are derived:

- Faster construction
- Reduced materials and spoil transportation
- Reduced commercial risk
- Safer construction