TUNNELPRO

COMPANY PRESENTATION - 2023

TUNNELPRO

COMPANY OVERVIEW

MISSION

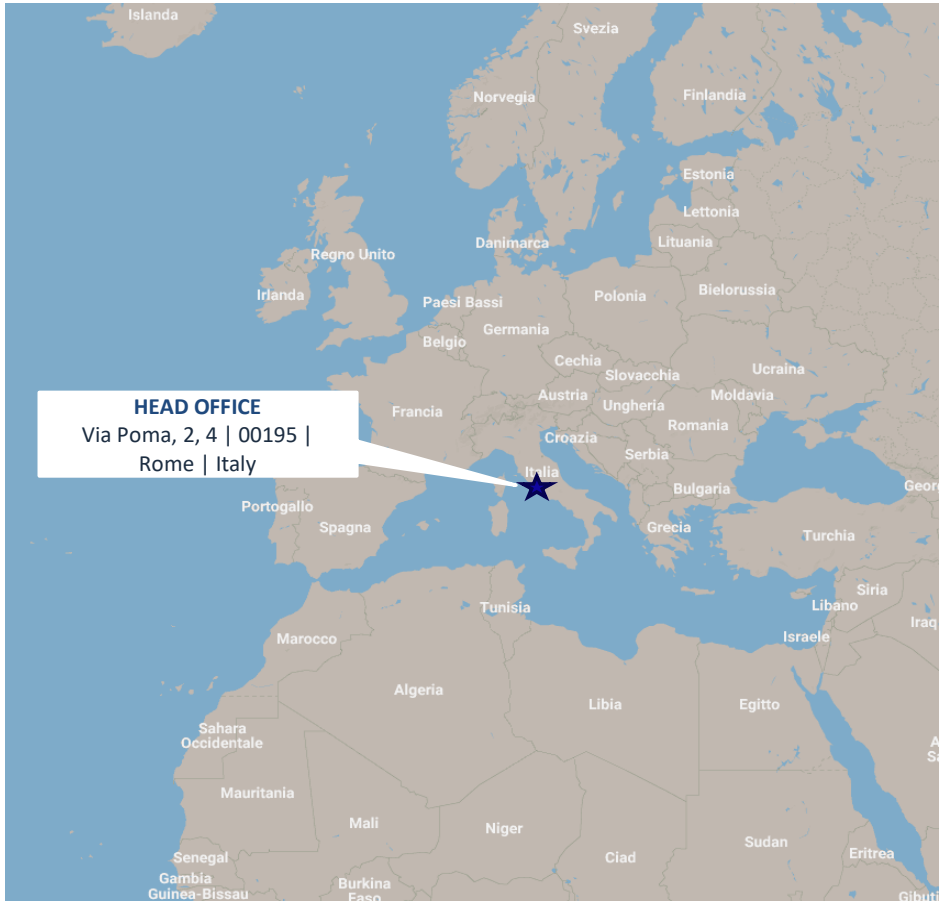
Applying advanced techniques and sustainability principles in the world of tunnelling

VISION

Tunnels as passages towards a more safe and sustainable future for the users

TunnelPro S.p.A. is a subsidiary of Ghella S.p.A.
The company know-how includes experiences related to the excavation of tunnels, design and construction of machines for mechanized excavation, technical assistance in the context of excavation projects in urban and extra-urban environments.
From 2022 TunnelPro S.p.A. participates in public tenders and private contracts, nationally and internationally, and is prepared to be a dynamic player in the world of excavation, exporting its consolidated experience in the following core businesses:

- ❑ **HEAD OFFICE TECHNICAL SERVICES**
  (Preliminary design for tender, detailed design, project management)
- ❑ **ONSITE TECHNICAL SERVICE**
  (TBMs and auxiliary equipment start-up and operation)
- ❑ **DESIGN AND MANUFACTURING OF MECHANIZED SYSTEMS**
  (TBMs, auxiliary equipment, prototypes for mining)
- ❑ **EXCAVATION PROJECTS**
  (Railway infrastructures, renewable energy plants, civil works)
- ❑ **RESEARCH AND DEVELOPMENT PROJECTS**



TUNNELPRO

QHSE CERTIFICATIONS & QUALIFICATIONS

ISO 9001:2015

DNV

CERTIFICATO DI SISTEMA DI GESTIONE

Si certifica che il sistema di gestione di
TunnelPro S.p.A.
Via Carlo Poma 4 - 00195 Roma (RM) - Italia

È conforme allo Standard:
ISO 9001:2015

Questa certificazione è valida per il seguente campo applicativo:
Servizi di ingegneria, progettazione, consulenza e supervisione nell'ambito della costruzione di opere in sotterraneo. Progettazione, costruzione, revisione, montaggio, manutenzione e supervisione all'utilizzo di macchine per lo scavo meccanizzato (TBM) e attrezzature ausiliarie di cantiere.
Progettazione, costruzione e manutenzione di opere infrastrutturali per la mobilità (metropolitane, ferrovie), opere d'arte nel sottosuolo, opere idrauliche, nell'ambito di appalti o servizi pubblici o privati.
(IAF: 18, 28, 34, 35)

ACCREDIA

ISO 14001:2018

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Utilizzo e supervisione all'utilizzo di macchine per lo scavo meccanizzato (TBM) e attrezzature ausiliarie di cantiere.
Progettazione, costruzione e manutenzione di opere infrastrutturali per la mobilità (metropolitane, ferrovie), opere d'arte nel sottosuolo, opere idrauliche, nell'ambito di appalti o servizi pubblici o privati, attraverso le fasi di: i) analisi geotecniche, ii) cantierizzazione, iii) scavo meccanizzato con TBM e macchine speciali iv) montaggio del rivestimento del tunnel
(IAF: 18, 28, 34, 35)

ACCREDIA

ISO 45001:2018

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(IAF: 18, 28, 34, 35)

ACCREDIA

SA8000:2014

CERTIFICAT ◆ CERTIFICADO ◆ CERTIFICAT ◆ ZERTIFIKAT ◆ CERTIFICATE

CERTIFICATO
Nr. 50 100 16783

Si attesta che
TUNNELPRO S.p.A.

UBICATA IN:
VIA CARLO POMA 4
IT - 00195 ROMA (RM)

RISULTA AVERE UN SISTEMA DI GESTIONE ADEGUATO ED EFFICACE CONFORME AI REQUISITI DELLO STANDARD PER I SISTEMI DI GESTIONE PER LA SOCIAL ACCOUNTABILITY
SA8000:2014

IL CAMPO DI APPLICAZIONE RIPORTATO SUL PRESENTE CERTIFICATO SI REFERISCE ALLA PROTEZIONE E PROMUOVIMENTO DEL PERSONALE CHE OPERA PER QUESTA ORGANIZZAZIONE, INCLUSO IL PERSONALE IMPIEGATO DALL'ORGANIZZAZIONE STESSA PER LE SEGUENTI ATTIVITÀ:

Servizi di ingegneria, progettazione, consulenza e supervisione nell'ambito della costruzione di opere in sotterraneo. Progettazione, costruzione, revisione, montaggio, manutenzione e supervisione all'utilizzo di macchine per lo scavo meccanizzato (TBM) e attrezzature ausiliarie di cantiere, anche tramite l'utilizzo di outsourcers. Progettazione, costruzione e manutenzione di opere infrastrutturali per la mobilità, opere d'arte nel sottosuolo, opere idrauliche, nell'ambito di appalti o servizi pubblici o privati, inclusi opere edili e impianti accessori, anche tramite l'utilizzo di outsourcers

Per l'Organismo di Certificazione
TÜV Italia S.r.l.

Validità
Dal: 19/10/2022
Al: 18/10/2025

L'Audit è stato condotto e supervisionato da:
Maria Teresa Corbasso
SA8000 Lead Auditor

Data emissione
19/10/2022

Francesco Scarlata
Direttore Divisione Business Assurance

ISO 30415:2021

STATEMENT ◆ ERKLÄRUNG ◆ DÉCLARATION ◆ DECLARACIÓN ◆ DICHIARAZIONE

DICHIARAZIONE DI VALIDAZIONE
Nr. IT-VAL-0002- Rev.00

Si attesta che la seguente asserzione fatta da

TUNNELPRO S.p.A.

VIA CARLO POMA 4
IT - 00195 ROMA (RM)

È stata sottoposta a validazione di terza parte.

L'organizzazione ha implementato un approccio organizzativo all'integrazione della D&I nel posto di lavoro secondo la linea guida internazionale ISO 30415

DATA EMISSIONE
19/10/2022

Per l'Organismo di Validazione:
TÜV Italia S.r.l.
Gruppo TÜV SÜD
Via Giosuè Carducci, 125 pal.23
20099 Sesto S. Giovanni (MI)

Francesco Scarlata
Direttore Divisione Business Assurance

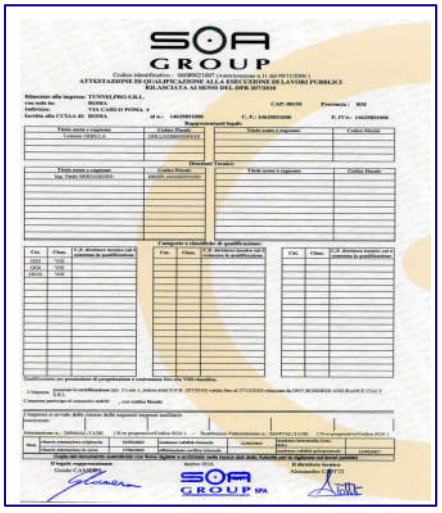
ECOVADIS

ecovadis

TUNNELPRO SPA
è stata assegnata a
Platinum medal
come riconoscimento del rating EcoVadis
- DICEMBRE 2022-

PLATINUM Top 1%
2022
ecovadis
Sustainability Rating

SOA



SOA GROUP

ATTESTAZIONE DI QUALIFICAZIONE ALLA ESECUZIONE DI LAVORI PUBBLICI
RILASCIATA AI SENSI DEL DPR 207/2010

SOA GROUP SPA

TUNNELPRO

COMPANY BACKGROUND

Established in 2018, TunnelPro is a unique actor in the world of tunnelling.

Throughout the years, the company's management, structure and know-how has played a keyrole in many worldwide projects involving underground mechanized excavations.

TBM	50+	TBM MANUFACTURED
Project	60+	Projects COMPLETED
Excavation	350+	km EXCAVATED

TUNNELPRO

TUNNELPRO WORLDWIDE

TUNNELPRO

TBM MANUFACTURING, DESIGN & OVERHAULING

1999


Italy


Ethiopia


Ethiopia


Italy


Hong Kong


Russia


Spain


Chile


Iran


India


Iran


Turkey


Panama

Turkey


Denmark


Italy


Malaysia


Italy

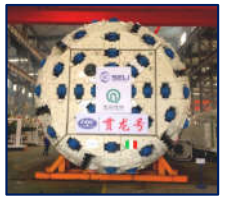

Italy


Italy


China


Ecuador


China


China


China


Italy


Thailand


India


Philippines


South Africa

2019

TBM Double Shield

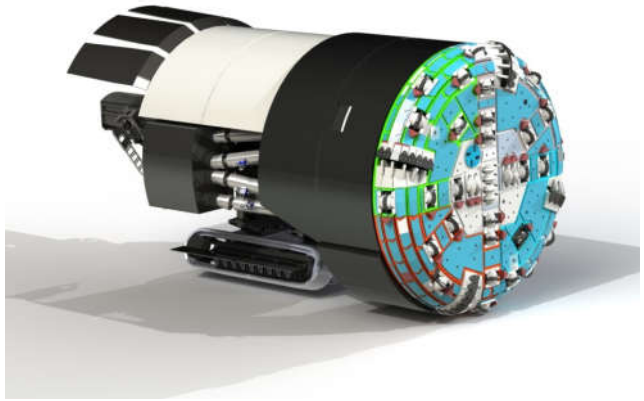
TBM Earth Pressure Balance

TBM Dual Mode

Mobile TBM

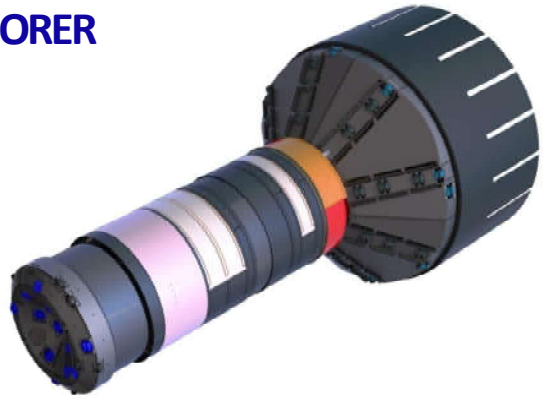
YEAR	JOB	CLIENTS	COUNTRY	TYPE
2018 / 19	MOBILE TBM	MASTERDRILLING	SOUTH AFRICA	MOBILE TBM

MOBILE TBM



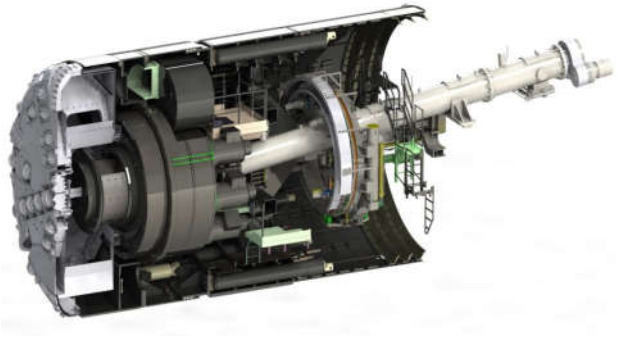
YEAR	JOB	CLIENTS	COUNTRY	TYPE
2018 / 19	VERTICAL SHAFT	MASTERDRILLING	SOUTH AFRICA	VERTICAL BORER

BLIND SHAFT BORER



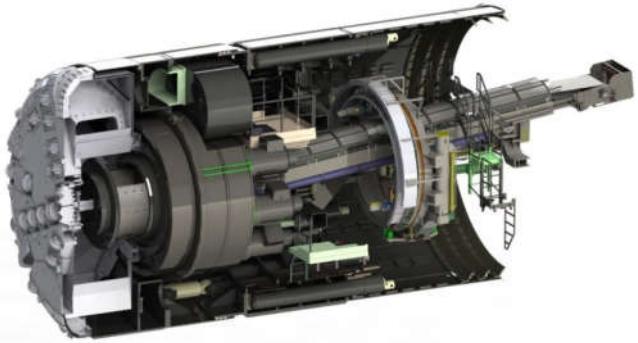
YEAR	DUAL MODE TBM
2018	SCREW CONVEYOR MODE

SCREW CONVEYOR MODE

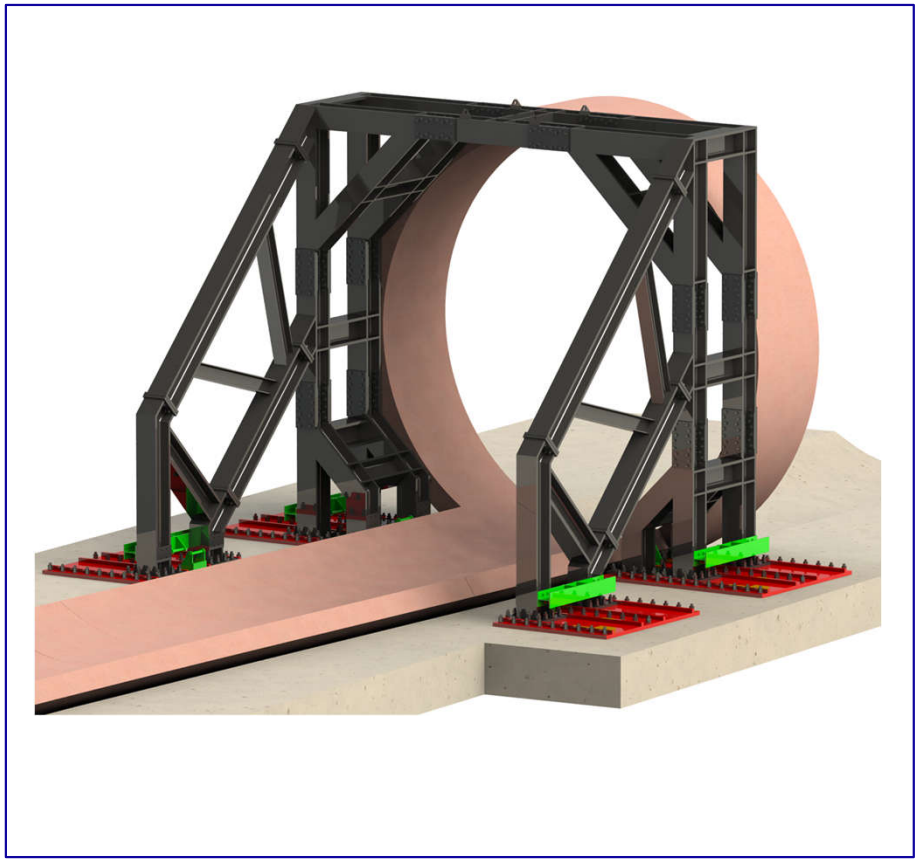


YEAR	DUAL MODE TBM
2018	TBM CONVEYOR MODE

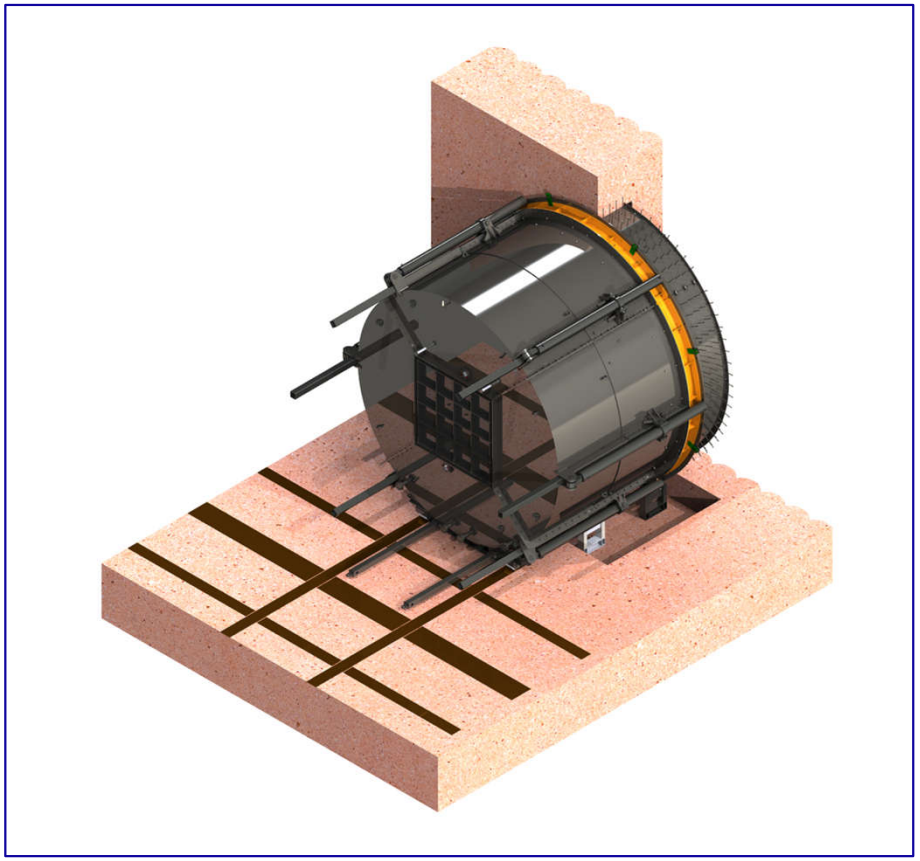
BELT CONVEYOR MODE



YEAR	TBM START UP EQUIPMENT
2019	TBM LAUNCHING FRAME



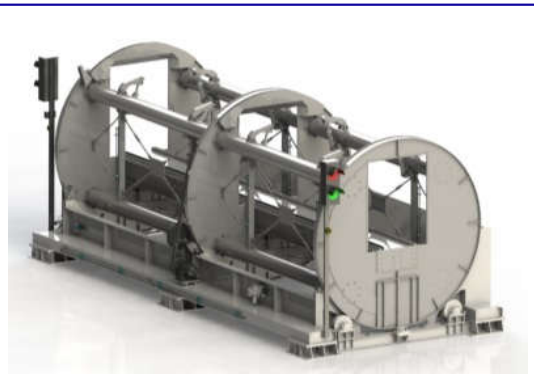
YEAR	TBM BREAKOUT
2021	TBM PRESSURE BREAKOUT VESSEL



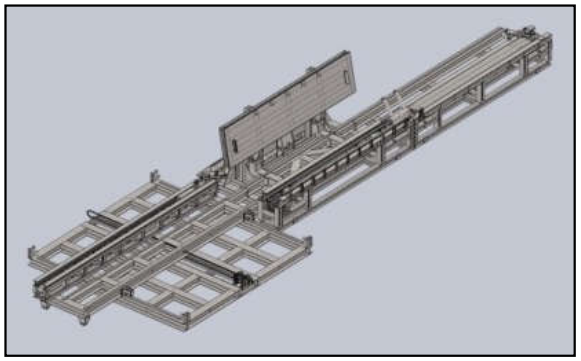
TUNNELPRO

SPECIAL EQUIPMENT FOR TUNNELING

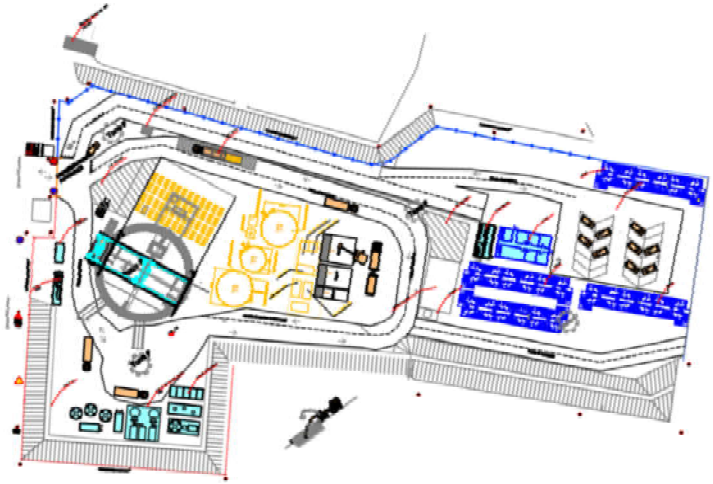
YEAR	MUCK CARS TIPPLER
2017	ROTATIVE MODE



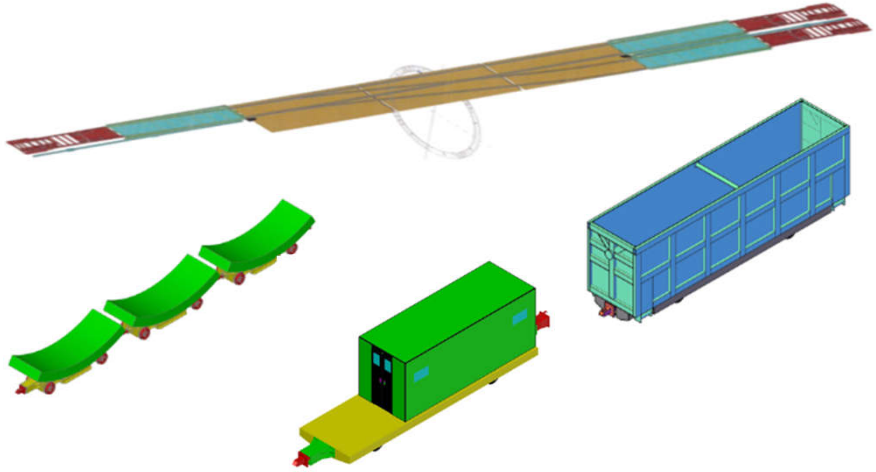
YEAR	MUCK CARS TIPPLER
2017	TILTING MODE



YEAR	TBM YARD DESIGN
2022	LOGISTIC AND EQUIPMENT DESIGN



YEAR	ROLLING STOCK EQUIPMENT
2020	TRAINS SWITCHES & TRAINS CARS

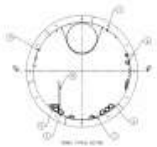


Central Interceptor – Auckland (NZ)

CLIENT	GHELLA ABERGELDIE JV
CONTRACT	Equipment supply
CONTRACT AMOUNT	1.000.000 € (total amount estimated)
START	04/2020
COMPLETION	09/2021
WORKS PERFORMED BY	TUNNELPRO

MAJOR WORKS	• The Central Interceptor is a wastewater tunnel that will run between Grey Lynn and the Mangere Wastewater Treatment Plant. The tunnel will run underground at a depth of between 15 and 110 meters. It will cross the Manukau Harbour at about 15 meters below the seabed. Along the route it will connect to the existing wastewater network, which will divert flows and overflows into the tunnel. • The Works include a 14.7km long main tunnel excavated with a 5.45 m diameter Earth Pressure Balance Tunnel Boring Machine (EPB TBM) and two underground links of overall 4.3km excavated with two micro-TBMs, of the diameter of approximately 3m each. The line will encounter 16 shafts reaching up to a depth of 80 meters, as well as numerous connecting sewers, chambers, control facilities and air treatment facilities. • The project provides a supersized wastewater tunnel that will significantly reduce waste water overflows into central Auckland's waterways. The increased capacity in the wastewater network also provides for future growth and development on the Auckland Isthmus for the next 50 years and beyond.

CONSTRUCTION METHODS AND EQUIPMENT	Excavation by EPB TBM type

TECHNICAL SPECIFICATION OF THE SUPPLY	TBM thrust system including: • Steel frames • Hydraulic plant • Electric plant • TBM interface system	
	Mobile and fixed californian switches including: • Steel frames • Hydraulic plant • Electric plant	
	Tunnel supports including: • walkways • electric cables and boxes • piping • rails sleepers	

Hinkley Point C – Hinkley (UK)

CLIENT	Balfour Beatty
CONTRACT	Technical service
CONTRACT AMOUNT	650.000 € (total amount estimated)
START	10/2020
COMPLETION	2023
WORKS PERFORMED BY	TUNNELPRO

MAJOR WORKS	The project is one of the most complex marine engineering projects currently taking place in the world to support the construction of the first new nuclear power station built in the UK in more than 20 years. The project will see the construction of three tunnels under the seabed that will supply the two reactors at Hinkley Point C with cooling water and then discharge it back into the Bristol Channel. Intake 1 & 2 Tunnel Diameter: 6m Internal Diameter (ID); Tunnel Length: both approx. 3500m; Outfall Tunnel Diameter: 7m (ID); Tunnel Length: approx. 1800m;

CONSTRUCTION METHODS AND EQUIPMENT	Excavation by EPB TBM type

TECHNICAL SPECIFICATION OF THE SERVICE	On-site support and Tunnelpro Head Office support including: • organization and monitoring of the programming and progress of the works • the production of short-term programs for the launch of the two TBM's • TBM Progress Meetings o discuss TBM activity/actions with the designer, client, geotechnical engineers, surveyors • drawings and specification review • the Materials and Plant selection review • Methods Engineering • Drawings and technical studies. Sketches and layout drawings • First Draft Design • Procurement Specifications

Hanoi Metro Line CP03 – Hanoi (VTN)

CLIENT	FECON corporation
CONTRACT	Technical service
CONTRACT AMOUNT	3.500.000 €
START	10/2020
COMPLETION	12/2022
WORKS PERFORMED BY	TUNNELPRO

MAJOR WORKS	The Hanoi Pilot light – Metro line works is composed by n°2 parallel tunnel with a length of 2.925 m each. The TBM launching is located at Station 9 and the disassembly will be at Station 12 (S12). The two EPB (Earth Pressure Balance) TBM, with an excavation diameter of 6,58m, will pass the intermediate station n°10 and n°11 (S10 e S11).

CONSTRUCTION METHODS AND EQUIPMENT	Excavation by EPB TBM type

TECHNICAL SPECIFICATION OF THE SERVICE	• a) Yard & TBM production analysis and optimization
	• b) Spare Parts analysis
	• c) Procurement requirement
	• d) TBM Data Analysis
	• e) Tunnel Excavation supervision
	• f) TBM performance optimization
	• g) TBM shifts management and optimization
	• h) Manpower Management
	• i) Yard equipment maintenance
	• j) Consultancy regarding the review of all procedures and methods
	• k) Yard equipment and plants assembly
	• l) TBM assembly and strart-up
	• m) Tunnel Construction
	  ○ i. TBM Operation (excavation, lining installation, etc,)
	  ○ ii. TBM maintenance
	  ○ iii. TBM disassembly
	  ○ iv. Tunnel utilities removal (wrang, piping, ducts, and supports)
	  ○ v. Yard equipment and plant removal

Mae Ngat – Mae Kuang Hydro Project - Thailand

CLIENT	UNIQUE ENGINEERING AND CONSTRUCTION PCL
CONTRACT	TBM SUPPLY – TECHNICAL SERVICE – SPARE PARTS SUPPLY
CONTRACT AMOUNT	€ 7.830.605,00
START	06/2016
COMPLETION	
WORKS PERFORMED BY	Seli Technologies – from 11/2018 TunnelPro

MAJOR WORKS	• Construction of a 10.500 m long hydraulic tunnel, with a boring diameter of 4,93 m • Tunnel lining with 25 cm thick precast concrete segments.

CONSTRUCTION METHODS AND EQUIPMENT	Excavation by DSU TBM type

TECHNICAL SPECIFICATION OF THE TBM	Boring diameter	4.93 m
	Cutters	19" / ripper
	Maximum thrust	26.000 kN (@350bar)
	Cutterhead drive	electric
	Power	no. 6 x 315kW
	Cutterhead torque	2.552 kNm at 7 RPM
	Boring stroke	

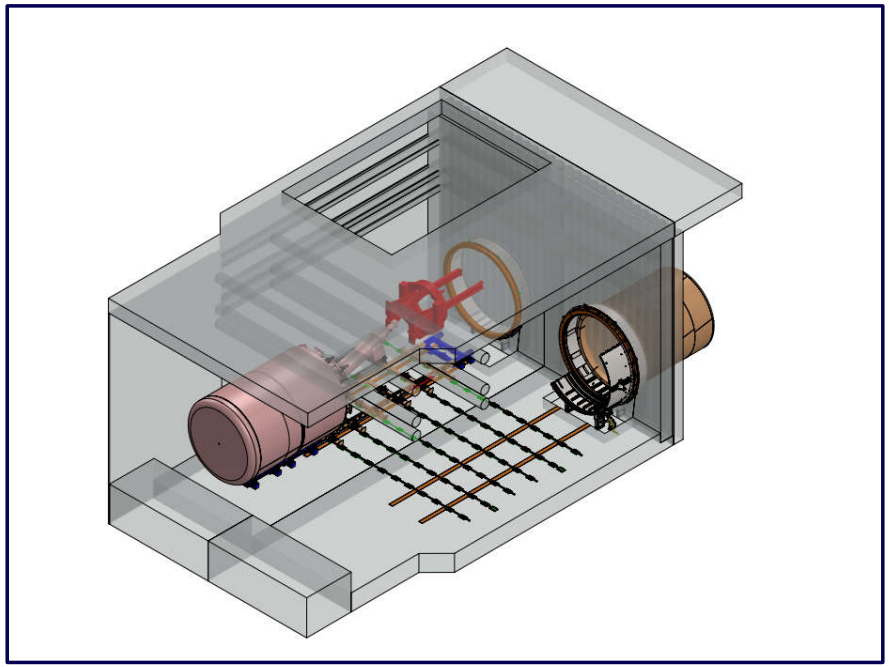
TUNNEL LINING	Precast concrete segments; N. 4 hexagonal segments

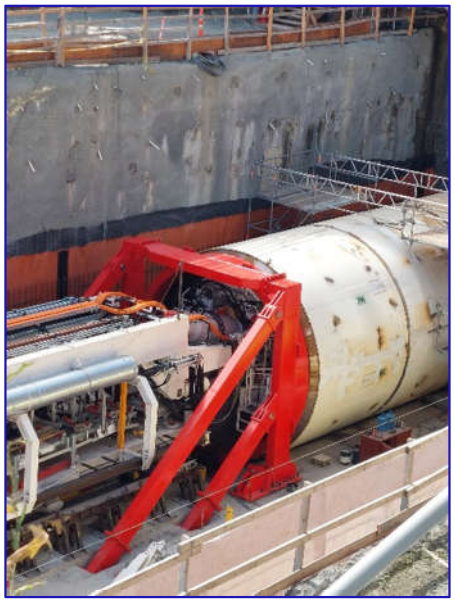
GEOLOGY	Quarzitic sandstone thinly bedded intercalation of siltstone and shale

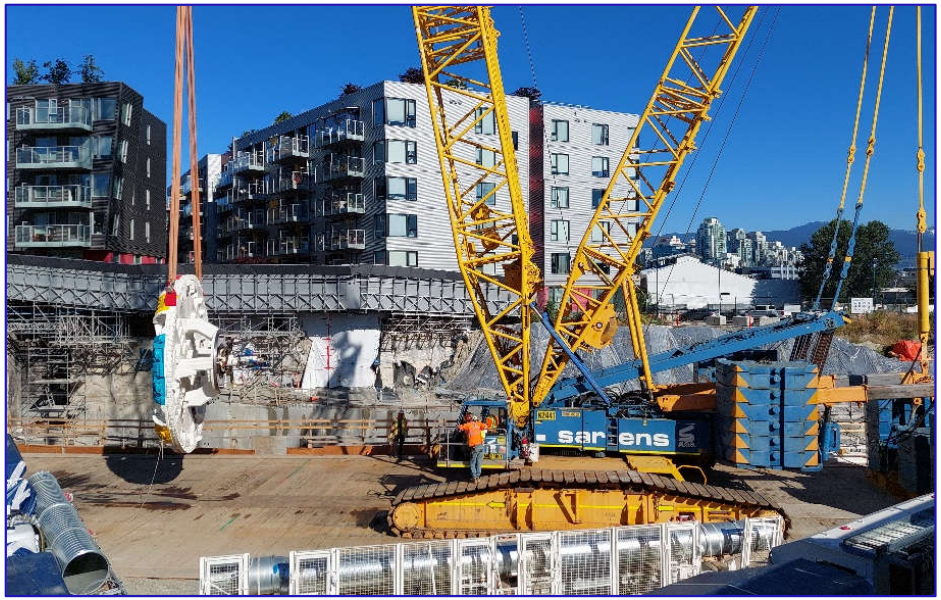
TUNNELPRO

Technical Design of Assembly, Start-up and Disassembly of TBMs

PROJECT	Broadway Subway Project
YEAR	2022
LOCATION	Canada (Vancouver)
TBM TYPE	EPB
EXCAV. Ø	6.00 m



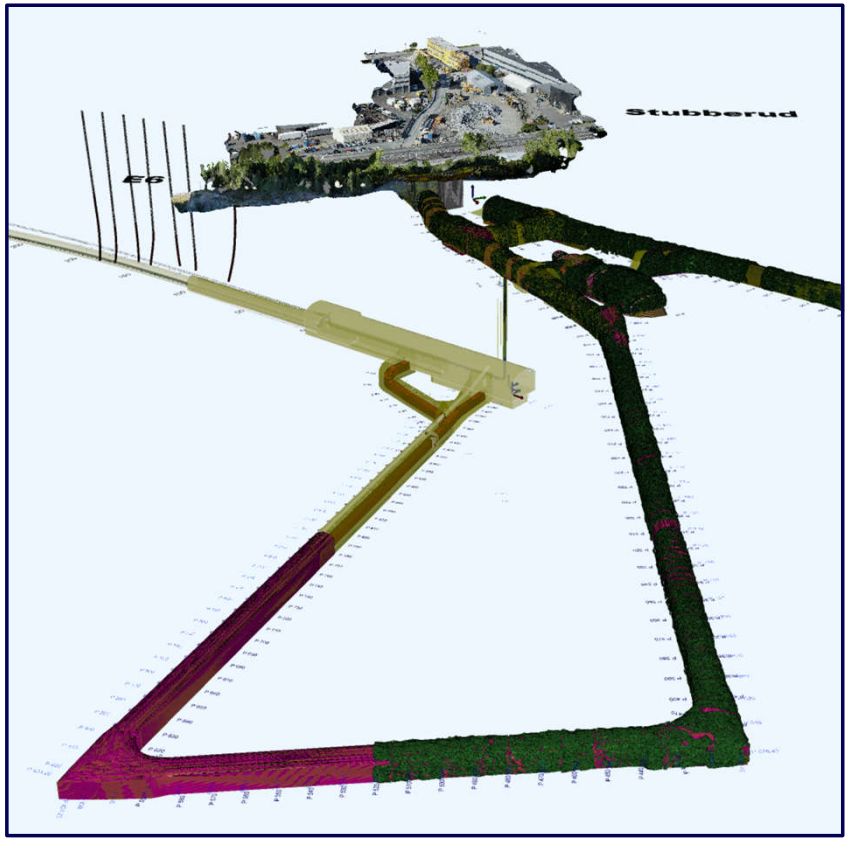


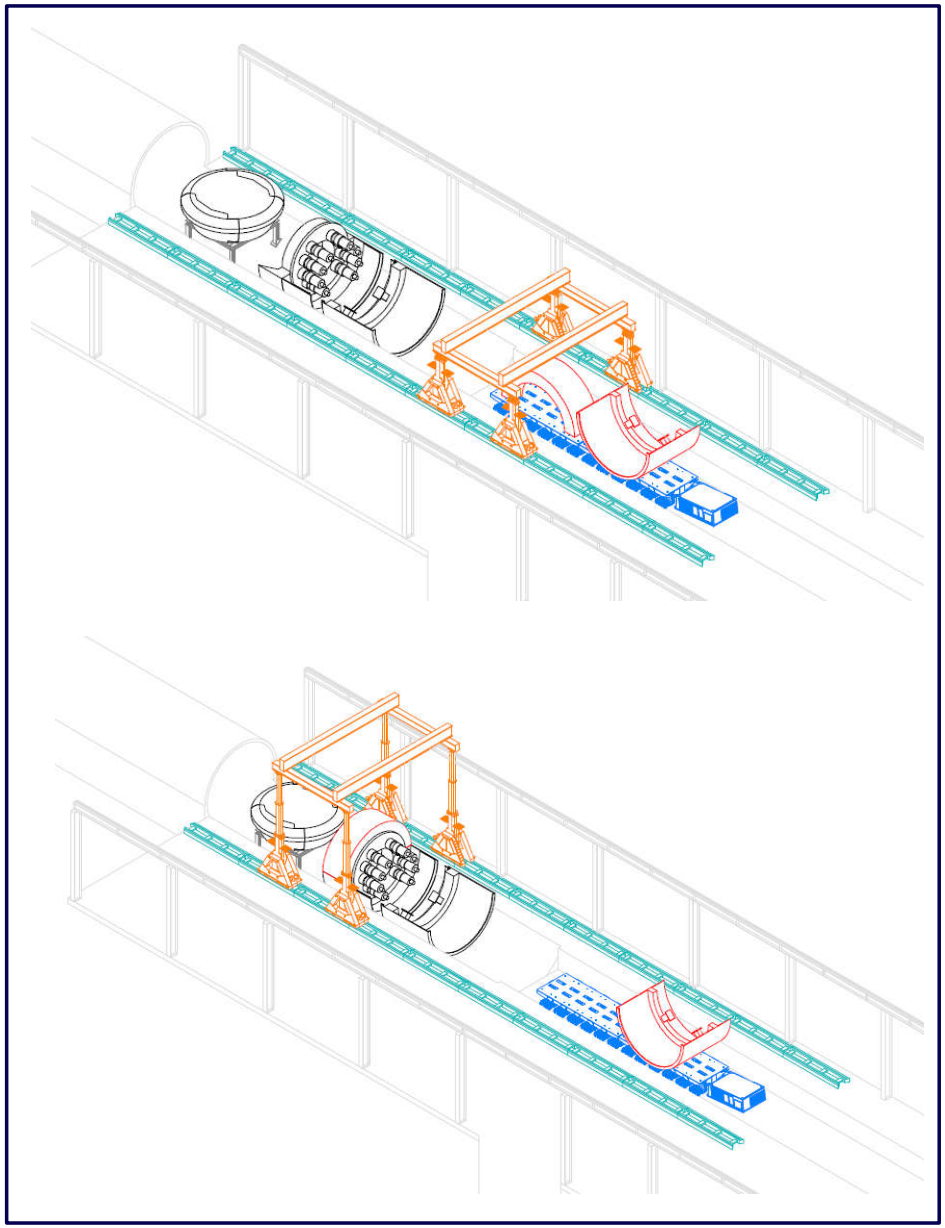


TUNNELPRO

Technical Design of Assembly, Start-up and Disassembly of TBMs

PROJECT	E6 Clean water tunnel
YEAR	2021
LOCATION	Norway (Oslo)
TBM TYPE	Double Shield
EXCAV. Ø	7.04 m

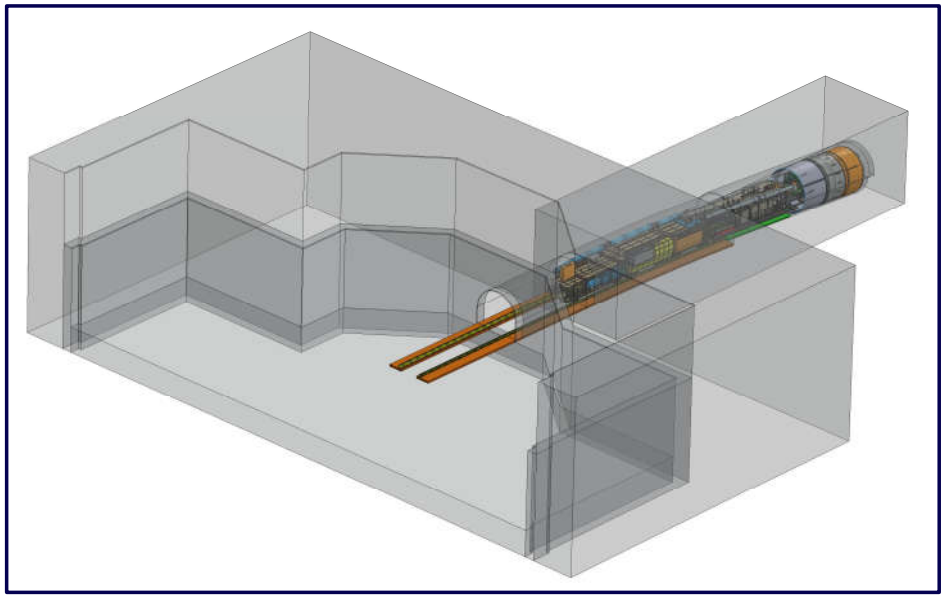




TUNNELPRO

Technical Design of Assembly, Start-up and Disassembly of TBMs

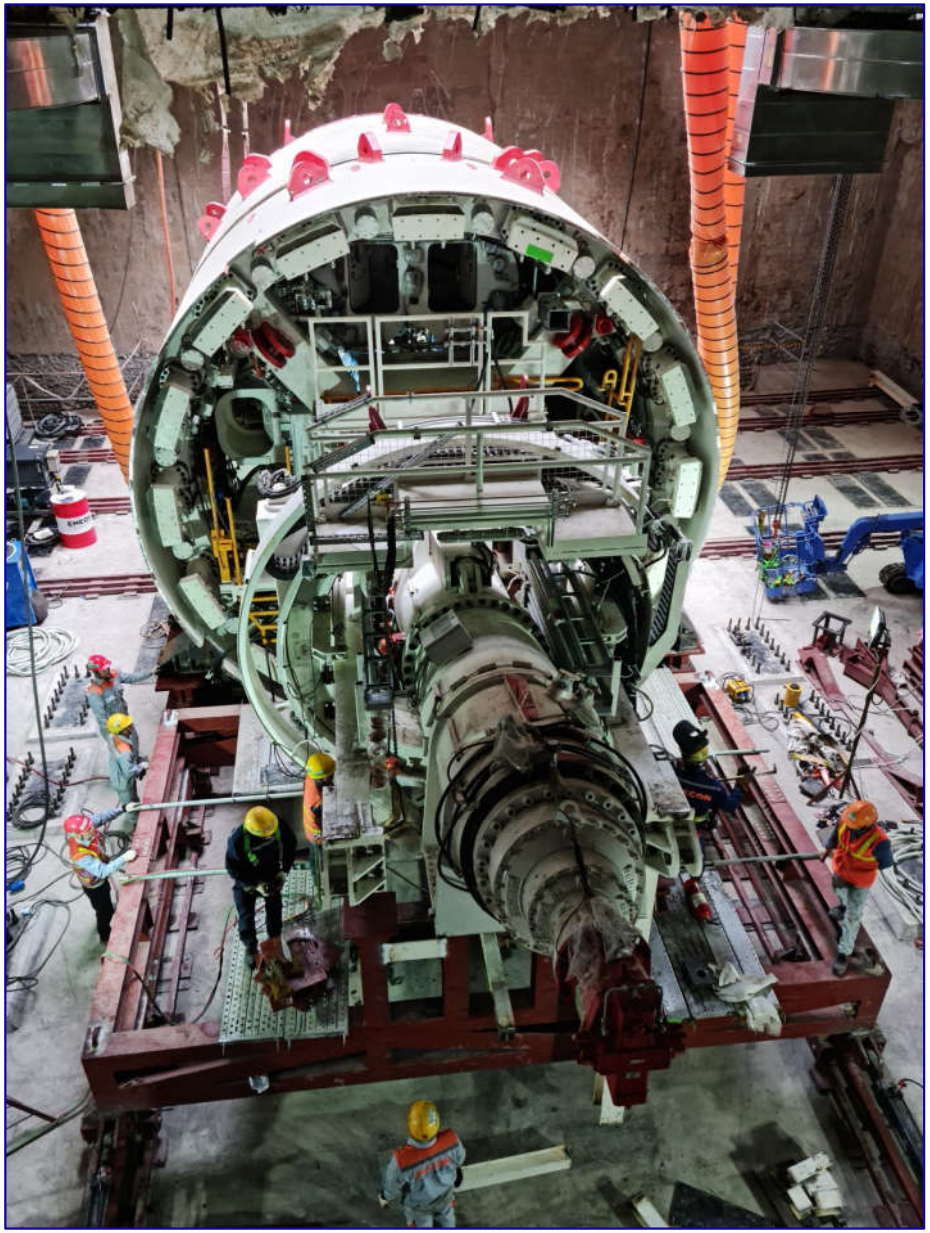
PROJECT	Hinkley Point C
YEAR	2020
LOCATION	United Kingdom
TBM TYPE	EPB
EXCAV. Ø	8.06 m



TUNNELPRO

Technical Design of Assembly, Start-up and Disassembly of TBMs

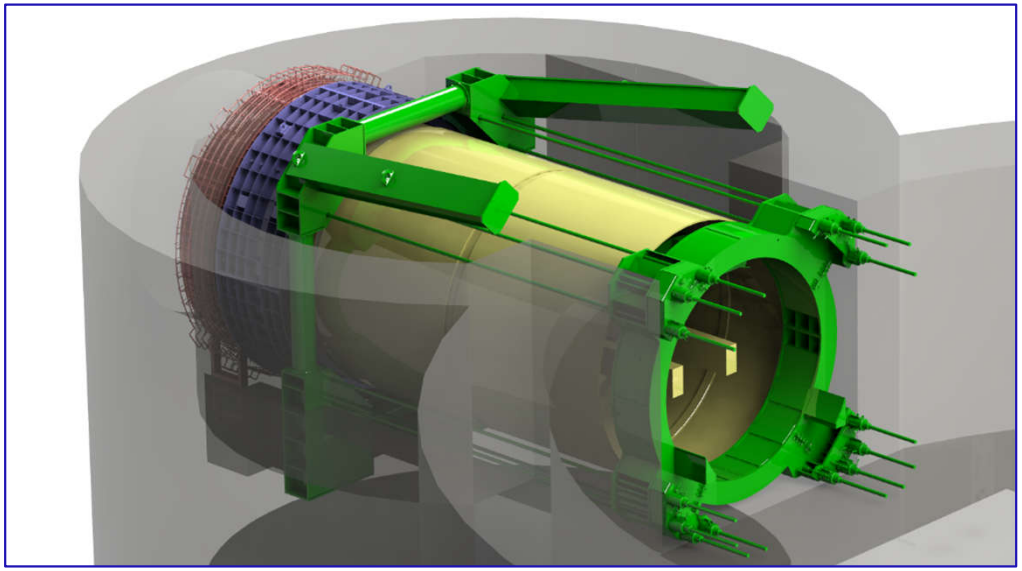
PROJECT	Hanoi Pilot Light Metro Line
YEAR	2019
LOCATION	Vietnam (Hanoi)
TBM TYPE	EPB
EXCAV. Ø	6.58 m

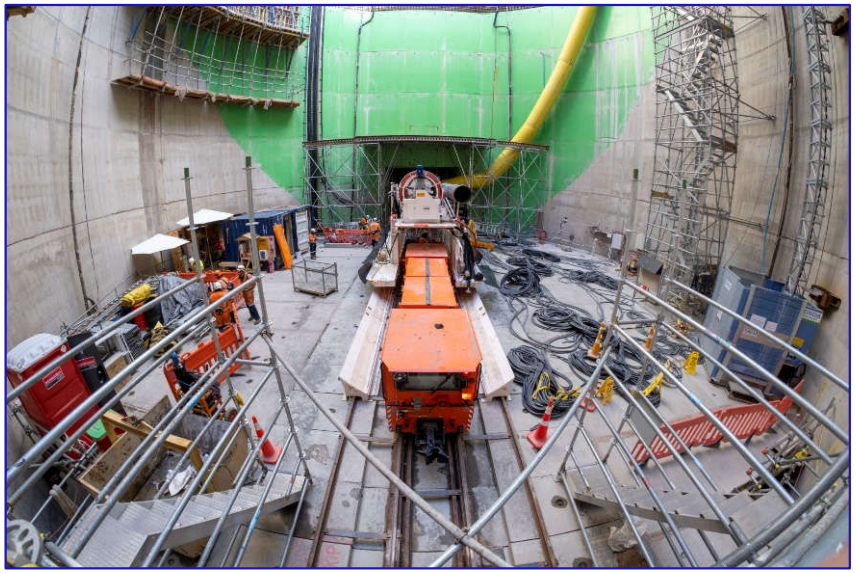


TUNNELPRO

Technical Design of Assembly, Start-up and Disassembly of TBMs

PROJECT	Auckland Central Interceptor
YEAR	2018
LOCATION	New Zealand (Auckland)
TBM TYPE	EPB
EXCAV. Ø	5.45 m

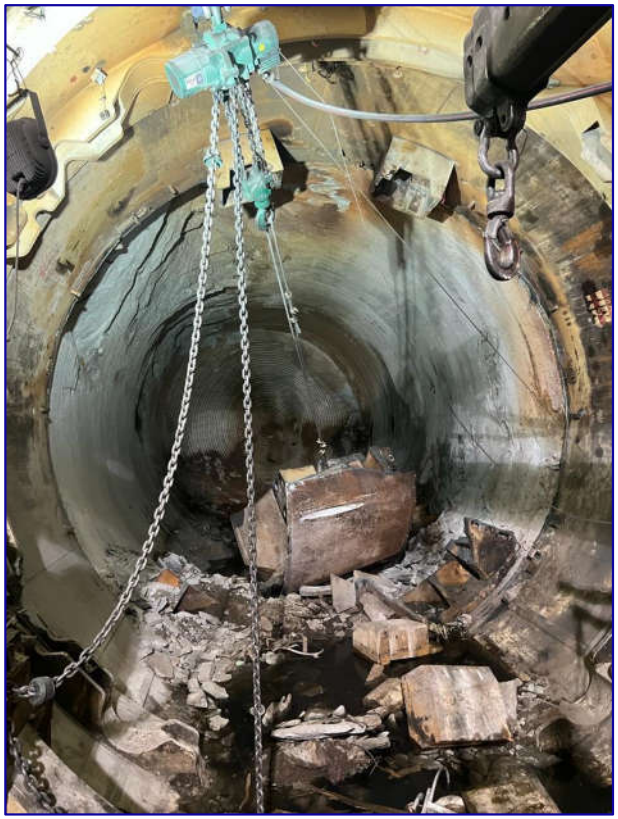




TUNNELPRO

Technical Design of Assembly, Start-up and Disassembly of TBMs

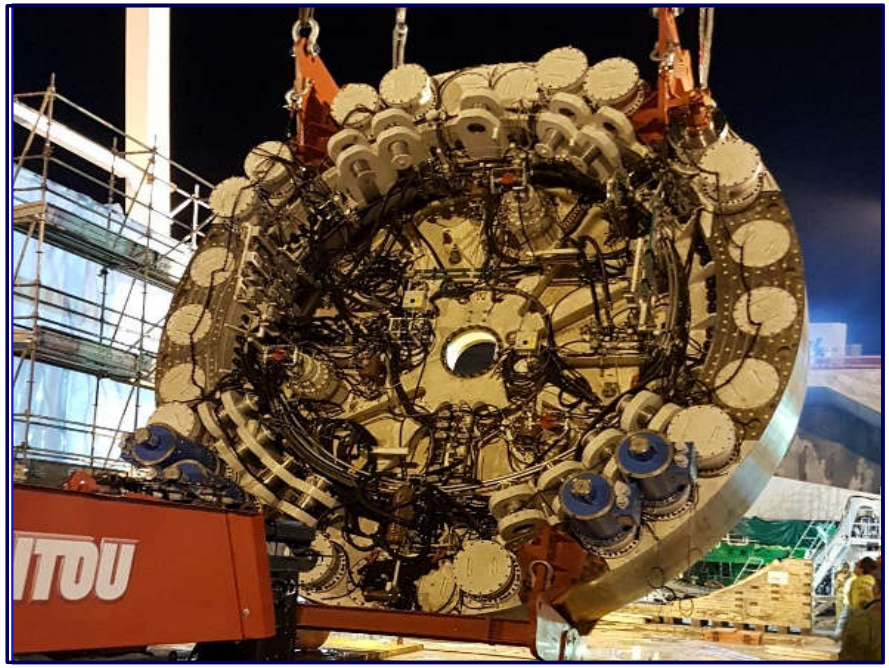
PROJECT	Galleria del Brennero - Lotto 2-3
YEAR	2017
LOCATION	Italy (Mules)
TBM TYPE	DS
EXCAV. Ø	6.85 m



TUNNELPRO

Technical Design of Assembly, Start-up and Disassembly of TBMs

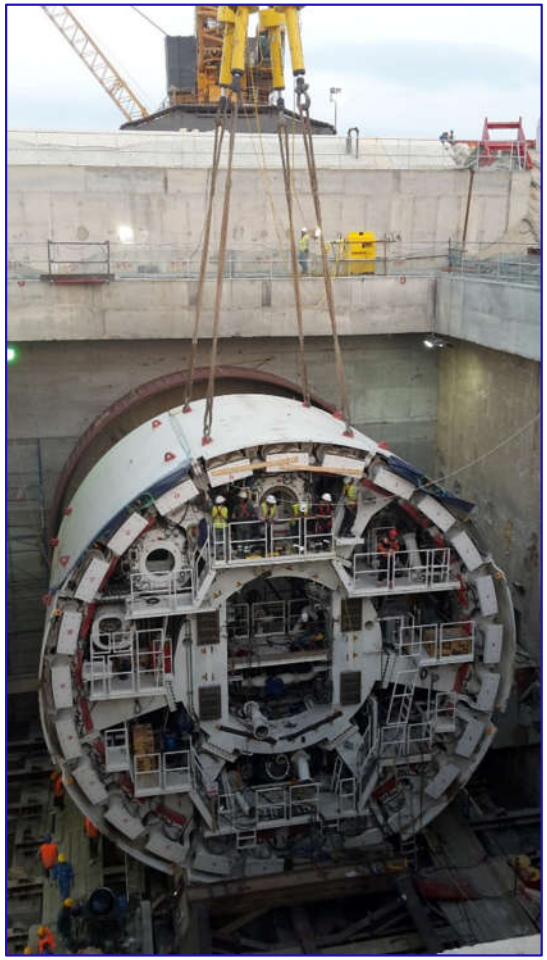
PROJECT	Galleria Santa Lucia
YEAR	2016
LOCATION	Italy (Barberino)
TBM TYPE	EPB
EXCAV. Ø	15.94 m



TUNNELPRO

Technical Design of Assembly, Start-up and Disassembly of TBMs

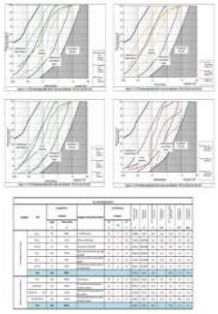
PROJECT	Tunnels Under Suez Canal
YEAR	2015
LOCATION	Egypt (Ismailia)
TBM TYPE	Slurry
EXCAV. Ø	13.05 m

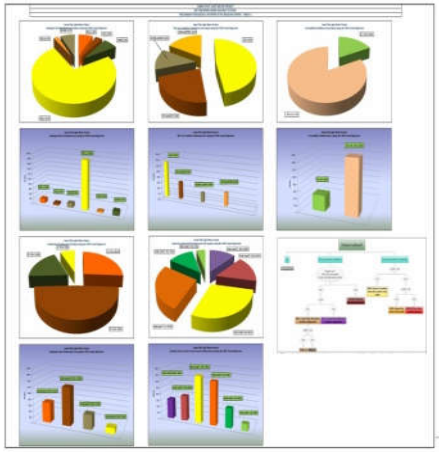


TUNNELPRO

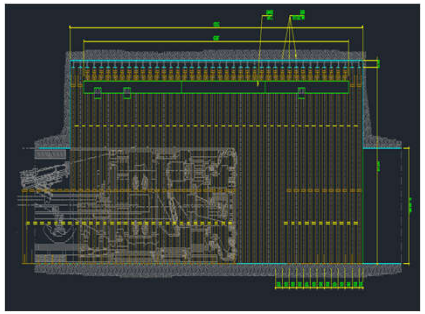
TECHNICAL SERVICES & RESEARCH AND DEVELOPMENT

YEAR	GEOLOGICAL ANALYSIS
2022	TBM ADVANCE ESTIMATION

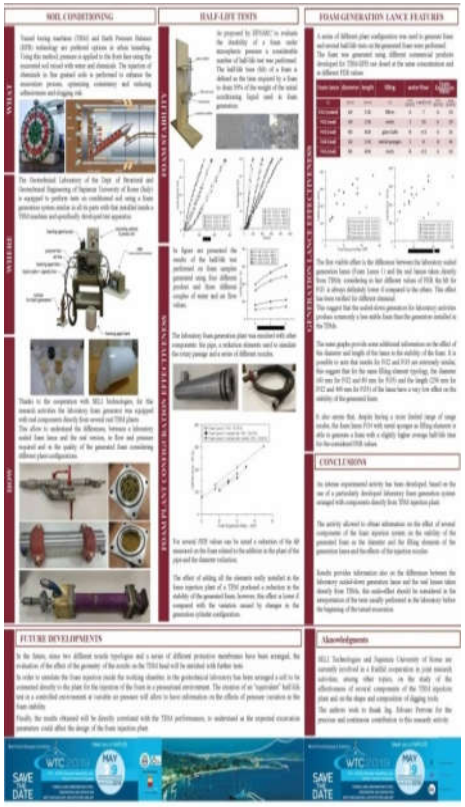




YEAR	TBM RECOVERY
2018	Mae Ngat – Thailand



YEAR	TECHNICAL PUBLICATIONS
2018	WTC



YEAR	RESEARCH AND DEVELOPMENT
2023	TBM SIMULATOR