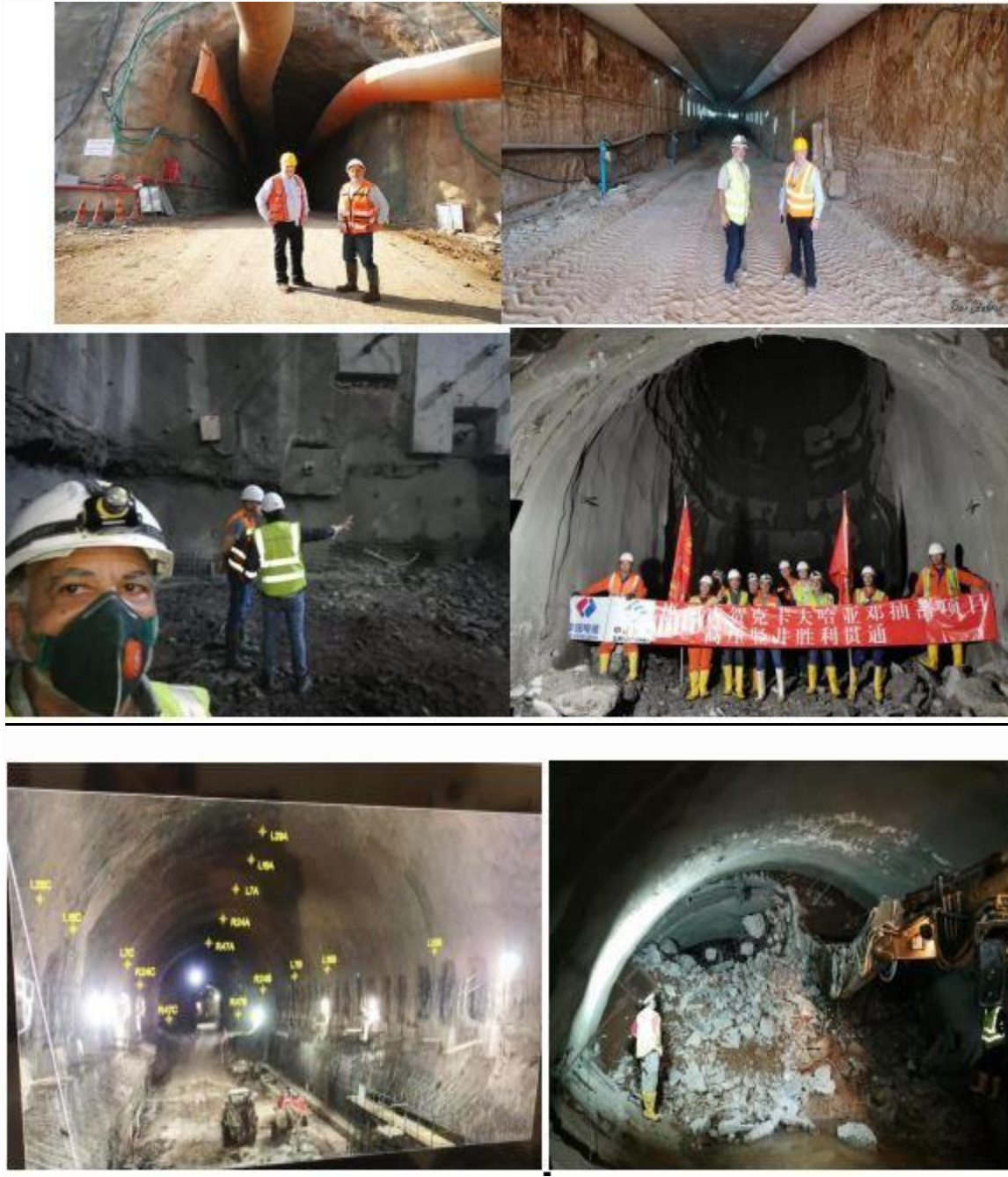


Company Profile: **Sub T Engineers**



Company Profile: **SUB T ENGINEERS**

Sub T Engineers is an Israeli company that was established in 2014, specializing in tunneling, civil, geotechnical and environmental engineering, blast engineering and construction vibrations. The company offers a broad range of engineering services for each stage of the investigation, design and construction phases of mine and civil projects.

The company CEO, **Chris Breeds** Ph.D., P.E., CEng, is a civil engineer with a doctorate in mining engineering from Nottingham University, England. Chris's technical field experience includes numerous projects involving design and management of underground and surface mining, civil and environmental engineering.



For the past 30 years, Chris has been:

- Lecturer and professor of mining engineering
- Underground and surface engineering and construction for coal and hard rock mining projects
- Feasibility studies and conceptual design for mined facilities
- Mine systems analysis
- Mechanical excavation method selection
- Rock engineering and ground support selection
- Shotcrete and concrete materials selection
- Operation logistics and design
- Subsidence engineering
- Geotechnical instrumentation and testing.

The company's manager, **Brian Ages**, is an Israeli licensed civil and mechanical engineer, with over 50 years of experience:



- Supervisor, project engineer, project and construction manager, and department manager
- Expertize in tunneling
- Large civil infrastructures
- Civil & electro-mechanical industrial construction
- Specializing in project financial control and claims management, document control
- Qualified Engineering Contractual Arbitrator
- Coordination of architectural and engineering interfaces
- Overseas work & living experience

Sub T Engineers provides services in consultation, design and management of engineering projects in tunneling and underground engineering, instrumentation and automated monitoring, blasting and blast engineering.

Name of Company..... **Sub T Engineers Ltd.**

Company Registration Number..... 515072700

Class of Company..... Limited Company

Date of establishment (licensed business)... October 2014

Contact person..... Brian Ages

Email..... BAges@subt.co.il

Location..... Pardes-Hana Karkur

Mailing address..... Ankor 49/2 Pardes-Hana Karkur

Phone number..... 054-2478830

Fax number..... 04-6270394

Characteristic Projects:

Engineering Consultation & Design

Engineering Consultation			
	Name of Project	Vendor	Description
1.	Excavation of Ibtin Tunnel Rd.6	Lipsker	Analysis of tender
2.	Pumped Storage Power Station Gilboa	A. A. Shirutim Technim	Engineering Consultation & Design
3.	Pumped Storage Power Station Gilboa	Electra-Solel Boneh Gilboa PSP	Engineering Consultation & Design
4.	Light Rail Tel Aviv Red Line	Danya Civil- Danya Cibus	Red line tunneling analysis for Bnei-Barak Chief Rabbi
5.	Pumped Storage Power Station Gilboa	Oron Pamco- Shura	Preparation of work program for continuation & completion of tunneling
6.	Light Rail Tel Aviv Red Line- the Turkish Alignment	Kolker- Kolker- Epstein	MONITORING - Building Condition Survey and Building Damage Assessment Analysis, design and preparation of tender and contract documents and specifications. Review and approval of work specifications and methods. Monitoring of the project
7.	Pumped Storage Power Station Kohav Ha`Yarden	LUDAN Engineering Israel Ltd	Review and approval of project design
8.	Road 16 Jerusalem	Mahod Engineering	Examination of tunneling tender, preparation of bill of quantities. Preparation of alternative tunnel design and adjustment of bill of quantities.
9.	Shoham building site	Magnezi	Preparation of Site Law
10.	Navon train station Jerusalem	Yaron- Shimoni-Shaham	Vibration monitoring consultation
11.	Light Rail Tel Aviv-Green line	STAR Engineers	Tunneling tender analysis
12.	Light Rail Tel Aviv- Red line	Tadmor- Levi NTA	Professional expert opinion
13.	Connection tunnel between the Justice Ministry and Bank of Israel - Jerusalem	Ashiv Betahon	Supervision and blast monitoring

14.	Kochav HaYarden Pumped Storage Power Station	Sinohydro PowerChina	Consultation and engineering services for the EPC contractor. Signing of building permit as “Responsible for Construction of the Structural Frame” for the underground works
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Project Management

Project Management			
	Name of Project	Vendor	Description
1.	“Tunnel Road”, Highway 60 South, “the Long Tunnel”	Gili & Yoel Azaria	Project Manager

Blast Monitoring, Building & Crack Monitoring

Blast Monitoring, Fracture monitoring			
	Name of Project	Vendor	Description
1.	Generi 5- connection tunnel to Ministry of Foreign Affairs - Jerusalem	ALPHA	Blast and vibration monitoring
2.	Light Rail Tel Aviv Red line- the Turkish Alignment	Kolker- Kolker- Epshtein	Preparation of documents and work specifications. Monitoring design and follow-up during 5 year construction period.
3.	Municipal Park “Hagiborim Stream” Haifa	Re`em Infrastructure & Development	Long-term Vibration and Crack monitoring of the cliffs
4.	Excavations at building sites in and around Jerusalem : Beitar Ilit, National Library, Jerusalem theatre, Eden Theatre, Mt. Hotzvim, Ha`Turim site, Mobileye site, Light Rail depot 25- Jerusalem	C4 Ha`Hotzvim	Preparation of Site Law, blast vibration monitoring
5.	Gas pipeline excavations Mesilat Tzion- Jerusalem	Kobi Tzion	Preparation of Site Law, vibration monitoring
6.	Generi 5- connection tunnel to Foreign Affairs Ministry - Jerusalem	Technasol- Lipsker- Geotechnics	Blast monitoring
7.	Bar Lev industrial area	Ashiv Bitachon	Preparation of Site Law, blast vibration monitoring
8.	Slopes above Beit Alfa quarry	Beit Alfa Quarry	Monitoring of open fissures and real-time collapse warning
9.	Connection tunnel between Justice Ministry and Bank of Israel - Jerusalem	Ashiv Bitahon	Construction & blasting supervision, vibration monitoring

10.	Hagit Gas Power Station-fuel line crossing	SICIM	Preparation of Site Law, vibration monitoring
11.	18" Gas pipeline – excavation Mesilat Tzion Jerusalem	SICIM	Preparation of Site Law, vibration monitoring
12.	36" Gas pipeline excavation - Alon Ha`Tavor	SICIM	Preparation of Site Law, vibration monitoring
13.	Sarona Hotel, Sarona, Tel-Aviv	Nitzba Holdings	Preparation of monitoring strategy, monitoring follow-up, appointed as Monitoring Engineer
14.	Connection tunnel between Lustice Ministry and Bank of Israel - Jerusalem	Danya Cibus	Tunneling design, primary supervision
15.	Gas pipeline excavation - Yokne`am segment	Byron Engineering	Preparation of Site Law, vibration monitoring
16.	Ha`Imahot building site, Tiberias	Yehezkel Morad	Preparation of Site Law, vibration monitoring
17.	Efron 9 hotel building site, Haifa	Gazal Halabi	Vibration monitoring
18.	Gas pipeline excavation – Shoval-Eshel Ha`nasi	Chemo-Aharon	Preparation of Site Law, vibration monitoring – on-going work to date
19	Gas pipeline excavation – Dudaiim – Eilat-Ashkelon Pipeline crossing	Chemo-Aharon	Preparation of Site Law, vibration monitoring
20	Rechasim expansion	Nitvei Zafon	Preparation of Site Law, vibration monitoring
21	MADATECH	Madatech Technical Museum - Haifa	Preparation of Site Law, vibration monitoring of sensitive internal demolitions
22	Yigal Alon TA building site	Gav-Yam	Diaphragm wall excavation (hydromill) site law and monitoring
23	Givat Olga Interchange	HaTashan (Fuel line infrastructure)	Site Law and construction Monitoring
24	Sorek~Jerusalem 36" Gas Pipe Line	ROTEM Natural Gas	Site Law and Excavation vibration monitoring
25	Cronin House - Jerusalem	A-to-Z Project Management	Multiple Building Condition Surveys, Long-term construction vibration monitoring and analysis
26	Revaya Quarry	Elyakim Ben-Ari	Blasting Site Law
27	Netaphim – Underground Storage Caverns	Rolzur	Blasting Site Law analysis, air-blast measurements
27	36" Gas Pipeline Installation – Eshel Hanasi - Shuval	Chemo-Aharon	Site Law and Vibration Monitoring of rock excavation
28	36" Gas Pipeline Installation - Shalvah	Chemo-Aharon	Vibration Monitoring of rock excavations
29	36" Gas Pipeline Installation – DOR-HAGIT	Chemo-Aharon	Site Law, and Vibration Monitoring of rock excavation

30	36" Gas Pipeline Installation – Dimona-Rotem 2033	Chemo-Aharon	Site Law, and Vibration Monitoring of rock excavation
31	MANARA Pump-Storage Hydro-electric plant – Upper Reservoir	TOURAB	Blasting Site Law
32	Stalactite/Stalagmite Caves	National Parks Authority	Consulting for construction vibration monitoring
33	MANARA Pump-Storage Hydro-electric plant – Upper Reservoir	TOURAB	Upper Reservoir blasting monitoring in the Kibbutz
34	36" Gas Pipeline Installation – Dimona-Aroer	H.Z. Hershkovitz	Site Law, and Vibration Monitoring of rock excavation
35	Tira Railway Station – Eastern Line	AMZ-SHEMESH	Site Law for Dynamic Compaction
36	Ben Baba Jerusalem building site	EVEN AMI	Blasting Site Law
37	Moshav Dishon – housing expansion	TAVOR BAR	Site Law and Blasting monitoring
38	36" Gas Pipeline Installation – DOR-HAGIT	Chemo-Aharon	Additional Vibration Monitoring of rock excavation