



# **GEOTECHNICAL FOUNDATION EXPERTS**



Experts Contracting & Consulting  
Geotechnical Engineering Services

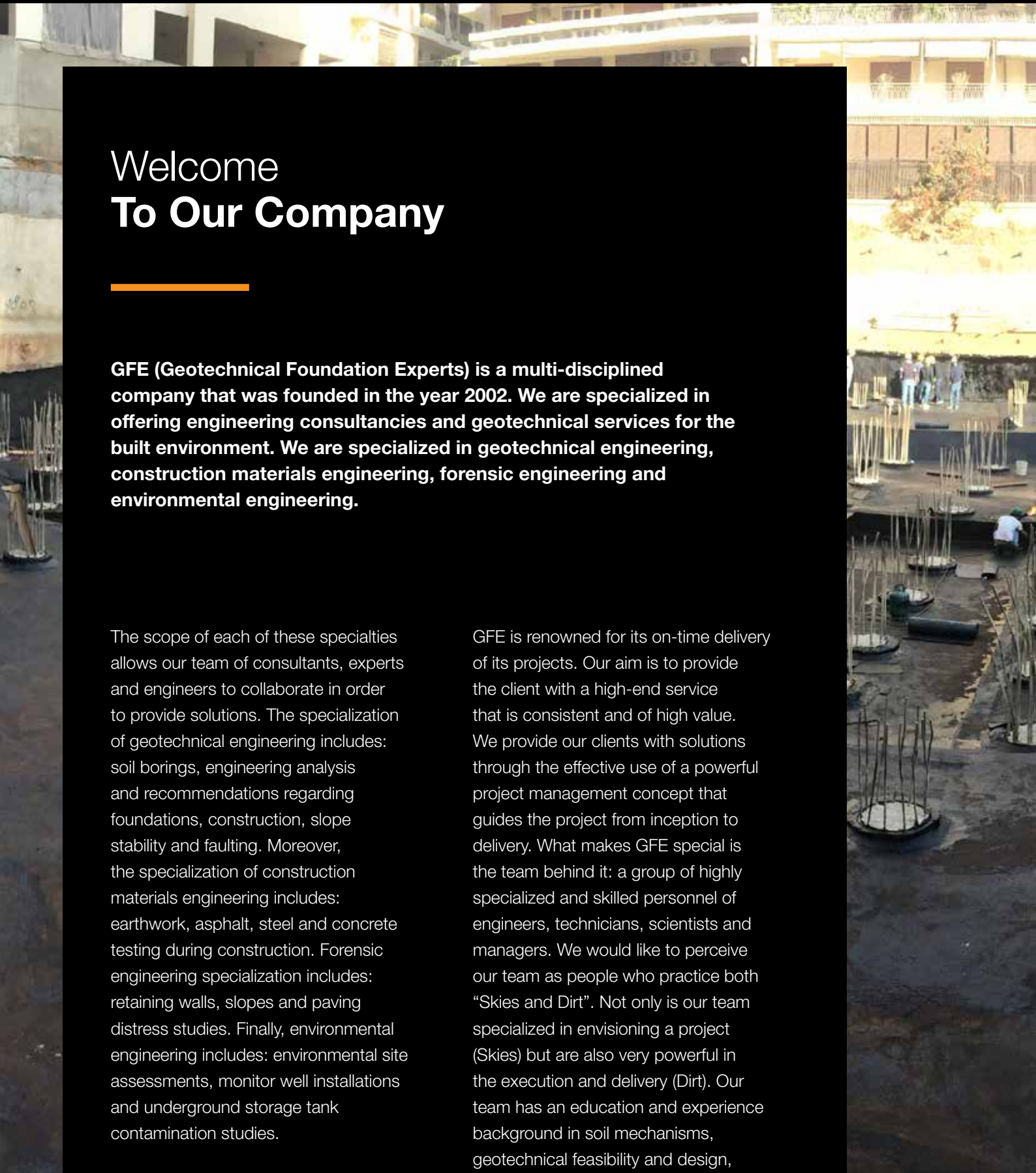
# Welcome To Our Company

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**GFE (Geotechnical Foundation Experts) is a multi-disciplined company that was founded in the year 2002. We are specialized in offering engineering consultancies and geotechnical services for the built environment. We are specialized in geotechnical engineering, construction materials engineering, forensic engineering and environmental engineering.**

The scope of each of these specialties allows our team of consultants, experts and engineers to collaborate in order to provide solutions. The specialization of geotechnical engineering includes: soil borings, engineering analysis and recommendations regarding foundations, construction, slope stability and faulting. Moreover, the specialization of construction materials engineering includes: earthwork, asphalt, steel and concrete testing during construction. Forensic engineering specialization includes: retaining walls, slopes and paving distress studies. Finally, environmental engineering includes: environmental site assessments, monitor well installations and underground storage tank contamination studies.

GFE is renowned for its on-time delivery of its projects. Our aim is to provide the client with a high-end service that is consistent and of high value. We provide our clients with solutions through the effective use of a powerful project management concept that guides the project from inception to delivery. What makes GFE special is the team behind it: a group of highly specialized and skilled personnel of engineers, technicians, scientists and managers. We would like to perceive our team as people who practice both "Skies and Dirt". Not only is our team specialized in envisioning a project (Skies) but are also very powerful in the execution and delivery (Dirt). Our team has an education and experience background in soil mechanisms, geotechnical feasibility and design, geologic hazard evaluation, field inspection and soil testing.





Our culture empowers both its staff and clients to collaborate hand-in-hand and going through the meticulous details of every project in order to ensure the satisfaction of everyone involved. With our extensive project portfolio, powerful management culture, a strong vision and a mission to give back to this community; we work with a conscience in mind for a better future. Our culture supports a green cause and aims for high CSR (Corporate Social Responsibility).

Visit our website for more information on our ongoing activities and projects:



[www.gfe-leb.com](http://www.gfe-leb.com)

# Our Services

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**At GFE, we offer a wide range of services for the built environment.**

In our company culture, we always strive to deliver the best quality service. Based on word-of-mouth marketing from satisfied clients, our projects portfolio is growing by the numbers. Our expertise starts by offering the client a review and an individual assessment of design and construction proposals for major projects. Followed by offering an innovative solution to geotechnical problems. These solutions are advised for the following types of projects:

## Contracting

**Shoring Systems**

**Deep Foundation**

**InSitu Testing**

**Under Pinning**

**Dewatering**

## Consultation

**Shoring Systems Design**

**Foundation Piles Design**

**Soil Investigations and Reports**

**Third Party Consultants**

**Earth Pressure & Retaining Walls**

“

We do not aim for attracting clients

We aim for building long lasting relationships

Fadi Hanna - Founder and Managing Director

”



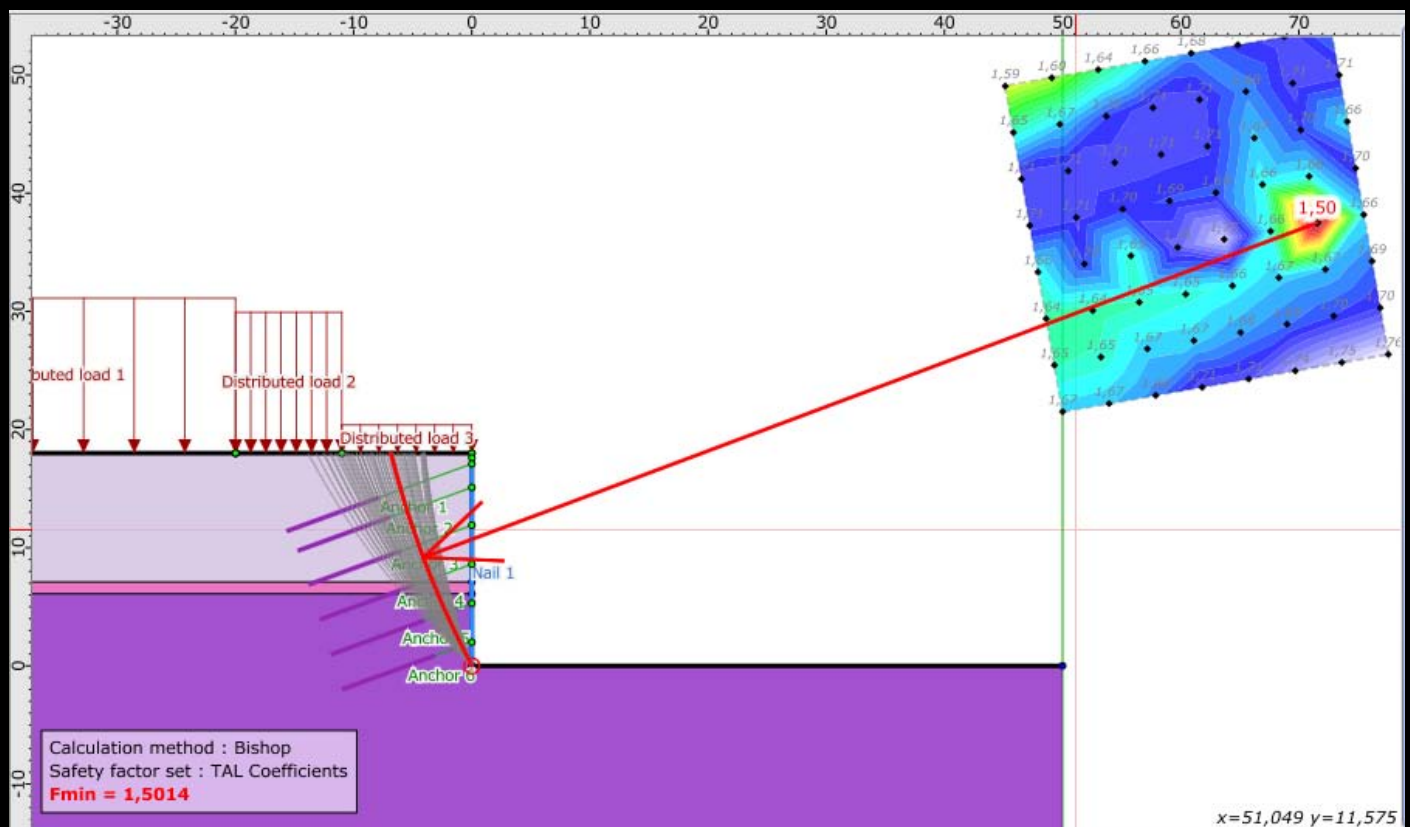
# Software Design: TALREN

TALREN is an ideal software for checking the stability of geotechnical structures, with or without reinforcements:

- natural slopes
- cut or fill slopes
- earth dams or dikes.

It takes into account various types of reinforcements such as:

- anchors and soil nails
- piles and micropiles
- geotextiles and geogrids
- steel
- polymer strips.



# Project data

Project reference : Ashrafie

Calculation title : Slope stability analysis

Location : Ashrafie

Comments : N/A

Units : kN, kPa, kN/m<sup>3</sup>

yw : 10.0

## Soil layers

	Name	Colour	$\gamma$	$\phi$	c	$\Delta c$	qs nails	pl	KsB	Anisotropy	Favorable	Specific safety factors
1	Soil layer 1		20,0	30,00	40,0	0,0	250,0	3000,0	60000,0	No	No	Yes
2	Soil layer 2		20,0	38,00	20,0	0,0	200,0	2000,0	20000,0	No	No	Yes
3	Soil layer 3		20,0	34,00	30,0	0,0	250,0	2500,0	50000,0	No	No	Yes

## Soil layers (cont.)

	Name	Colour	$\Gamma\gamma$	$\Gamma c$	$\Gamma \tan(\phi)$	Cohesion type	Curve
1	Soil layer 1		1,00	1,00	1,00	Effective	Linear
2	Soil layer 2		1,00	1,00	1,00	Effective	Linear
3	Soil layer 3		1,00	1,00	1,00	Effective	Linear

## Points

	X	Y		X	Y		X	Y		X	Y		X	Y		X	Y			
1	-50,000	18,000	2	-20,000	18,000	3	-11,000	18,000	4	0,000	18,000	5	0,000	7,100	6	0,000	6,100	7	0,000	0,000
8	50,000	0,000	9	-50,000	7,100	10	-50,000	6,100												

## Segments

	Point 1	Point 2		Point 1	Point 2		Point 1	Point 2		Point 1	Point 2		Point 1	Point 2		Point 1	Point 2		Point 1	Point 2	
1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	6	7	7	7	8
8	5	9	9	6	10																

## Distributed loads

	Name	X left	Y left	q left	X right	Y right	q right	Ang/horizontal
1	Distributed load 1	-50,000	18,000	110,0	-20,000	18,000	110,0	90,00
2	Distributed load 2	-20,000	18,000	100,0	-11,000	18,000	100,0	90,00
3	Distributed load 3	-11,000	18,000	20,0	0,000	18,000	20,0	90,00

## Nails

	Name	X	Y	Horizontal spacing	Angle/horizontal	Width of diffusion base	Diffusion angle	TR	Length	Rsc
1	Nail 1	0,000	17,600	1,000	90,00	20,000	20,00	226,0	17,800	-

## Nails (cont.)

	Name	Equivalent radius	Traction/shear rule	Prescribed shear force Rcis	Plastification moment	EI	Critical Angle	Traction	Shear
1	Nail 1	0,100	Tnui, Ccal	-	47,0	13500,0	45,00	-	external

## Nails (cont.)

	Name	qsnails from...	$\theta_{bar}$	$\sigma_e$	Direct input of tensile strength	Rsc calculated from qs	Shear force varying along nail
1	Nail 1	Charts	-	-	Yes	Yes	-

## Anchors

	Name	X	Y	Horizontal spacing	Angle/horizontal	Width of diffusion base	Diffusion angle	TR	Grouted length
1	Anchor 1	0,000	17,100	3,000	20,000	0,600	20,00	795,0	8,000
2	Anchor 2	0,000	15,100	3,000	20,000	0,600	20,00	795,0	8,000
3	Anchor 3	0,000	11,900	3,000	20,000	0,600	20,00	1060,0	8,000
4	Anchor 4	0,000	8,600	3,000	20,000	0,600	20,00	1060,0	8,000
5	Anchor 5	0,000	5,300	3,000	20,000	0,600	20,00	1060,0	8,000
6	Anchor 6	0,000	2,000	2,000	20,000	0,600	20,00	1060,0	8,000

## Anchors (cont.) (1/2)

	Name	UngROUTED length	Traction/shear rule	qsanchors from...	RQS
1	Anchor 1	9,000	Prorata length/grout	Charts	750,000
2	Anchor 2	8,000	Prorata length/grout	Charts	750,000
3	Anchor 3	7,000	Prorata length/grout	Charts	900,000
4	Anchor 4	6,000	Prorata length/grout	Charts	900,000

# Software **Design: PLAXIS**

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PLAXIS is based on the finite element method and intended for 2-Dimensional and 3-Dimensional engineering, design and analysis of soil and rock deformation and stability, soil structure interaction and groundwater- and heat flow.

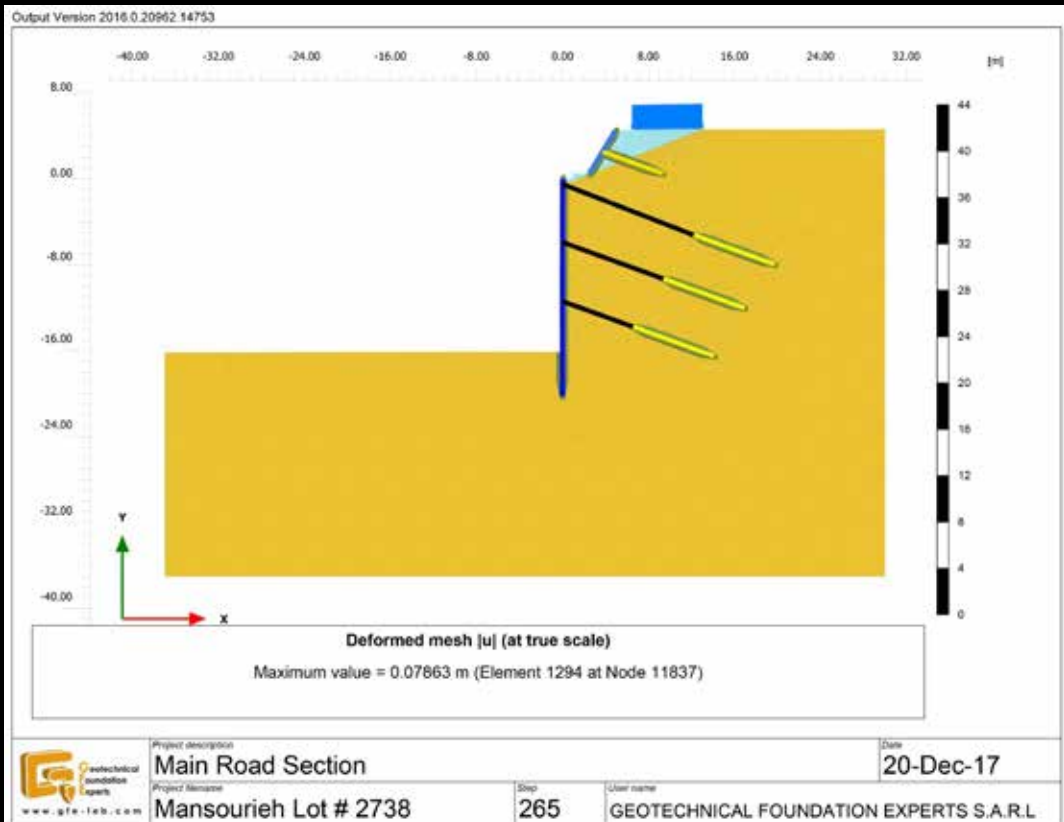
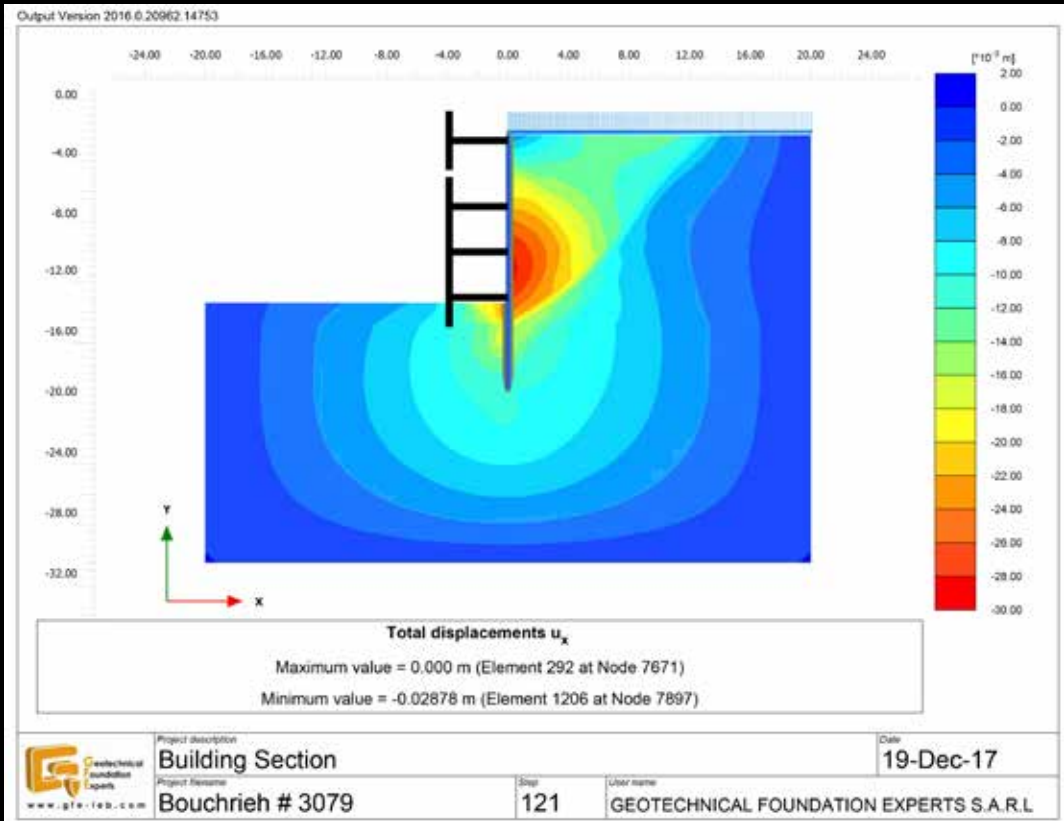
PLAXIS software is applied in areas such as excavations, foundations, embankments, tunnels, mines, dredging, etc.

Geotechnical applications require advanced constitutive models for the simulation of the non-linear and time-dependent behavior of soils.

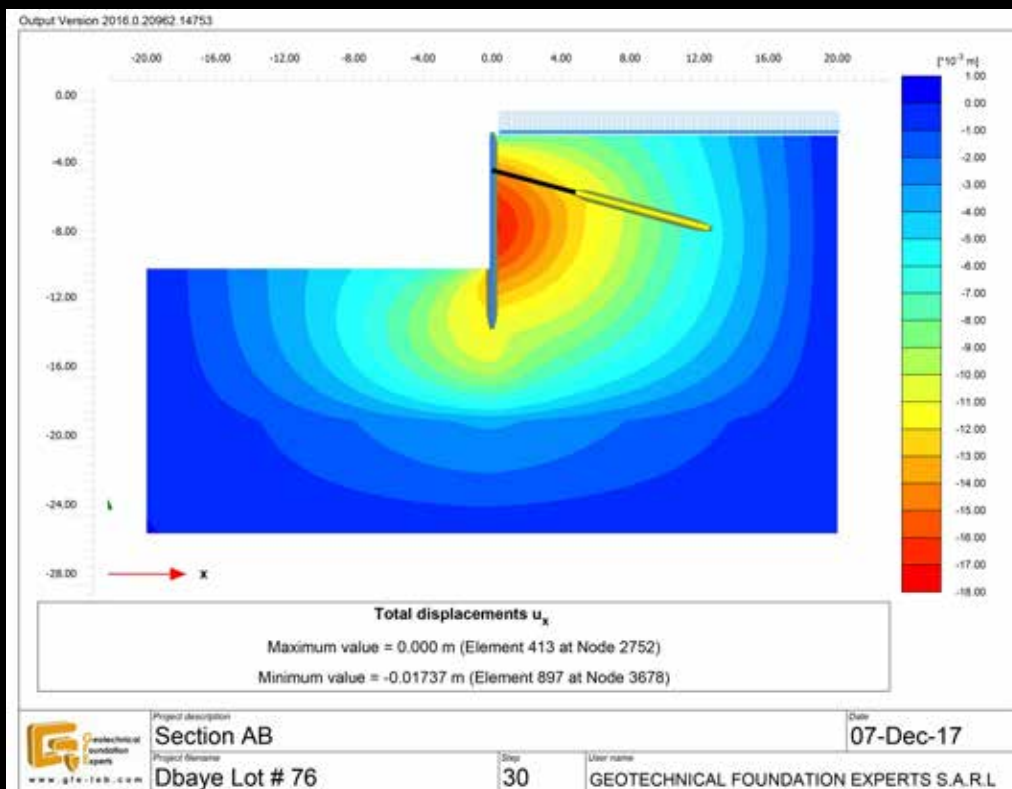
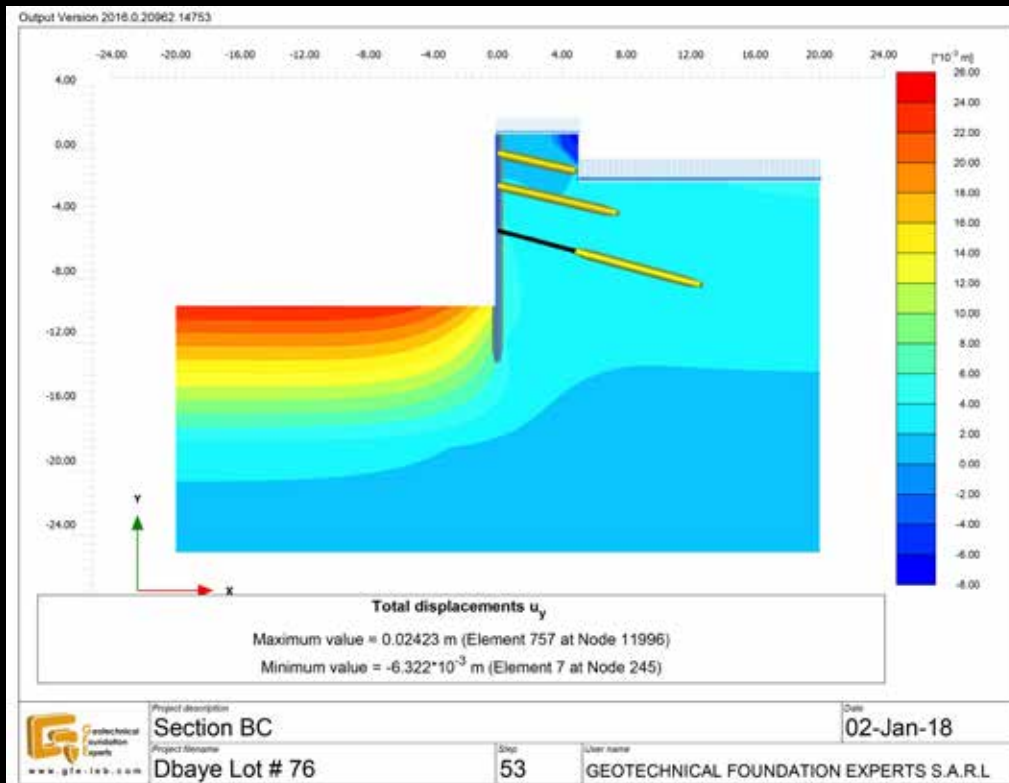
In addition, since soil is multi-phase material, special procedures are required to deal with hydrostatic and non-hydrostatic pore pressures in the soil. Although the modelling of the soil itself is an important issue, many geotechnical engineering projects involve the modelling of structures and the interaction between the structures and the soil.

PLAXIS software is equipped with special features to deal with the numerous aspects of complex geotechnical structures.



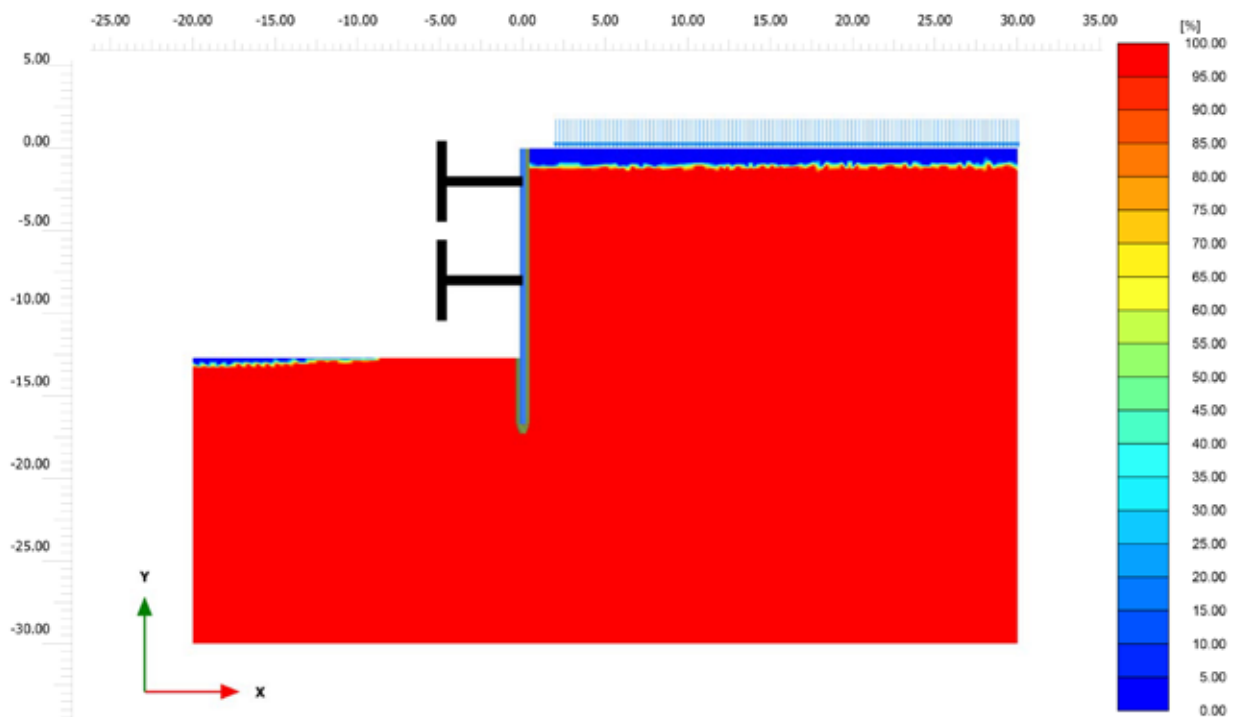


# Software Design: PLAXIS



PLAXIS		essential for geotechnical professionals	
Project description	: Section AB	<b>Output Version 2016.0.20962.14753</b>	
User name	: GEOTECHNICAL FOUNDATION EXPERTS S.A.R.L	Date	: 07-Dec-17
Project filename	: Dbaye Lot # 76	Page	: 1
Output	: Calculation information		
<b>Step info</b>			
Phase	Phase_4 [Phase_4]		
Step	Initial		
Calculation mode	Classical mode		
Step type	Safety		
Updated mesh	False		
Solver type	Picos		
Kernel type	32 bit		
Extrapolation factor	1.000		
Relative stiffness	1.555E-3		
<b>Multipliers</b>			
Soil weight		$\gamma_{weight}$	1.000
Strength reduction factor	$M_{\sigma}$	-0.4980E-3	$\gamma_{\sigma}$ 1.000
Time	Increment	0.000	End time 0.000
<b>Staged construction</b>			
Active proportion total area	$M_{area}$	0.000	$\gamma_{area}$ 0.7660
Active proportion of stage	$M_{stage}$	0.000	$\gamma_{stage}$ 0.000
<b>Forces</b>			
$F_x$	0.000 kN/m		
$F_y$	0.000 kN/m		
<b>Consolidation</b>			
Realised $P_{Excess,stage}$	0.000 kN/m <sup>2</sup>		

Output Version 2016.0.20962.14753

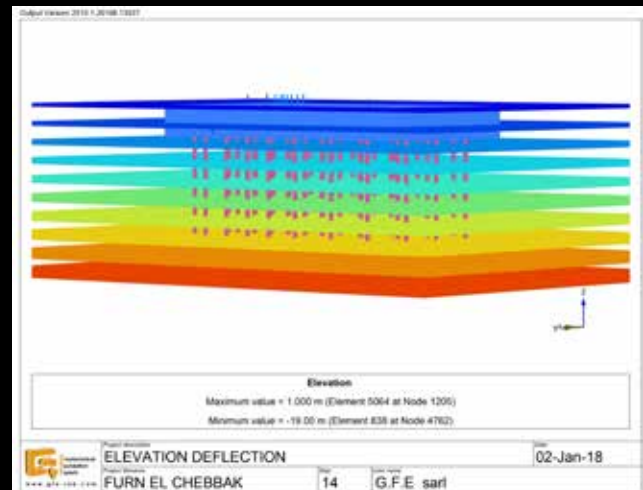
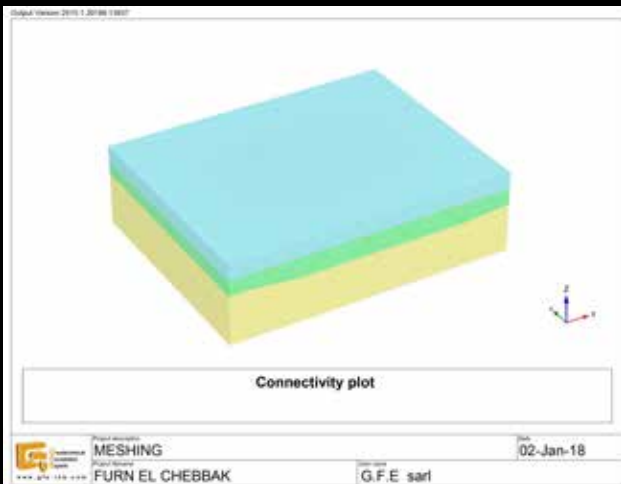


**Saturation**

Maximum value = 100.0 % (Element 33 at Node 10904)

Minimum value = 0.000 % (Element 129 at Node 11232)

# Software Design: PLAXIS



Modify soil layers

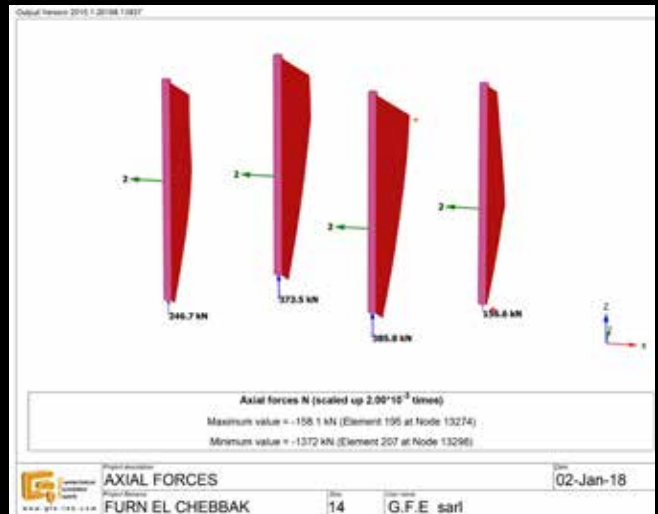
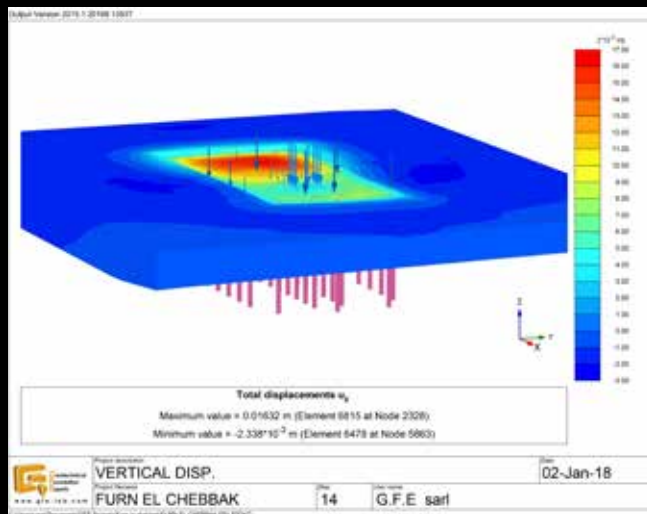
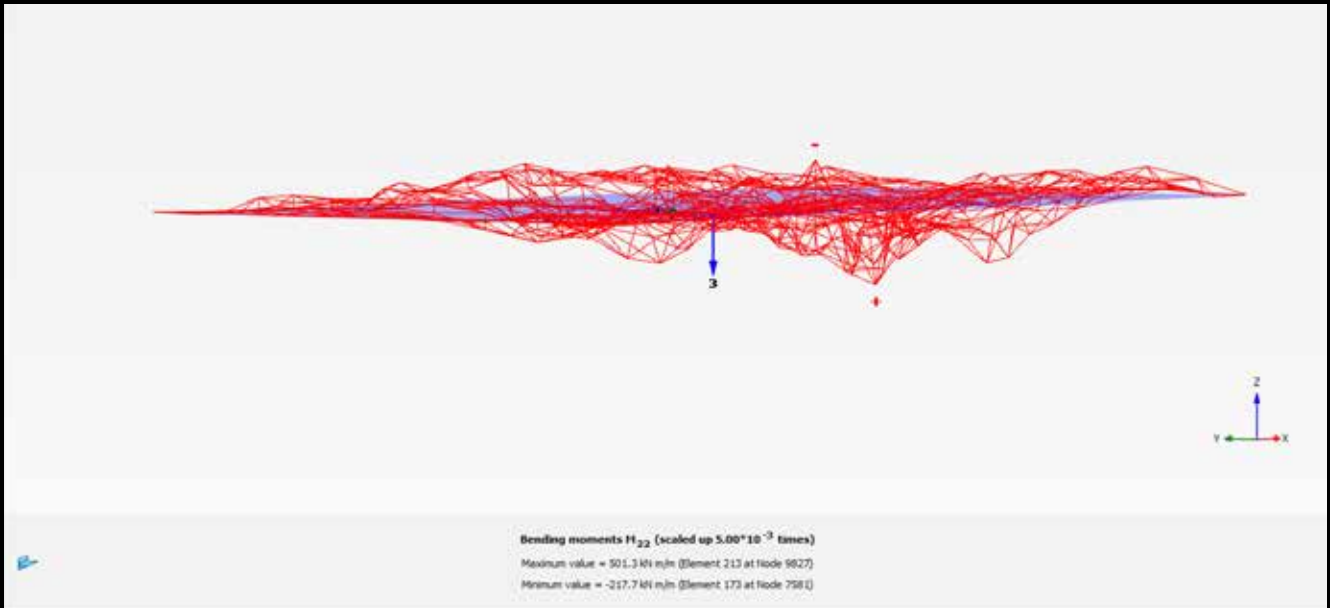
Borehole_1	Borehole_2	Borehole_3
x: 19.29	x: 28.34	x: 8.720
y: -12.26	y: -2.060	y: -2.870
Head: -4.500	Head: -4.500	Head: -3.500

Layers	Borehole_1		Borehole_2		Borehole_3		
#	Material	Top	Bottom	Top	Bottom	Top	Bottom
1	FILL	1.000	-3.000	1.000	-3.500	1.000	-3.000
2	CLAY WITH SAND	-3.000	-8.000	-3.500	-6.500	-3.000	-6.000
3	LEAN CLAY WITH SAND	-8.000	-19.00	-6.500	-19.00	-6.000	-19.00

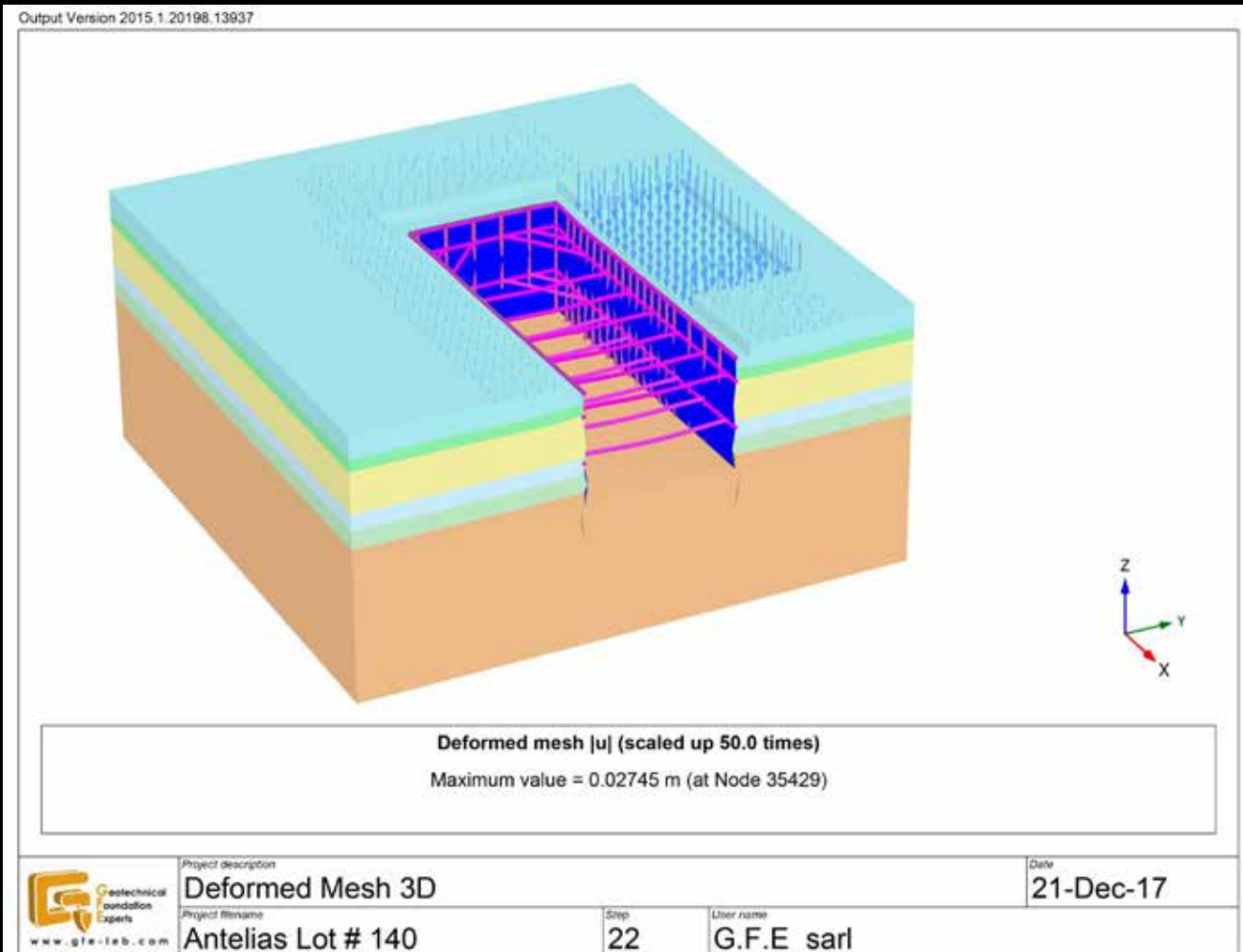
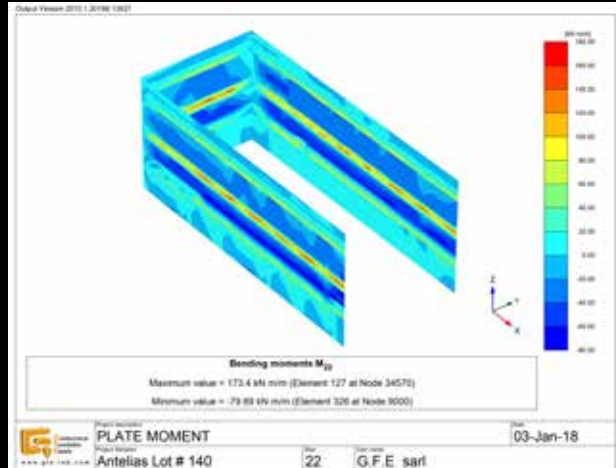
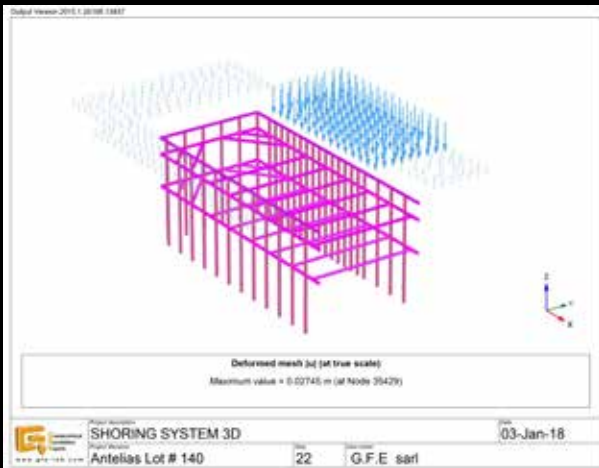
Buttons: Add, Insert, Delete

Soil layers: Water, Initial conditions, Surfaces, Field data

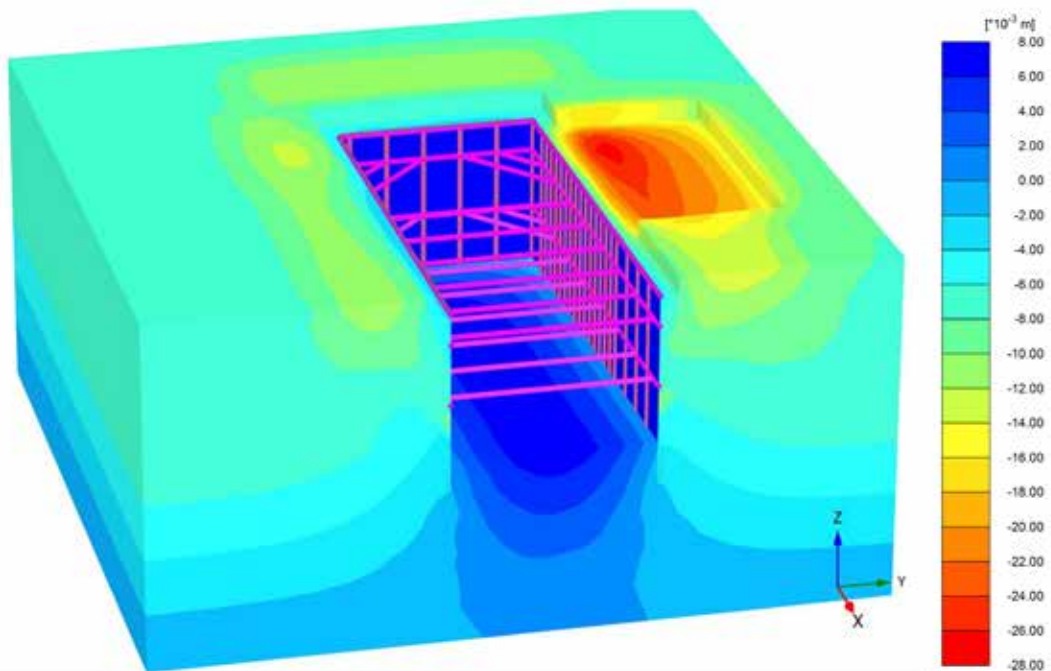
Bottom buttons: Boreholes, Materials, OK



## Software Design: PLAXIS



Output Version 2015.1.20198.13937



**Total displacements  $u_z$**

Maximum value =  $7.218 \cdot 10^{-3}$  m (Element 2625 at Node 5316)

Minimum value = -0.02687 m (Element 9001 at Node 35429)



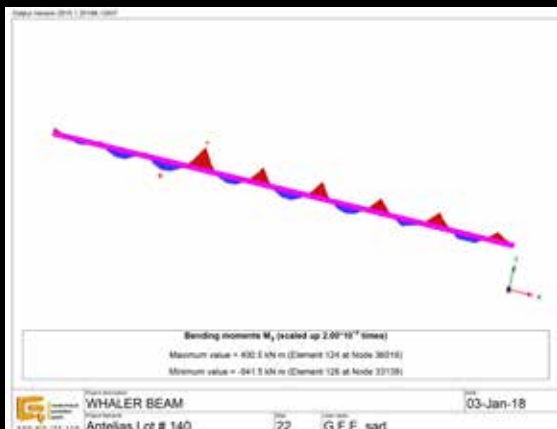
Project description  
**VERTICAL DISP.**

Date  
**03-Jan-18**

Project filename  
**Antelias Lot # 140**

Step  
**22**

User name  
**G.F.E sarl**



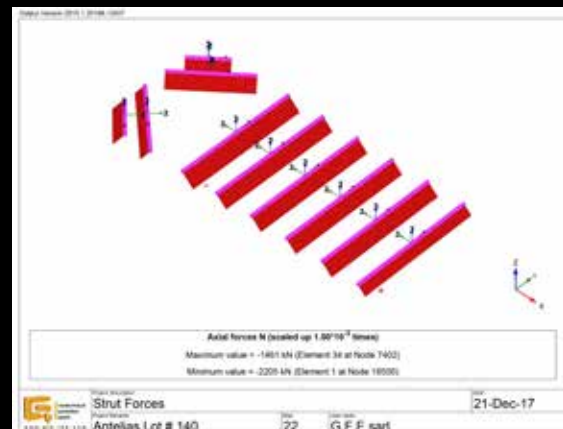
Project description  
**WHALER BEAM**

Date  
**03-Jan-18**

Project filename  
**Antelias Lot # 140**

Step  
**22**

User name  
**G.F.E sarl**



Project description  
**Strut Forces**

Date  
**21-Dec-17**

Project filename  
**Antelias Lot # 140**

Step  
**22**

User name  
**G.F.E sarl**

# Equipment and Tools: Selected List

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Caterpillar TR 250D rotary drilling machine YOM 2016

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Caterpillar TR 250D rotary drilling machine YOM 2015

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Caterpillar TR 220D rotary drilling machine YOM 2009

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Caterpillar TR 200D rotary drilling machine YOM 2015

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Caterpillar EB12 Rotary drilling machine YOM 2008

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8 C6 Casagrande rotary drilling machines

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2 Puntel rotary drilling machines

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1 Nenzy rotary drilling machine

---

6 Risen Crete high pressure grouting machines

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5 Risen Crete shotcrete PZ9 machines

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2 Risen Crete shotcrete PZ3 machines

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6 high pressure air compressors

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4 mono-strand stressing machines

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2 multi-strands stressing machines

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*Inquire more about our full list by contacting us...*





# Equipment and Tools

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# Equipment and Tools

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# Equipment and Tools

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# List of **Selected Projects** Soil Investigations and Reports

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Lot# 104 - Wadi Chahrour - Mr. Francois Feghali

Lot# 1468 - Btighrine - Mr. Mikhael Saliba

Lot# 365 - Jdeideh- Mrs. Grace Tabet

Lot# 506 - Rmeil - DESIGN & BUILT –  
Mr. Sami Sakr

Lot# 1261 Ghazir - Kfarhabab - Cong. Des Soeurs  
Antonines

Lot# 1368 - Kaifoun - Mr. Hussein Komati

Lot# 3591 - Halat - Eng. Issam Feghali

Lot# 239 - Wadi Chahrour - Mr. Elias El Feghali

Lot# 636 & 3 - Dbayeh - Mr. Nazih Khairallah

Lot# 2691 & 6160 - Mazraa - Mr. Radwan El Hakim  
& Partner

Lot# 1722 - Sin El Fil - Mr. Roland Abi Nader  
& Partners

Lot# 528 & 529 - Haret El Bellaneh - Eng. Riad Klait

Lot# 1024 - Mtayleb - Mr. Elie & Charles Rahme

Lot Naas Residential Building - Bikfaya - Mr. Rafi  
Kokoglanian

Lot# 2317 - Mishmish - Mr. Edward Bechara

Lot# 2434 - Sin El Fil - Mr. Ibrahim Shamas

Lot# 997 - Chahtoul - Mr. Abdo Daccache

Lot# 547 - Aaraya - Mr. Joseph Souaid

Lot# 1508 - Ashrafieh - DESIGN & BUILT -  
Mr. Dani Doumit

Lot# 5144 - Mouseitbeh - Mr. Omar Moussally

Lot# 86 - Ashrafieh - Mr. Alfred Bou Daou

Lot# 3885 - Baabda - Mr. Edward Bechara

Lot# 400 - Kfarchima- Mr. Hachem Rihani

Lot# 1390- Zouk - Mr. Georges Aoun

Lot# 2223 - Ashrafieh - Mr. Naji Sleiman

Lot# 999 - Fatqa - Mrs. Carole Kenaan  
& Mr. Majid Habchi

Lot# 4300 - Baabda - Mrs. Mona Abou Nader

Lot# 3929 - Jbeil - Mr. Georges Aoun

Lot# 1767 - Ibrine - Mr. Carlos Moubarak

Lot# 653 - Halat - Mr. Georges Aoun

Lot# 1235 - Shayle Mr. Edgard HabibBuilding





Lot# 3885 Baabda - Owners of Lot Baabda 3885

Lot# 2682 - Mr. Houssam Bou Mjahed & Mr.Charles Tahan

Lot# 68 - Shayle - Mr. Edgard Habib

Lot# 18 - Dik El Mehdi - Mr. Claude Aoun

Lot# 379 - Choueifat - CHOUEIFAT MUNICIPALITY

Lot# 99 & 100 & 104 - Saida - Mr. Fouad Najem & Mr. Riad Kleit- Arab SeCker

Lot# 5611 - Baskenta - SAYFCO

Lot# 1558 - Kfour - Eng. Antoine Souaid & Mr. Elie Farah

Lot# 536 - Naameh - Eng. Joseph Matar

Lot# 676 - Zaroun - Mr. Ayoub Al Kantar

Lot# 783 - Zouk Mikael - Mr. Joseph Ghanime

Lot# 746 - Btighrine - H.E. Mr. Michel Al Murr - Mr. Farid Saliba

Lot# 1444 - Halat - Mr. Antoine Souaid

Lot# 1750 - Monte Verde - Mr. Ziad Makari

Lot# 926 - Mazraat Beit Al Chaar - Mrs. Nohad Makhoul & Eng. Rima Mouawad

Lot# 1592 - Saida - Mr. Ibrahim Shamas

Lot# 1986 - Anfe - Mr. Kamal Moulayess

Lot# 132 - Mtayleb - Mr. Roland Abi Nader

Lot# 2432 - Ashrafieh - MOUIN AOUN CONTRACTING

Lot# 47 - Saifi - La Bodeguita Del Medio Group SAL

Lot# 2109 - Kornet EL Hamra - Eng. Ziad Bachour & Eng. Edward Bechara

Lot# 572 - Beit El Chaar - Mr. Wadih & Raja Nouwef

Lot# 1117 - Mazraa - Mr. Hussein Saleh

Lot# 2189 - Rmeil - TOP END PROPERTY - Eng. Remi Feghali

Lot# 2189 - Rmeil - TOP END PROPERTY - Eng. Remi Feghali

Lot# 399 - Ashrafieh - Mrs. Marie Pliil c/c Mr. Sami Sacre

Lot# 74 - Tabarja - Eng. George Aoun

Lot# 233 - Antelias - KFOURY ENGINEERING - Mr. Bachir Kfoury

Lot# 469 - Bteghrine - Mr. Farid Saliba

Lot# 705 - Fatre - Mr. Antoine Souaid

# List of **Selected Projects** Contracting, Shoring and Dewatering

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Lot# 1766 - Kaslik - ZEROCK

Lot# 192 - Fanar - SYRIAC CATHOLIC

Lot# 2098 - Ashrafieh - Mr. Fady Acar

Lot# 5640 & 5641 - Hazmieh - SKY DEVELOPERS -  
Mr. Hasan Wazne

Lot# 285 & 286 - Bsalim - Mr. Roni Bitar

Lot# 1764 - Nabay - Mr. Adib Bou Habib

Lot# 898 - Zouk Mosbeh - Mr. Chant & Henry Krekorian

Lot# 980 - Kahaleh - Mr. Chadi Bitar

Lot# 1064 - Nabay - Mr. Faysal Salameh

Lot# 14 - Ashrafieh - Mr. Anis Naboulsi

Lot# 656 - Mazraa - IDEA - Mr. Claudia Jaber

Lot# 5563 - Baabda - HAT - Mr. Hasan Wazne

Lot# 535 - Batroun - Jamil Saab & co Mr. Jad Kahawati

Lot# St. Famille - Fanar - Owner of ST. Famille Fanar

Lot# Shahine Residential - Burj Hammoud -  
Dr. Mhamad Shahine

Lot# 4127 - Baabda - HAT - Mr. Hasan Wazne

Lot# 1053 - Sarba - Consul Patric Abi Nahed

Lot# 1945 - Ashrafieh - Mr. Rami Farran

Lot# 5074 - Chayah - Mr. Riad Kanj

Lot# 1095 - Furn El Chabbak - Mr. Mario Chamoun

Lot# 86 - Ashrafieh - Mr. Alfred Bou Daou

Lot# 20 - Nabay - SAYFCO

Lot# 893 - Bleible - Mr. Elie Khoury

Lot# 4494 - Jnah - KABALAN TAPIS - Mr. Ibrahim  
Shamas

Lot# ISF Smart Building - Ashrafieh - MEC SARL  
Mr. Jihad Barakat

Lot# Ehden Church - Zghorta - Antoine Makhlof for  
trading & contracting

Lot Foubourge St. Jean - ZEROCK

Lot# 1075 - Mtayleb - Mr. Haroutian & Hamparsoum  
Yesseyan

GARDENIA - Hazmieh - ORA Group

SANTIAGO - Ashrafieh - MOUIN AOUN

CONTRACTING

Lot # 3538 Ain Saade - Bitar Building

Lot# 3885 Baabda - Owners of Lot Baabda 3885



Lot# 911 -PENTHOUSE - Jal El Dib - KFOURY ENGINEERING

Lot # 506 - Rmeil - DESIGN & BUILDING DEVELOPERS

Lot Charcutier Aoun - Fanar - KFOURY ENGINEERING

Lot# 531 - Zkak Al Blat - KABALAN TAPIS - Mr. Ibrahim Shamas

Lot Zerock Plant - Nahr El Mawt - ZEROCK

Lot # 4561 - Mousaytbeh - D&A Developers

Lot# 119- Marbella - Ashrafieh - MOUIN AOUN CONTRACTING

Lot # 1525 - Bachoura - Lot1525 Bachoura Sal

Lot # 140 - Dbayeh - N & R Group

Lebanese University - Tripoli - JV. Maalouf Trading &Cont. & Binaa W Imar

Lot# 2008 - Ashrafieh - Owners Of Lot 2008 Ashrafieh

Lot# 3009 - Mansourieh - Mr. Roukoz & Romana Rouboz

Lot Homel - Bdadoun - Ets. Joseph Maalouf For Engineering

Lot# 73 - Haret Hreik - WAAD

Lot#1758 - Haret Hreik - ZEROCK

Lot# 1592 - Saida - KABALAN TAPIS - Mr. Ibrahim Shamas

Lot# 2550 - Haret Hreik - WAAD

Lot# 904 - Haret Hreik - ZEROCK

Lot# 1665 - Dahieh - ITIHAD

Lot# 2309 - Ghoubeire - Mr. Ali Harb

Lot # 3538 Ain Saade - Bitar Building

Lot# 597 - Sfeir - URTEC Sal

Lot# 2576 - Haret Hreik - ZEROCK

Lot# 2854 - Bayada - Mr. Nassim Saba

Lot# 1330 - Rmeil - MOUIN AOUN CONTRACTING

Lot# 284 - Dahieh - ITIHAD

Lot St Charles Hospital - Hazmieh - Ste. Louis El Hachem For Eng.& Cont.

Lot# 4996 - Verdun - AASHOUR - Mr. Wissam Aashour

Lot# 399 - Ashrafieh - Mr. Sami Sakr

Lot# 487 - Rass Beirut - Eng. Mahmoud Dandachli

Lot# 908 - Ayoun Broumana - ORA Group

# LOT #192

## Fanar: ST. Joseph Residence

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40 m shoring system using 20 m of sloped excavation and 20 m depth vertical cut in sand and cemented sand, using piles, anchors and shotcrete.

Moreover raft on piles for the towers were implemented.





LOT# 656

# Mazraa: Lilas Residence

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7 m shoring system in sand and sandy clay material, using piles, anchors and shotcrete.

Moreover raft on piles having 26 m depth, using full casing technique under water table, were implemented.





LOT# 2031

# Ashrafiye: ST. Coeur Sioufi School

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18.5 m shoring system in fill, marl and marl stone, using the top down anchored wall technique.







LOT# 474

## Down Town: Plus tower

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21 m shoring system in a fill, marl and fractured marl stone, using piles anchors and shotcrete.

Moreover dewatering was also implemented during excavation works.





# LOT# 4561

## Jnah

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20 m shoring system in sand & sand clay using piles, micro-piles, anchors and shotcrete.

Moreover The Waller beams were used as part of the final wall of the constructed building.





# LOT# 20

## Nabay: St. Thomas

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62 m depth shoring system in fill materials, marl and fractured marl stone layers, using 2 different stages of shoring consisting of sloped cut of 36 m, shored by nail shotcrete wall, followed by 26 m vertical cut shored using anchors and shotcrete.

Moreover dewatering was also implemented during excavation works.





# LOT#193 &195

## Jounieh: Kortbawe Institute

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17.5 m shoring system in fill, sand and sandy clay soil using piles, micro-piles, anchors and shotcrete

Moreover Dewatering was also implemented during excavation works.





# Soil Investigation

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# Miscellaneous Projects

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Nahr El Mot



Bleibel



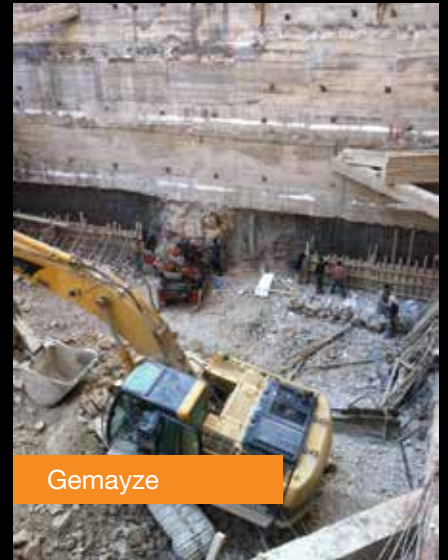
Mansourieh



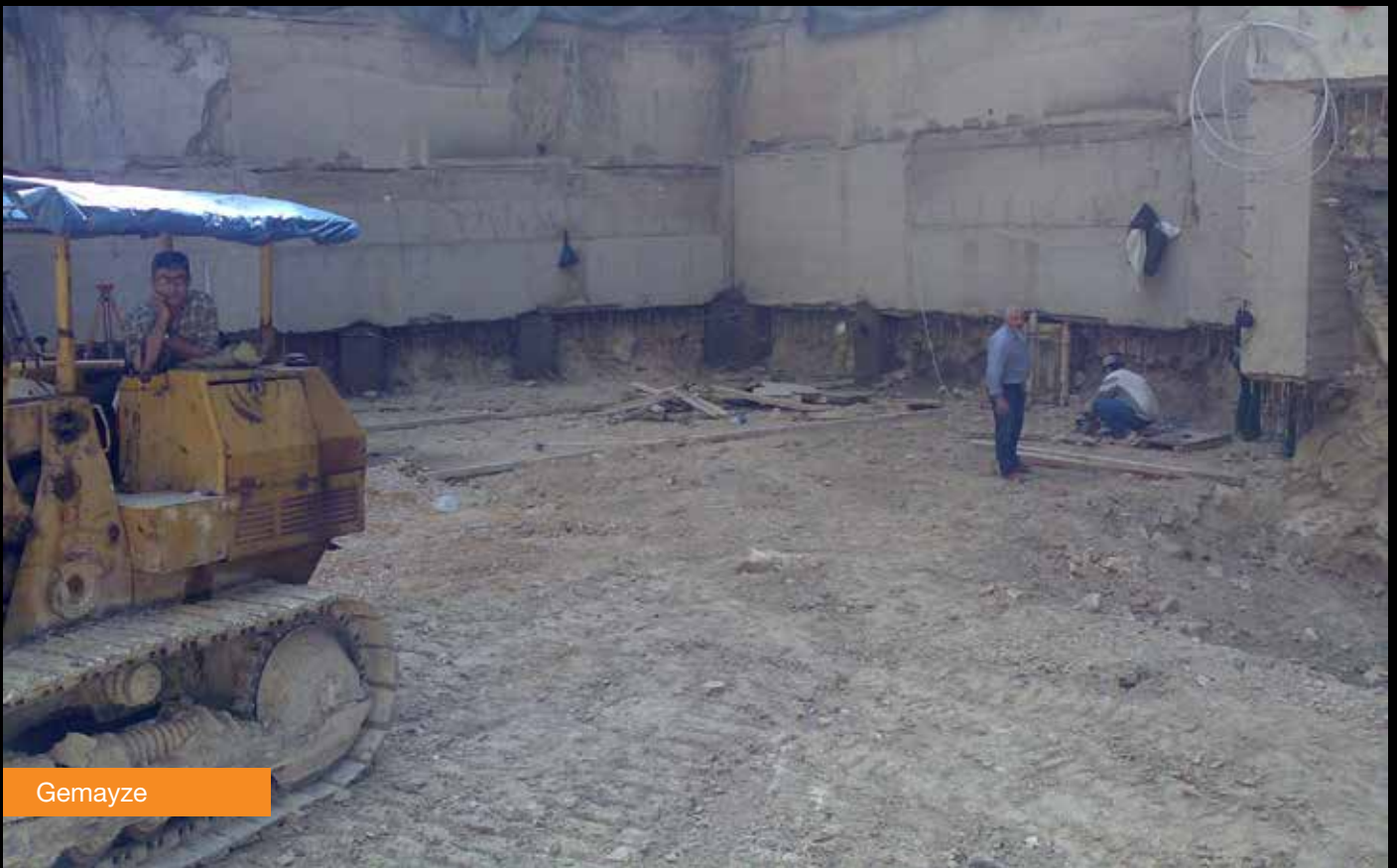
Broumana



Burj Hamoud



Gemayze



Gemayze

# Miscellaneous Projects

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Tripoli



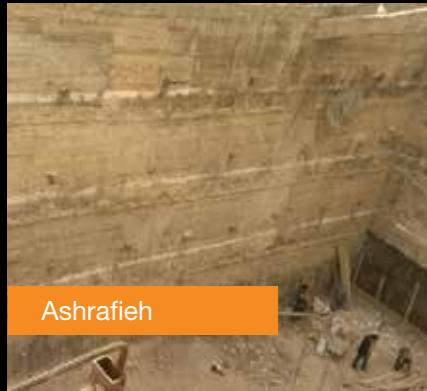
Ghazir



Jounieh



Dbayeh



Ashrafieh



Jounieh



Antelias

# Miscellaneous Projects

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# Miscellaneous Projects

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Dbaye



Kaslik

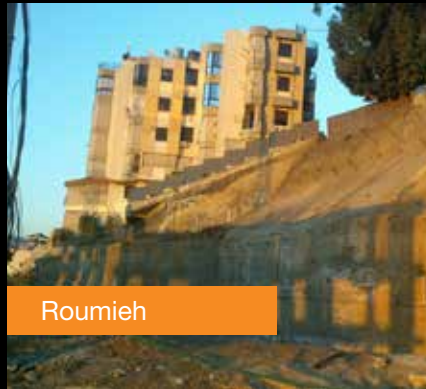


Kfarhbeb





Yarze



Roumieh



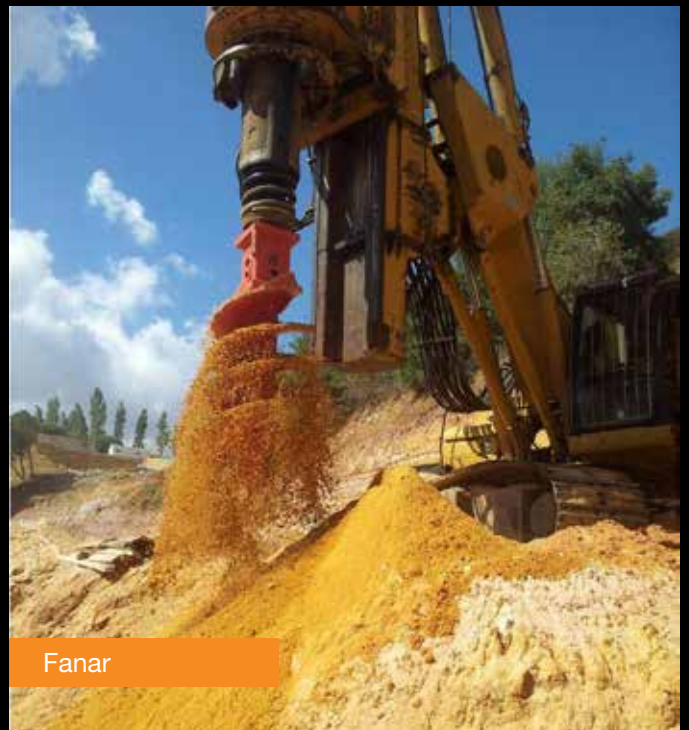
Ain Saadeh



Down Town

# Miscellaneous Projects

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# Miscellaneous Projects

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Gemayze



Jounieh



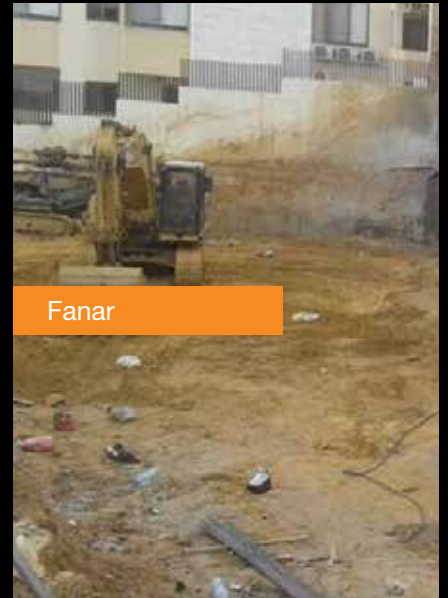
Verdun



Fanar



Jdeide



Fanar



Haret Hreik

# Miscellaneous Projects

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Kfardebian



Fanar



Jounieh



Down Town



Mazraa



Burj Hamoud



Mtyleb

# Miscellaneous Projects

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Naccache



Jnah

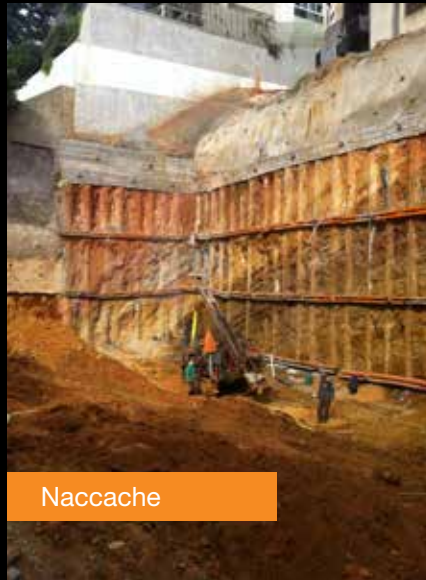


Jounieh





Mansrourieh



Naccache



Ashrafieh



Saida

# Miscellaneous Projects

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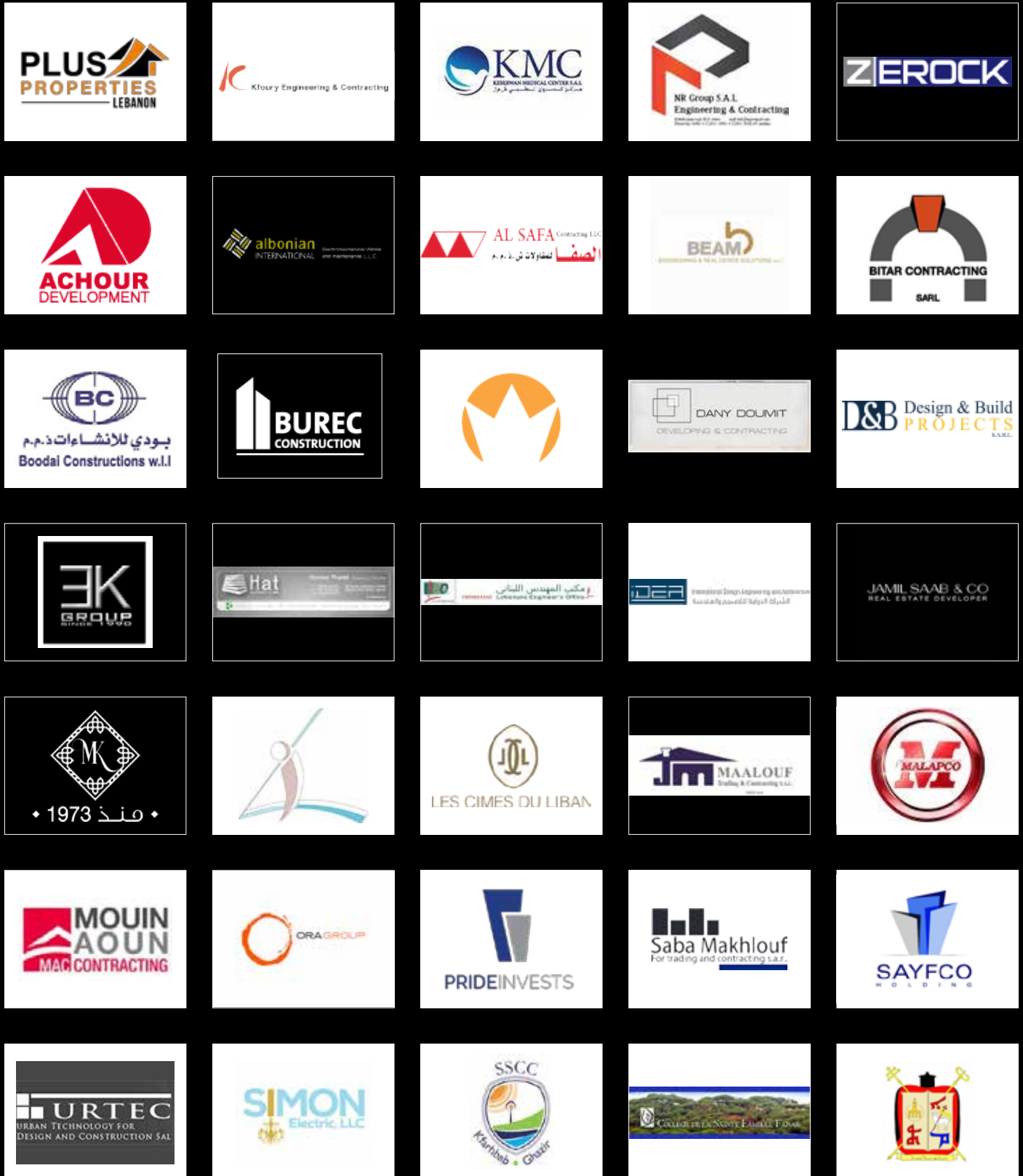


Saida



Verdun

# Selected Clients



“

Foundation engineering is the art of using technology

For making the impossible possible

”



LEBANON - BEIRUT  
FURN EI CHEBBAK - MAIN ROAD  
KASTOON BUILDING, GGF CENTER, 2nd FLOOR

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